CHAPTER IV

RESULTS AND ANALYSES

This part of the study deals with the results of what has been one from three phases of Chapter III. Here the results would be proved to be essential consequences to the Global Model and CTU Change Management Model in ESD in HEIs as well.

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

The following would be the findings of a global change management model in ESD in HEIs. Here are the results of the study.

1.1 Basic Data Survey for Constructing a Global Change Management Model

This was the fundamental information collected to make it supporting materials for creating a global model.

1.1.1 Documentary research: The materials in terms of 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, helped construct the two 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 fundamentals for creating, first, a global model and CTU one with its factors in change management in ESD as well later.

1.1.2 Reviews of the fieldtrips

The following were the HEIs at a glance collected from the researcher on the sites.

Firstly, in the reviews of the 17 fieldtrips to HEIs in Thailand, Vietnam and Malaysia, they were all displayed bellows:

Table 1 Higher Education Institutions Fieldtrips

No	Higher Education Institutions	Country	Period	Purposes
1.	Naresuan University (NU)	Thailand	Jun., 2007	To pursue the PhD program about Educational Administration, and to study about the university development and its administration
2.	Mae Fa Luang University (MFU)	Thailand	Oct., 2007	To study about the university development and its administration
3.	Kasetsart University (KU)	Thailand	Nov., 2007	To study about the university development, its administration and ITC innovation
4.	Thai Knowledge Park (TKP)	Thailand	Nov.,2007	To study about TKP administration and ITC innovation

Table 1 (Cont.)

No	Higher Education Institutions	Country	Period	Purposes
5.	Chulalongkorn University (CU)	Thailand	Dec. ,2007	To study about the university development, its administration and international cooperation
6.	Rotary Center for International Studies in Peace and Conflict Resolution, Chulalongkron University (CU)	Thailand	Dec.,2007	To study about the center development, its administration and international cooperation
7.	HCM (HO CHI MINH) Vietnam National University	Vietnam	May, 2008	To study about the university development, its administration, ITC innovation, teaching and learning development, and international conference attendance

Table 1 (Cont.)

No	Higher Education Institutions	Country	Period	Purposes
8.	HCMC (HO CHI MINH CITY) University of Education	Vietnam	May, 2008	To study about the university development, its administration, ITC innovation, teaching and learning development, and international conference attendance
9	Kiengiang Community College (KCC)	Vietnam	Jul., 2008	To study about the Community College development, its administration and Mekong Delta cooperation
10.	Angiang University (AGU)	Vietnam	Jul., 2008	To study about the university development, its administration and Mekong Delta cooperation

Table 1 (Cont.)

No	Higher Education Institutions	Country	Period	Purposes
11.	Khon Kaen University (KKU)	Thailand	Sep., 2008	To study about the university development, its administration, ITC innovation, teaching and learning development, and international conference presentation
12.	Assumption University (AU)	Thailand	Nov. 2008	To study about the Private &Catholic University development, its administration, ITC innovation, teaching and learning development, international cooperation, and international conference presentation

Table 1 (Cont.)

No	Higher Education Institutions	Country	Period	Purposes
13.	Sripatum University (SPU)	Thailand	Jan., 2009	To study about Private University development, its administration, ITC innovation, teaching and learning development, and international cooperation
14.	Mahasarakham University (MSU)	Thailand	Mar., 2009	To study about the university development, its administration (Isan culture), ITC innovation, teaching and learning development, and international conference attendance

Table 1 (Cont.)

No	Higher Education Institutions	Country	Period	Purposes
15.	Rambhai Barni Rajabhat University (RBRU)	Thailand	Aug., 2009	To study about the university (formerly Teachers' College) development, its administration, ITC innovation, teaching and learning development, and international conference presentation
16.	Burapha University (BUU)	Thailand	Oct., 2009	To study about the university development, its administration, ITC innovation, teaching and learning development. And international conference presentation
17.	Universiti Sains Malaysia (USM)	Malaysia	Nov., 2009	To study about the university development, its administration, ITC innovation, teaching and learning development. And international conference presentation

First, Naresuan University (NU), Thailand, is a government sponsored university in Phitsanulok, northern Thailand. It was established as a separate university on July 29, 1990, which was the 400th anniversary of the start of the reign of Phitsanulok-born King Naresuan the Great. A courtyard with a statue of King Naresuan is located on the grounds and the students regularly pay their respects before it. The university has about 20,000 full time students. On January 18, 1964, the Royal Thai Ministry of Education resolved to create a branch of the College of Education (located in Bangkok) for teacher training in each region of the country. On January 25, 1967, the Phitsanulok campus was established as the fourth branch of the College of Education and was meant to serve mainly the Northern provinces. In 1974, the College of Education was upgraded to university status and was named Srinakharinwirot University. Originally, only the third and fourth years of university study were offered at Phitsanulok, and students were admitted by competitive examination after completing the curriculum at one of the nation's associate degree level teacher training colleges. In 1976, the first and second years were added. Other majors besides education were gradually included, and in 1990, the Phitsanulok campus became independent of Srinakarinwirot University. It was designated as Naresuan University during the celebrations of the 400th anniversary of King Naresuan the Great's ascending to the throne. (Figure 34, Appendix, p.527).

Second, Mae Fah Luang University (MFU), Thailand, situated in the province of Chiang Rai in northern Thailand, is named after Her Royal Highness the Princess Mother (Somdet Yah), the beloved mother of the current king of Thailand. Mae Fah Luang was the name given to her by the local people in Chiang Rai. It is an autonomous public university, established on September 25, 1998. Initially, it offered only two majors, (English being one of them). It now offers more, including Business Chinese, Agro-Industry, and Traditional Thai Medicine. There are currently over 5,000 students in the undergraduate program The University strives to be an international institution, using English as the primary medium of instruction. However, this is hindered by the inadequate language skills of the Thai teaching staff, and also by that of the students. As it is a new university, the top students in Thailand as yet seldom apply here. There are also too few native English-speaking teachers on the staff to accommodate the president's aggressive enrollment goal. The People's

Republic of China built the Sirindhorn Chinese Language and Cultural Center on the campus as a gift to Thailand, equipping it with computers with Chinese programs and textbooks. The center is built to resemble a tradition Chinese house, complete with courtyards, gardens, and a pond. (Figure 30, Appendix, p.525).

Third, Kasetsart (KU) is a state university of Thailand among the present 24 public universities and institutions and 40 private universities and institutions in the country. It ranks the fourth chronologically and is the very first one to offer post-secondary degree-bound educational programs in agriculture. The three preceding it are also state universities, namely Chulalongkorn, Thammasat, and Mahidol, in that order. Kasetsart emerged initially in 1938 at the Maejo village in Chiangmai as a unit of division rank of the Department of Agriculture and Fisheries of the Ministry of Agriculture with the name of Kasetsart College, literally meaning College of Agricultural Science, and the primary responsibility of offering three-year post-secondary educational programs in response to the personnel requirements of the said ministry. In 1939, it was transferred to the present location at Bangkhen; Bangkok with the inclusion of the School of Forestry in Phrae under is jurisdiction and the specification of Agriculture, Cooperative Science, and Forestry as the academic areas for its post-secondary education programs. Also, KU has growth steadily with numerous highly commendable accomplishments throughout the years. As a specialized university emphasizing on agricultural science and offering only four bachelor's degree programs to a total of 182 students initially, it is presently a nationally and internationally leading comprehensive university offering as many as 78 bachelor's degree programs to 16,341 students, 64 master's degree programs to 4,306 students and 19 doctorate programs to 95 students. Its teaching personnel have increased tremendously in number from less than 100 initially to 1,885 at present. Likewise, the number of degree-granting primary structural units has increased from four to 14 (inclusive of the Graduate School), while that of research institutes are 6, and that of service units from nil to four. Besides the main campus in Bangkok, it presently has three other campuses in the Central region (Kamphaengsaen,Sri Racha, and Lopburi) and one campus each in the Northeastern region (Chalermprakiat Sakhon Nakhon), the Western region (Suphan Buri), and the Southern region (Krabi).

Moreover, if maintains altogether 16 research stations, 5 field stations and 30 centres in all geographical regions of the country. (Figure 31, Appendix, p .525)

Fourth, the idea of the Thailand Knowledge Park (TKP) was to create a "dynamic living library, a provider of good books that is constantly being updated and improved, as opposed to something that remains lifeless and inactive since the beginning." Most importantly, TK Park was to take a major role in encouraging Thais to read and to learn. On January 13, 2004, the parliament officially passed a resolution outlining the establishment of the Thailand Knowledge Park. The concept laid out was that of a place of learning that is innovative, accessible, and conducive to creativity; its aims were to cultivate a love of reading and independent learning, coupled with the opportunity to participate in educational activities. In the process of creating a library that provides more than books, the TK staff has studied various living libraries around the world, including those in France (The Georges Pompidou Centre), England (Idea Store), Japan (Sendai Mediatheque), and Singapore (Library@Orchard). The team, comprising of both youths and adults, has come to understand the combined importance of books and experience as learning tools, and has designed TK Park accordingly. From their collective ideas and inspiration came the blueprint for Thai edutainment and TK Park was able to open for the first time on January 24, 2005 at the Central World Plaza.

TK Park's success as a learning center is in part due to the parliamentary resolutions passed on March 23 and August 31 of 2004. The document transferred managerial powers over the National ICT Learning Center to the the Office of Knowledge Management and Development (OKMD), with the aid of SIPA (Software Industry Promotion Agency), which helped overlook the transition until the OKMD was ready to take over full management. Finally, on September 28, 2005, under the approval of the OKMD Board of Directors, the ICT center eventually merged with TK Park. As a result, TK was able to expand its functional space and to possess the technological tools necessary for the growth of empowered imagination. (Figure 32, Appendix, p. 526)

Fifth, Chulalongkorn University (CU), Thailand's first institution of higher learning, officially came into being in March, 1917. The groundwork and preparation for it in terms of planning and development, however, took place more than a century ago. The worldwide economic, social and political changes in the late nineteenth century contributed to Siam's decision to adapt her in order to avoid being colonized by the Western powers ("Siam" became "Thailand" in the year of 1939). Thus, King Chulalongkorn (Rama V) has royal policy to strengthen and improve government so that the country could successfully resist the tide of colonialism. One of the major parts of the policy, which would later prove to be deep-rooted and highly effective, was to improve the Siamese educational system so as to produce capable personnel to work in both the public and private sectors. As a result, a school was founded in 1871 at the Royal Pages Barrack within the Grand Palace compound. Later on, in 1882, King Chulalongkorn developed this school and gave it the name of "Suankularb." In the same year, the King also established other schools, namely the Army Cadet School, the Cartographic School, the School for Princes, and the School for Dhamma Studies. "...All of our subjects, from our royal children down to the lowest commoners, will have the same opportunity to study-be they royals, nobles or commoners..." This speech showed that the King did not forget common citizens. He had a policy to set up schools throughout the kingdom, together with institutions of higher learning. He insisted: "...Education in this country is the first priority, which I am determined to develop..."

When it was first founded, the university had 380 students taking classes in four faculties which were located in two campuses. The Faculty of Medicine was located at Siriraj Hospital, whiles the Faculties of Public Administration and of Engineering was at the Administration Building and the Faculty of Arts and Science was located at Prince Vajirunhis' palace. The latter three faculties were in Patumwan district. The Law School was under the responsibility of the Ministry of Justice until the university was ready to take over, and the Teachers' Training School was handed over to the Ministry of Education. The categories of students were the same as in the old Civil Service College.

Sixth, Rotary Centre for International Studies in Peace and Conflict Resolution, Chulalongkorn University, (CU), Bangkok, Thailand, was established in 2004 to provide a three month, professional development certificate program twice annually to individuals currently working in related fields. Sessions run from January-April and June-August each year with a maximum of 25 Rotary World Peace Fellows in each session. Also, the Rotary Foundation gives a full scholarship to pursue a Master's degree in international studies, sustainable development, peace, and conflict resolution or professional development certificate in peace and conflict studies at one of the six Rotary Centers at: Duke University; University of North Carolina; University of Bradford; International Christian University; University of Queensland; Universidad Del Salvador; and Chulalongkorn University. (Figure 33, Appendix, p.526).

Seventh, Kiengiang Community College (KCC), Vietnam, is located in Rach Gia City; Kien Giang Province in Vietnam's Mekong Delta Region It has approximately 250 km from Ho Chi Minh City and 90 km from the Cambodian border. KCC is stationed in Rach Gia with a population of 250,000. It is one of the four colleges in the city. Founded in April, 2002, taking the place of the Kien Giang Continuing Education Center (founded 1975), KCC is now one of the 13 community colleges in Vietnam and a member of the Vietnam Association of Community Colleges (VACC) with International Associate Member of the American Associate of Community Colleges since November 2005. And it has approximately 6,500 students enrolled in all levels of classes in 2008, 2,700 enrolled in fulltime degree programs, 2,900 studying in part-time degree/certificate programs, and 1,000 taking short-term courses. KCC is majoring in aquaculture with (1) Fisheries development, and (2) Seafood processing (Nha Trang University, a joint program), Economics/Accounting, Mechanics/Electronics, Foreign Languages, Tourism and IT. (Figure 41, Appendix, p.530)

Eighth, An Giang University (AGU), Vietnam, was created as the second university in the Mekong Delta in 1999. Before gaining approval from the Ministry of Education and Training (MOET), it was a teacher training college. Remaining close to its roots as a teacher training college, AGU produces many graduates who will go on to teach in the surrounding provinces of An Giang, Kien

Giang, and Dong Thap, the Mekong Delta provinces. In addition to this, and because of Dr. Vo Tong Xuan's long history with agricultural and rice production, the school has a very strong agricultural program producing graduates who continue to promote sustainable agricultural development throughout the Mekong Delta Region, south Vietnam. A new construction project of a larger university structure is taking place south of the current building structure. This is called South An Giang University, and is to be completed in 2009. The old, north campus will be primarily used by those studying in the department of education.

Ninth, Vietnam National University, Ho Chi Minh City, Vietnam, was founded on 27 January 1995 by a government decree 16/CP on the basis of merge of 9 universities (members): (University of Ho Chi Minh City, Thu Duc Technology Training University, Ho Chi Minh City University of Technology, Ho Chi Minh City University of Agriculture and Sylviculture, University of Economics, University of Accounting and Finance, Ho Chi Minh City Pedagogical University, Ho Chi Minh City Architecture University, Branch of Law University of Hanoi into 8 members and officially declared on 6 February 1996. On February 12, 2001, Vietnamese Prime Minister Phan Văn Khải signed a Decision No. 15/2001/QĐ-TTg on reorganization of this University. According to which, Vietnam National University, Ho Chi Minh City, the same applied for Vietnam National University, Hanoi, shall have specific internal organization and activity (unlike the one applicable for other Vietnamese universities), will be given priority to involve in education of postgraduate and science research of various spheres of technologies, to be a pioneer in education and science, to contribute significantly to the country's economic and scientific development. Also in this decision, some member universities were split from Ho Chi Minh City National University and came under the management of the Ministry of Education. At present, Ho Chi Minh City National University consists of five member universities and a faculty, namely: (1) Ho Chi Minh City University of Technology, (2) Ho Chi Minh City University of Natural Sciences, (3) Ho Chi Minh City University of Social Sciences and Humanities , (4) Ho Chi Minh City International University , (5) Ho Chi Minh City University of Information Technology , and Ho Chi Minh City Faculty of Economics.

Tenth, Ho Chi Minh City University of Education, Vietnam is a university specializing in tertiary-level training of teachers and lecturers located in District 5, Ho Chi Minh City, South Vietnam. The university was founded as the Saigon National Pedagogical University in 1957 and reestablished by prime ministerial decree in 1976. In 1995, the university was incorporated in Ho Chi Minh City National University, but it was split to become an autonomous university with the current name in 1999. This university is presently one of 14 Vietnam's leading universities and also one of two largest pedagogical universities in Vietnam, plays the leading roles in teacher and lecturer training. Between 1976 and 2006, the university educated 65,945 graduates, of which 1,000 are postgraduates. The university also offers training for 33,800 teachers and has education cooperation with over 50 universities worldwide. The university has 17 faculties: Math-IT, Physics, Chemistry, Biology, Letters, Geography, Political Education, Psyology-Education, Junior School Teacher Education, Kindergarten Teacher Education, Physical Education, National Defense Education, English, Chinese, French, Russian. 3 teams and subordinate divisions: Women Affairs Education, non-vocational Education, Special Education. There are 7 centers for: IT, Foreign Languages, Environmental and Population Education, Asian-Pacific Francophone, Thuan An Disabled Children, Chinese Language and Culture, University Entry Test Training. The Institute for Education Research with 6 research centers: (1) High School Education, (2) Tertiary Education Research, (3) Education Appraisal and Verification, (4) Teaching Process, (5) Pedagogical Skill Development, and (6) International Education and Cultural Exchange and the Applied College.

Eleventh, Khon Kaen University (KKU), Thailand, is the largest education and learning center in the Northeast of Thailand, and is recognized as the leader of new innovations in teaching and learning and research in the region. Khon Kaen city is the trade and administrative hub of the Northeast and is on a main transport route between the south and the Mekong Sub-region, and thus KKU is ideally placed to support the development of the Northeast and its neighboring counties. KKU currently hosts more than 29,000 students, learning within 17 faculties, covering almost every discipline. A satellite campus is located in Nong Khai. KKU is committed to the development of its communities and its neighboring countries. KKU

currently offers 31 International programs, and 11 English programs, with students from all our neighboring counties studying for degrees at KKU. As host to 18 Research Centers of Excellence, the E-Sarn software park and the Northeastern Sciences and Technology Park. KKU is an active hub for innovation and research.. Also, KKU has been working hard to formalize its activities, collaborations and exchange programs through the signing of over 100 Memoranda of Understanding with other institutions in more than 21 countries. These allow this university to define the scope, expectations and responsibilities of the partnerships more clearly, such as waiving of fees for student exchanges, support for research collaboration etc., and have added greater impetus to our partnerships. KKU is currently benefiting from tremendous goodwill and cooperation from its neighboring Asian institutions for the academic and training activities.

KKU has strong links with other universities in Southeast Asia through its GMS (Greater Mekong Subregions) membership, and the scholarships for Neighboring Countries initiative. This initiative supports staff and students from institutions in the Greater Mekong region who have a memorandum of understanding with KKU, to come and study for higher degrees at KKU. This is a continuing program with new scholarships awarded annually, with the aim of significantly strengthening the human capital in specific areas in these neighboring countries.

Twelfth, Assumption University (AU), Thailand, is a university with three campuses in the Hua Mak, Central World Plaza and Suvarnabhumi areas of Bangkok, Thailand. The university is led by the Brothers of St. Gabriel, who have been active in education in Thailand since 1901. Assumption University is noted for attracting large numbers of foreign students from countries including India, China, Myanmar, Russia, Bangladesh, Pakistan, and other Asian countries. Students from China make up the largest number of foreign students, with up to 6,000 enrolled. Approximately 1,000 Indian students also attend the university. There are exchange students from the United States (Loyola) and Europe. Assumption University also the first international university in Thailand, and became an autonomous educational institution in 1969 when Assumption Commercial College (ACC) became Assumption School of Business. In 1972, it became Assumption Business Administration College (ABAC). In 1990, the college was granted university status by the Ministry of

University Affairs and took the name Assumption University (AU). Recently, AU has been expanding the Suvarnabhumi campus with beautiful Gothic style buildings and creating a nature-centered atmosphere it calls the "University in the Park."

Thirteenth, Sripatum University (SPU), Thailand, is one of the oldest and most prestigious private universities in Thailand. It was founded on the 28th of May, 1970 by Dr. Sook Pookayaporn under the name Thai Suriya College. The name "Sripatum" meaning "Source of Knowledge Blooming like a Lotus" was conferred on the college by Her Royal Highness the Princess Mother, who graciously presided over the first, second and third graduation ceremonies and delegated Professor Sanya Thammasak, then the president of His Majesty's Privy Council, to preside over the fourth to the tenth graduation ceremonies. In 1987, the Ministry of University Affairs approved the opening of a second campus in Chonburi and the opening ceremony was presided over by Her Royal Highness Princess Chulaporn Walailuk on the 19th of July, 1987. On the 6th of November, 1987, the Ministry of University Affairs approved for the Sripatum College to become "Sripatum University" on the 29th of December, 1987. Sripatum University has fulfilled all four responsibilities of a university, namely-producing graduates, conducting research, providing academic services to the community and preserving arts and cultures. The university's goal is to produce high quality graduates in accordance with the university motto, "intellectual, cheerful, professional and ethical." Graduates of Sripatum University are intellectual, knowledgeable in many areas and experts in their chosen fields. They are cheerful and ethical in their personal and professional lives.

For the development of learning and teaching, at present, the university offers 15 degree programs with 25 curricula at the undergraduate level and 6 degree programs with 10 curricula at the postgraduate level. There are ten faculties, namely-the Graduate School and the Faculties of Law, Business Administration, Accounting, Communication Arts, Liberal Arts, Economics, Engineering, Informatics and Architecture. In learning and teaching, the university aims to instill correct attitudes towards education in students so that they are enthusiastic in their pursuit of knowledge and self-development. This will give them a firm foundation for the future when they graduate. The university places the highest priority in recruiting qualified instructors.

Fourteenth, Mahasarakham University (MSU), Thailand, is a public university located in the city of Maha Sarakham in the northeast (Isan) region of Thailand. Currently, the university has two main campuses, one on the outskirts of Mahasarakham City and another at Kamrieng district about 8 kilometers away on the Kalasin road. The university is expanding rapidly to meet increasing demand for higher education in this relatively underdeveloped part of rural Thailand, and there are a number of small satellite centers in locations such as Udon Thani and Yasothon. MSU was established as an independent public university on December 9, 1994. It was the nation's 22nd governmental university. Previously, it was a branch campus of Srinakharinwirot University. Its history can be traced back to College of Education (Mahasarakham) which was founded on March 27, 1968. Also, Mahasarakham University has since expanded rapidly in terms of both facilities and academic services and has become a comprehensive university, offering undergraduate and post-graduate degree programs in three academic clusters: Social Sciences; Pure and Applied Science; and Health Science. In response to this growth, in 1998, Khamriang Campus was set up in Kantarawichai District, approximately seven kilometers from the original campus. With 17 faculties and two colleges currently operating, MSU has been widely recognized as one of Thailand's fastest-growing universities. The total enrollment has also increased, from fewer than 10,000 in its earlier years to more than 30,000 students at present. Many faculty buildings have been constructed on Khamriang Campus, now the administrative and academic center.

Fifteenth, the main campus of Rambhai Barni Rajabhat University (RBRU), Thailand, was formerly Suan Ban Kaew Palace, the personal residence of Her Majesty Queen Rambhai Barni, the Queen of King Prajadhipok or King Rama VII. After H.M. King Prajadhipok passed away, H.M. Queen Rambhai Barni lived here from June 1950 to June 1972 with the strong intention of developing this region of the country. With her sharp vision for the nation's development, particularly educating the people of the nation. The Queen graciously donated her own residence to Thailand's Ministry of Education in 1972 to establish an institution of higher education in the East. The aging Queen then took up her permanent residence at Sukhothai Palace in Bangkok. Chantaburi Teachers College was therefore established at Suan Ban Kaew Palace in 1972. The Queen kindly permitted the college to use

H.M. King Prajadhipok's royal insignia, 'Sakdidej' as the first college emblem for which all lecturers, staff, and students are deeply grateful. Later in 1985, Rambhai Barni College, with permission of His Majesty King Bhumibol Adulyadej - the present King, replaced the former name in commemoration of H.M. Queen Rambhai Barni. This is because Chanthaburi residents wanted to show their deepest appreciation, gratefulness, and loyalty to the late Queen who had acted for them in a myriad of benevolent ways. After that in 1995, H.M. King Bhumibol Adulyadej kindly renamed all state Teachers Colleges across Thailand to "Rajabhat Institutes" and upgraded their status and rights to those of universities. Rambhai Barni College was then changed to Rajabhat Institute Rambhaibharni. Finally on June 15, 2004, the official name was changed to Rambhai Barni Rajabhat University. Lecturers, staff and students are proud of their long and prestigious history as well as their tradition of excellence in academic growth. RBRU is being expanded with more regional campuses. Their satellite campuses in Rayong and Trat provinces have become very popular with students and people from both the government and private sectors. The eastern seaboard has boomed for industry and demand for national and international higher education has increased. Thailand's development has driven demand for qualified professionals throughout the country. The satellite campuses are providing individuals with an opportunity to gain new knowledge and skills near their places of employment. Many of the students who use the satellite campuses hold leading positions in business, schools, universities, and government.

Sixteenth, Burapha University (BUU), Thailand is a public university located in Bangsaen, Chonburi, about 100 km. from Bangkok, in the Eastern Seaboard Area of Thailand. The campus covers an area of 256 acres. It was first established as the Bangsaen College of Education in 1955-the first tertiary education institution ever established outside of Bangkok to produce graduates in teacher education. In 1984, when the Prasarnmitr College of Education in Bangkok was upgraded to university level and named Srinakharinwirot University, Bangsaen College of Education was included as a branch campus and started to offer several other degrees besides teacher education. In 1990, due to the need for more college-trained personnel to implementation the Government's Eastern Seaboard Development Project to industrialize the area, the Bangsaen Campus was upgraded to full university

level and renamed BUU, which means "University of the Eastt." Burapha University has rapidly expanded since then. Enrollment in 2000 was approximately 12,000 students, with over 500 teaching staff and over 300 general staff. There are 15 faculties and colleges: Faculty of Humanities and Social Sciences, Education, Nursing, Public Health, Science, Engineering, Fine and Applied Arts, Science and Liberal Arts, Marine Technology, Graduate School, Gems College, Maritime College, Graduate School of Commerce, Graduate School of Public Administration, and Sport Science College. In addition, the University also has a number of advanced research and service centers, such as the Library Center, the Institute of Marine Science, the Academic Services Center, the Computer Center, the University Hospital, etc. BUU offers more than fifty programs of study, thirty programs at the Master's degree level, one Ed.D program, three Ph.D programs, and many short-course training programs per year. More Ph.D programs in many disciplines are being set up and will be offered in the near future. (Figure 49, Appendix, p.534).

Seventeenth, Universiti Sains Malaysia (English: University of Science, Malaysia, acronym: USM) is a public university with its main campus situated in Penang, Malaysia. There are two other branch campuses, one in mainland Penang, and the other in Kelantan, on the East Coast of Peninsular Malaysia. With around 29,789 students in 2006, USM is one of the biggest universities in terms of enrolled students in Malaysia. The number of lecturers is about 1,606, which leads to a student-lecturer ratio of around 1:23.

USM was established in 1969 as the second university in Malaysia. It was first known as Universiti Pulau Pinang. Initially, the University operated on borrowed premises at the Malayan Teachers' Training College at Gelugor. In 1971, it moved to its present 239.4-hectare site (formerly a military barracks) at Minden, approximately 9.7 kilometers from the city of Georgetown. The site, which consists mainly of undulating land, is indeed an ideal location to house a university campus. There are now two other USM campuses as well, one at Kubang Kerian in Kelantan known as the Health Campus and the other at Seri Ampangan in Penang, known as the Engineering Campus. The former houses the School of Medical Sciences, the School of Health Sciences and the School of Dental Sciences, while the latter houses the six engineering schools. The University has always been guided in its activities by the

need to develop a personality and identity of its own. Since its establishment, it has adopted an innovative approach to higher education and departed significantly from the traditional faculty system of an academic organization. In its place, the University introduced the school system that allows for a multidisciplinary approach. The policy was to combine subjects and to organize programs in such a manner that a degree of specialization in a chosen subject was possible.

To date, 24 Academic schools, 14 centers and 7 units have been established. Of the Schools, 12 are applied science and technology-based Schools, namely, the School of Civil Engineering, the School of Aerospace Engineering, the School of Chemical Engineering, the School of Electrical and Electronic Engineering, the School of Materials and Mineral Resources Engineering, the School of Mechanical Engineering, the School of Housing, Building and Planning, the School of Industrial Technology, the School of Medical Sciences, the School of Dental Sciences, the School of Health Sciences and the School of Pharmaceutical Sciences. The three liberal arts schools are the School of Educational Studies, the School of Humanities and the School of Social Sciences. The pure science schools comprise the School of Biological Sciences, the School of Chemical Sciences, the School of Mathematical Sciences, the School of Computer Sciences, and the School of Physics, all of which offer courses that are similar to those traditionally available in other universities. In December 1989, the School of Management was set up, having evolved from the Management program within the School of Social Sciences. As part of its continuing expansion, the University established the School of Computer Sciences and the School of Communication as of March 1995. The centers and ancillary services include the Centre for Languages and translation, the National Poison Centre, the Doping Control Centre, the Centre for Archaeological Research Malaysia, the Centre for Educational Technology and Multimedia, the Computer Centre, the Centre for Knowledge, Communication and Technology and the Islamic Centre. There are also various research centers, namely the Centre for Policy Research, the Centre for Drug Research and the Centre for Marine and Coastal Studies. The Distance Education Program offered through the School of Distance Education is another innovative program adopted by the University in 1971. It has gained an encouraging response from working adults and is set to be developed further in this decade to cater for new

directions and needs. In the field of research, the emphasis is on function-oriented or interdisciplinary research. The main focus is on areas that integrate academic interest and practical relevance, thus directing scientific thrusts towards breakthroughs in problem areas crucial to the quality of life and national development. USM is one of three universities in Malaysia that have been identified as research-intensive universities in Malaysia, with the other being University of Malaya and Universiti Putra Malaysia. This is in tandem with its mission and vision to be a world-class university embarking on world class research programs via strategic planning and implementation of its R&D mechanism. The university has qualified academic staff and excellent human resource support in order to realize its mission. (Figure 50, Appendix, p.534).

To sum up, these HEIs provided with informative issues about the university or center development with increasing numbers of teaching and office staff. They are now expanding their fame nationwide and worldwide as well. In addition, these venues helped to partly set up elements in the change management models from the organizational change and agents change, too.

Secondly, in reviews of the 30 international conference lecture notes from 10 events, let us find out what the keynote speakers expressed about their fields of study towards HE level along with their presence at each place.

1. An International Seminar on "New Directions in Educational Research, Measurement and Evaluation: The 16th Thailand Educational Research, Measurement and Evaluation Get Together," Faculty of Education, Naresuan University (NU), Thailand, January 17-18, 2008.

2. The 2nd International Conference "Comparative Education; Vietnamese Education in the Globalization Context," HCMC University of Education, May 23, 2008.

3. The International Conference on Educational Research 2008 (ICER): "Learning Community for Sustainable Development," Khon Kean University (KKU), Thailand, September 11-12, 2008.

4. The International Conference "Commemorating the 25th Anniversary of Phi Delta Kappa (PDK) (Thailand Chapter): Ethnics vs Technology in

Postmodern Era of Education," Assumption University (AU), Thailand, November 7-8, 2008.

5. The 1st University Social Responsibility (USR) International Conference (USRIC 2009) hosted by Sripatum University (SPU), Thailand, January 12-13, 2009.

6. The 2nd International Conference on Educational Reform 2009 (ICER): "Cultural Diversity and Sustainable Education in a Changing World," hosted by Mahasarakham University (MSU), Thailand, March 25-27, 2009.

7. International Conference on "Society and University-ICSU 2009: Roles for Community Strengthening," Rambhai Barni Rajabhat University (RBRU), Chantaburi, Thailand, August 5-6, 2009.

8. The International Conference on Educational Research 2009 (ICER): "Learning Community for Sustainable Development," Khon Kean University (KKU), Thailand, September 11-12, 2009.

9. The 1st International Conference Learning &Teaching: Active Learning (EDUCA 2009) hosted by Burapha University (BUU), Thailand, October 15-17, 2009.

10. The 3rd International Conference on "Higher Education for Sustainable Development," Universiti Sains Malaysia (USM), Penang, Malaysia, November 20-22, 2009.

First of all, at an International Seminar on "New Directions in Educational Research, Measurement and Evaluation: the 16th Thailand Educational Research, Measurement and Evaluation Get Together," Faculty of Education, NU, Thailand, January 17-18, 2008, Prof. Daniel Stufflebeam, creator of CIIPP Model, U.S.A, and his colleague Prof. Arlen Gullickson, when talking about "sustainability evaluation," stated that sustainability evaluation assesses the extent to which a program's contributions are successfully institutionalized and continued over time. First, for Evaluator Activities, they are of (1) Interview program leaders and staff to identify their judgments about what program successes should be sustained, (2) Interview program beneficiaries to identify their judgments about what program successes should be sustained, (3) Review the evaluation's data on program effectiveness, program costs, and beneficiary needs to judge what program successes

should and can be sustained, (4) Interview beneficiaries to identify their understanding and assessment of the program's provisions for continuation, (5) Obtain and examine plans, budgets, staff assignments, and other relevant information to gauge the likelihood that the program will be sustained., (6) Periodically revisit the program to assess the extent to which its successes are being sustained., (7) Compile and report sustainability findings in the evaluation's progress and final reports, (8) In a feedback workshop, discuss sustainability findings plus the possible need for a follow-up study to assess long-term results, and (9) Finalize the sustainability evaluation report and present it to the client and agreed-upon stakeholders. Second, for Client/Stakeholder Activities: Continuing Successful Practices, they have (1) use the sustainability evaluation findings to determine whether staff and beneficiaries favor program continuation, (2)use the sustainability findings to assess whether there is a continuing need/demand and compelling case for sustaining the program's services, (3) use the sustainability findings as warranted to set goals and plan for continuation activities, (4) use the sustainability findings as warranted to help determine how best to assign authority and responsibility for program continuation, and (5) use the sustainability findings as warranted to help plan and budget continuation activities. (Figure 35, Appendix, p.527).

Meanwhile, Professor Arlen R. Gullickson, Chair of Joint Committee on Standards for Educational Evaluation, U.S.A said that student evaluation is the process of systematically collecting and interpreting information that can be used (1) to inform students and their parents (guardians) about the progress they are making towards attaining the knowledge, skills, attitudes, and behaviors to be learned to acquire, and (2) to inform the various personnel who make educational decisions (instructional, diagnostic, placement, promotion, graduation) about students. And Gullickson (2008) added that the student evaluation standards are the principles and guidelines for assessing and improving student evaluations in the classroom setting

Secondly, at the 2nd International Conference on Comparative Education: "Vietnamese Education in the Globalization Context," HCMC University of Education, Vietnam, May 23, 2008, Professor. Dr. Le Ngoc Tra, HCMC University of Education, when taking about "Globalization: Some Educational Issues in

Vietnam," expressed that globalization has brought to Vietnam, especially HE level, first, the educational system in the whole education picture of the world and understand its position, and second, professionals with "global thinking competence, democratic spirit, cooperative capability and ability to work in the international environment."

Then, Dr. Tran Thi Bich Lieu, Vietnam National Institute for Educational Management, posing skills for Vietnamese educational leaders in the 21st century, said that there are 10 skills needed for leaders to take into account: (1) skills for leadership and creating "change," (2) skills for vision creating, (3) skills for making policies and management, (4) skills for communication and community relations, (5) skills for policy planning and project development, (6) skills for organizational management, (7) skills for curriculum and instructions management, (8) skills for teaching and office staff evaluation and human resource management, (9) skills for professional development, and (10) skills for scientific and educational research.

Thirdly, at the International Conference on Educational Research 2008 (ICER): "Learning Community for Sustainable Development," KKU, Thailand, September 11-12, 2008, Assistant Professor Dr. Paisan Suwannoi, Dean, Faculty of Education, Khon Kaen University, Thailand, stated that people around the world inevitably face the influence of globalization. Their values and way of life would be challenged. Education could be one solution for providing citizens to survive with knowledge and skills so that they are able to adjust appropriately to the changing world. To ensure the anticipated outcomes, sustainable development seems to be a promising approach. Educators and stakeholders, who are involved in human resource development, should exchange their experiences for the enhancement of learning communities for sustainable development. This approach also corresponds to a goal of UNESCO, which announced that the years of 2005 to 2014 will be a decade of education for sustainable development. This special event aims to give international educators opportunities to share their ideas, to form networks and to join hands, working on education for sustainable development. Their sharing of research and development may contribute greatly to learning communities for sustainable development. (Figure 48, Appendix, p.534).

Associate Professor Dr. Peter Bodycott, Director, International Office, The Hong Kong Institute of Education, Hong Kong, posed that The Hong Kong Institute of Education (HKIEd) was established in April 1994 and has had a growing international reputation for excellence in preparing globally aware professional educators, providing high quality culturally enriched educational experiences, and for producing research of distinction. Central to the Institute's internationalization policy is a commitment to developing international and regional networks that will facilitate the integration of an international, intercultural or global dimension into the teaching, learning, research and service functions of the institution.

Professor Dr. Shuichi Kuramata, Director, International Student Exchange Center

Hirosaki University, Japan expressed that in Thailand, and in many other parts of the world, education reform continues. Globalization has the big impact on education reform. To adopt this tendency properly, we have to check the existing education systems. This event provides with good opportunities to share knowledge, practices and plans in education reforms towards the conference targets. International character of this opportunity specially gives us the chance to consider globalization.

Fourthly, at the International Conference "Commemorating the 25th Anniversary of Phi Delta Kappa (PDK) (Thailand Chapter): Ethnics vs Technology in Postmodern Era of Education," Assumption University (AU), Thailand, November 7-8, 2008, Rev. Bro. Dr. Bancha Saenghiran, President, Assumption University, Thailand, when stressing the key words at his opening speech at this event, said

> ...We, as educators, have both an opportunity and a responsibility, and it is imperative that while enjoying the former, we not abdicate the latter. Our opportunity is to take the tremendous potential of these new technologies and use them to provide the best in updated learning methodologies for our students; to take this new knowledge and interact with other scholars all over the globe as we work together to find new ways to advance knowledge; to work with students having needs beyond the scope of a normal classroom and find ways to use these technologies to enhance and improve their learning; to serve those in locations not traditionally served by learning institutions, such

as jails, remote farming communities or poorer areas; to take the potential of these new technologies and find ways to make them serve the ever changing needs of our students

(Bancha Saenghiran, November 7-8, 2008)

Besides, Associate Professor Dr. Pornchulee Achava-Amrung, Dean, Graduate School of Education, AU, Thailand, pointed out her ideas that education has always been vital to the success of individuals. In the knowledge-driven economy, it is also an investment in the collective future as society. Science and technology play an increasing vital role in enabling and shaping way of life and progress.

Fifthly, at the 1st University Social Responsibility (USR) International Conference (USRIC 2009) hosted by Sripatum University, Thailand, January 12-13, 2009, Dr. Molly Lee, UNESCO representative in Bangkok, Thailand, when speaking about "Reorienting Higher Education: Towards Participatory and Sustainable Development," concluded that university social responsibility (USR) must take its roles as the same as those of UNESCO in education in terms of economic development, political development, cultural development and social development, and participatory development with "people-centered" approach.

Dr. Chriatina T. Schachter, Director of Organizational Development, Stanford University, U.S.A, while addressing "the leading roles of the university in the local and global social responsibility," said that the roles are (1) engaging into diverse stakeholders (local and global) actions, (2) doing new approach with research, and (3) exceeding stakeholders of education towards the model SEED (Science, Environment, Education and Development) , and having "student curriculum" with the local and global partnerships.

Meanwhile, Dr. P. Moral, President of USR said that this organization, the University Social Responsibility Alliance (USR Alliance), is a global network of universities who are interested in actively participating in programs throughout the world committed to creating learning venues that hold to the critical importance of social responsibility. Now in the 21st century, it is essential that universities take a firm stand on our responsibility to teach students how to learn and live in socially responsible ways. University faculty and administrators need to assume

the position of global advocates to work toward creating higher education systems imbued with pedagogical and experiential venues that graduate socially responsible individuals. Moreover, the learning venues must also include the sense of advocacy and committed lifestyles that include working toward finding solutions for many global problems including caring for the environment, social justice and poverty eradication. One important way for our ideals and commitment to be carried out is to work together on a global front. Each person can work with one other, and overtime throughout the world, we can make a sustainable difference. This idea of unified commitment on a world-side basis can be realized through a network of universities dedicated to this goal.

Sixthly, at the 2nd International Conference on Educational Reform 2009 (ICER): "Cultural Diversity and Sustainable Education in a Changing World," hosted by Mahasarakham University (MSU), Thailand, March 25-27, 2009, Professor Dr. Gary Glen Price, an international dissertation advisory member, School of Education, University of Winsconsin-Madison, U.S.A, when considering "challenges to Education for Sustainable Developemnt" in educational reform, stated that the university needs to have some thing created such as "curriculum change as cultural change," "teachers as defenders of culture," and "reform reckoning with school culture." (Figure 48, Appendix, p.534)

In addition, Professor Dr. Marulyn Waring, Institute of Public Policy, Auckland University of Technology (AUT), New Zealand, once speaking up Sustainable Development (SD) issues, gave out the definition of SD. To Professor Waring (2009), SD is described as development that meets the "needs" of the present without compromising the ability of the future generations to meet their own needs. She explained that this definition reveals the two key concepts within it: the concept of "needs"- that the essential needs of the world's poor should be given priority, and the idea of limitations imposed by technology and social organization on the environment's ability to meet the present and future needs.

Professor John Renner and James Cross, Edith Cowan University, Australia, mentioned about Education for Sustainable Developemnt (ESD). They came out with the citing of Moore Janet (2005) seven avenues for universities as presented below: (1) infuse sustainability in all decisions, (2) promote and practice collaboration, (3) promote and practice transdisciplinarity, (4) focus on personal and social sustainability, (5) integrate planning, decision making and evaluation, (6) integrate research, service and teaching, and (7) create space for pedagogical transformation.

Seventhly, at the International Conference on Society and University-ICSU 2009: "Roles for Community Strengthening" Rambhai Barni Rajaphat University, Chantaburi, Thailand, August 5-6, 2009, in his keynote lecture, F.W.H Beamish, University Professor Emeritus, University of Guelph, Ontario, Canada, said that, in environmental-based education (EE), the roles of the university are essential to guide students to help the locals to protect "our environment."

Professor Cecilia N. Gascon, President of Southern Luzon State University, Lucban, Quezon, Philippines, when addressing "change' in sustainable development in educational field, pointed out that the change in mindset-that is imperative to ensure the vision – must be a sustained, long-term effort to transform education at all levels. To her suggestions, the leadership role is very important school and community. The education of all professionals would reflect a new approach to learning and practice. A college or university would operate as a fully integrated community that models social and biological sustainability itself and in its interdependence with the locals. Then she posed some thrusts as follows: (1) capacity building to both teachers and students, (2) infrastructure development in terms of lab, library, and classrooms and so on, and (3) effective networking and collaboration between school and community.

Meanwhile, Stewart Brougham, Internationalization Director of Waikato Institute of Technology (Wintec), Hamilton, New Zealand, while taking about problems of international students in the era of globalization, indicated that they [international students] are facing some obstacles when studying abroad in terms of the "gap" of perception and reality, which are often filled with disappointment. He added that bridging that gap is a key requirement for HEIs keen to retain students, motivate them for success and help prepare them for industry.

Eighthly, at the International Conference on Educational Research 2009 (ICER): "Learning Community for Sustainable Development," KKU, Thailand, September 11-12, 2009, Churairat Sangboonnum, Inspector-General, Ministry of Education Region 8, Thailand, while delivering her speech about "Thailand Educational Management Policy for Sustainable Development," stated that, within Thai educational reform, especially in HE level, in the slogan "A Smarter Thailand with Smarter People," educators will develop learning communities with (1) to promote the establishment of professional development networks among educators and educational personnel, (2) to encourage educational institutions to work together in clusters and to share resources, (3) to promote collaboration between a wide range of public and private sector partners, and (4) to reaffirm the importance of engaging with local communities to solve real problems that affect people's quality of life. And Churairat (2009) added that, for the international climate, Thailand will be the center for international education in the region, and has an Asian Studies Program and the study of the regional languages.

Professor Dr. Yin Cheong Cheng, the Hong Kong Institute of Education, once making his speech about "Teacher Management and Development: Reform Syndrome and Paradigm Shifts," posed the model of the implementation for teacher management based on the most important of the following three things: (1) getting the right people to become teachers, (2) developing them into effective instructors, and (3) ensuring that the system is able to deliver the most possible instructions for every learner. Also, to Professor Cheng (2009), so far (from 1980s up to now), there have been "three waves of teacher management." During 1980s-1990s, the first wave was "Teacher Internal Effectiveness" for the delivery of planned knowledge and skills in classrooms. Then coming up with the second wave, during 1990s, it was "Teacher Interface Effectiveness" for satisfying the stakeholders' expectations and needs in a competitive environment. And during 2000s, it has been the third wave "Teacher Future Effectiveness" for facilitating students' new learning and multiple and sustainable developments for the future.

In addition, Professor Kerry J. Kennedy, the Hong Kong Institute of Education, when giving his talk about "Creating a Citizenship Curriculum," put down his suggestions with a number of principles for curriculum developers as follows: (1) the school is not the only agent involved in citizenship education. The community, family and peer also play a role. Any curriculum must consider these external influences, (2) the environment of the school plays an important part in preparing young people for citizenship, (3) classrooms provide learning opportunities related to the formal and informal curriculum, and (4) the school curriculum is a cultural task in the broader social contexts. (Figure 48, Appendix, p.534).

Ninthly, at the 1st International Conference Learning & Teaching: Active Learning (EDUCA 2009) hosted by Burapha University, Thailand, October 15-17, 2009, Dr. Karen Dunn, Head of International Development in Education, Sheffield Hallam University, UK, posed her speech about "Educational Reform in the UK: Implications for Learning and Teaching," that educational reform is regarded as high priority towards (1) transformational leadership and school management, (2) high quality teaching, (3) relevant curriculum, (3) flexible pedagogies, (4) high quality infrastructure, (5) high levels of public trust, and (5) resources. Karen (2009) delivered out the key reform initiatives (since last 10 years) with (1) an integrated children's workforce, including (i) reshaping services around the needs of children, young people and families, (ii) considering education as part of a wider children's workforce, and (iii) having dialogues with employers, the workforce, children, young people and their families, as well as high quality research to inform policy decisions, with (2) redefining aspects of the teacher's roles, dealing with (i) expansions of teaching assistants (TA) and Learning Support Assistants (LSAs), (ii) teachers increasingly the planners and supervisors of lessons by assistants, (iii) changes in traditional and pastoral roles, and (iv) Learning Mentors and Inclusion Workers Roles, and with (3) integrated qualifications framework (IQF), referring to (i) a set of approved qualifications allowing progression, continuing professional development and mobility, (ii) responses to the needs for new career structures within education, and (iii) supports to the development of shared values and learning approaches across the whole of the children and young people's workforces.

At the same time of this conference, Dr. Bernard Hugonnier, Deputy Director for Education, OECD, France, when giving out his speech about "The New Insights on Teaching and Teachers Quality: The Main Lessons from OECD first International Survey Contributed to Teachers and School Leaders," stated that teachers need appraisal and feedbacks from school leaders for more effective performances. He said that," Teachers, who receive recognition for good performance from the principal or colleagues, feel more effective." And taking about "leadership and management styles," Bernard (2009) expressed about shaping the development of teachers through effective school leadership that (1) instructional leadership style deals with (i) management-school goals scale, (ii) instructional management scale, and (iii) direct supervision of instruction in the school scale, and that (2) administrative leadership style copes with (i) accountable management scale, and (ii) bureaucratic management scale. And he came up with the conclusion with the school leadership, "In a number of countries, where school leaders adopt a stronger instructional leadership role, (1) there is more collaboration between teachers, (2) there are better student-teacher relations, (3) there is greater recognition given to teachers for innovative teaching practices, and (4) there are more emphasis on development outcomes of teacher appraisals.

Meanwhile, Sakari Karjalainen, Director General, Ministry of Education, Finland, while making his speech about "Finland and the Crucial Development of Education: How Finland Stays on Top?" addressed that this country is basing on Basic Education Act, 1998, Sections 2 and 3 for the lifelong learning, in which (1) education shall promote civilization and equality in society and pupils' prerequisites for participating in education and, otherwise, developing themselves during their lives, (2) the aim of education shall further be to secure adequate equity in education throughout the country, and (3) education shall be governed by a unified national core curriculum in accordance with the Act. He added that the success of Finland lies in (1) flexible curriculum strategy, (2) integrative and cross-curricular themes in curriculum, (3) flexibility in organizing teaching and learning, (4) important principles for basic education, and (4) the quality of the Finnish education system. Sakari (2009) said that teachers in Finland are the key in education and teachers are as valued experts. And for the international trends, this country has implemented unique performances compared with the international ones as follows: (1) International trend:

(i) Standardization with standards for schools, teachers and students to improve the quality of outcomes, (ii) Emphasis on literacy and numeracy with basic knowledge and skills in reading, writing, mathematics and science, and (iii) Consequential accountability, which the school performance closely tied to "inspection" and ultimately rewarding or punishing of schools and teachers, (2) Finland: (i) Flexibility with school-based curriculum development networking through steering by information and support, (ii) Emphasis on broad knowledge with focus on broad learning objectives, equal values to all aspects of an individual's growth in personality, moral, creativity, knowledge and skills, and (iii) Trust through professionalism with culture of trust, i.e., valuing teachers and principals' professionalism in judging what is best for students and in reporting on progress of their learning.

In addition, Professor Eugene P. Sheehan, Dean, College of Education and Behavioral Sciences, University of Northern Colorado, U.S.A, posing the ideas in "The P-20 Movement in the United States," that it is the project integrated from kindergarten to higher education levels with its goals (1) improving students achievement, (2) increasing graduation rates at all levels, (3) improving access to education, (4) improving teacher quality, and (5) making data-based decisions. Eugene (2009) focused on the standards and accountability of school performance with (1) aligning curriculum throughout system, (2) having regular assessments of students, (3) holding accountable for student performances, and (4) going to the international benchmarking part of President Barrack Obama "Race to the Top," and on the teacher quality with (1) performance-based standards and clinical field experiences, (2) licensing examinations, (3) more fully integrated schools into teacher preparation, and (4) professional development.

And tenthly, at the 3rd International Conference on Higher Education for Sustainable Development with the theme "Transforming Higher Education for a Sustainable Society (HESD)," at Universiti Sains Malaysia (USM), Penang, Malaysia, 20-22 November, 2009, Professor Dzulkifli Abdul Razak, Vice Chancellor, USM, Malaysia, and Professor Gerd Michelsen, UNESCO Chair HESD, University of Luneburg, Germany both said that 2009 heralds the conclusion of the first half of the UN Decade "Education for Sustainable Development" and consequently grants people, especially HE stakeholders an opportunity to critically reflect on the

milestones accomplished thus far and to consider which tasks and challenges still remain to be dealt with. Therefore, it would seem only natural to take stock and contemplate as well as identity tasks and challenges and to emphasize on promising strategies and solutions. However, the crucial question remains, what value is added by incorporating questions of sustainability into teaching and learning in HE? Education for Sustainable Development can be a motivating force for innovation in advancing teaching and learning in HE, while simultaneously needing constant rekindling in education for sustainable development itself in order to meet the manifold challenges.

On this occasion, Professor Dr. Arjen Wals, Wageningen University, the Netherlands, when talking about "Learning for a Sustainable World," indicated that the world continues to face various critical challenges such as human-induced climate change, the rapid depletion of natural resources, the frequency of natural disasters, the spread of (old and new) infectious diseases, the loss of biodiversity, the violation of human rights, increased poverty, the dependency of economic systems on continuous growth in consumerism and so forth. SD has become a vehicle around the globe for expressing the need to depart from present dominant models of development which appear unable to balance the needs of people and the planet in the pursuit of peace and prosperity. And Arjen (2009) expressed the ideas about ESD that while the roots of ESD can be traced back to the early 1970s, its first flowering occurred at the United Nations Conference on Environment and Development (UNCED) also known as the Earth Summit, held in Rio de Janerio, Brazil, in 1992. UNCED resulted in a landmark publication: Agenda 21, which provides a comprehensive plan of action to be taken globally, nationally and locally by UN agencies, governments and major organizations (NGOs, CSOs and networks) to reduce the human impact on the environment, Agenda 21, the Rio Declaration on Environment and Development and the Statement of principles for the Sustainable Management of Forests were all adopted at the Earth Summit by 178 Governments. The Commission on Sustainable Development (CSD) was created in December 1992 to ensure effective follow-up of UNCED and to monitor and report on implementation of the agreements at international, regional, national and local levels. In Chapter 36 of Agenda 21 on education, training and public awareness, for which UNESCO was designed as Task

Manager, identifies four overarching goals: (1) Promote and improve the quality of education: The aim is to refocus lifelong education on the acquisition of knowledge, skills and values needed by citizens to improve their quality of life, (2) Reorient the curricula: from pre-school to university, education must be rethought and reformed to be a vehicle of knowledge, thought patterns and values needed to build a sustainable world, (3) Raise public awareness of the concept of sustainable development: This will make it possible to develop enlightened, active and responsible citizenship locally, nationally and internationally, and (4) Train the workforce: Continuing technical and vocational education of directors and workers, particularly those in trade and industry, will be enriched to enable them to adopt sustainable modes of production and consumption.

In addition to this special event, Professor Dr. Eijun Senaha, University of Hokkaido, Japan proposed a project with a model called "Alternative University Appraisal Based on ESD" (AUA Project) from 2009 to 2011, aiming to enhance the value and attractiveness of Asian-Pacific universities engaged in ESD, and create learning community for improving their practices. And Eijun (2009) added that the AUA model would be developed based on (1) the vision of the ideal university that contribute to SD, and (2) the results of the review of the existing university ranking and ranking systems. The AUA model would provide resources for HEIs to review and critically reflect upon their own practices in their major areas of activity, including the three major functions of education, research and outreach, from the perspectives of ESD. Also, the AUA model would indicate points to consider in HEIs' efforts to reorient themselves towards a sustainable future and helps them identify the areas that need to be addressed and improved. In other words, the AUA model would serve the purpose of "guidelines" and "signposts" that help a university learn what is required in order to evolve into a university that promotes ESD initiatives in a practical manner. (Figure 51, Appendix, p.535).

In brief, the ideas from the above-mentored keynote speakers at the international conferences gave out more thoughts and perspectives to HE lecturers and administrators to consider when they have plans for their lessons, strategies, and policies and others in both the short-term and long-term projects at their organizations.

Thirdly, in the reviews of the 35 interviews of keynote speakers and advisory members, here in this part, let us take more ideas from the experts, professors, deans, and other academicians to HE issues.

On August 26, 2007, Professor M.S Yadav, Center for Advanced Studies in Education, New Delhi, India, once speaking with Ph.D. students of Educational Administration, Faculty of Education, NU, Thailand, talked about Indian educational issues and stated that "management in education" is not a basic discipline like sciences and social sciences. Yet, it has its own perspectives as a distinct area of study and development. It is a "professional arena." It responds to varied needs of different fields of action. Yadav (2007) added that management in education as an area of study is of great significance to education and other areas of study and development. However, it needs to be appreciated that management takes different forms as perspectives and requirements it has to fulfill by way of providing infrastructure and other facilities in a given system. Similarly, management in education has to provide organizational structures and other action oriented programs which should yield expected results. All these are mainly determined by the concerned discipline of study and development. The management; therefore, operates in the perspectives and requirements of a discipline or area of work and development.

On November 15, 2007, speaking with international students at Graduate School, Naresuan University, Thailand, Professor Dr. Charles Webber, an international dissertation advisory member, said that leaders in the era of globalization must act locally but think globally with (1) self-awareness, (2) external awareness, (3) increased uncertainty, (4) self-reflection, (5) motivation, (6) sense of agency, (7) loss of isolation and (8) resistance to conformity. Webber (2007) also expressed that students have to think about "leadership" in leaning with (1) learning beyond self, (2) co-learning, (3) use of new tools supported by technology, (4) unseen connection between education and larger community, (5) emotional engagement, and (6) altruism nurtured. And in the sense of campus stakeholders, Webber (2007) focused on the

roles (1) international centers, deans, faculty members, (2) students and student associations, (3) lawyers and (4) faculty associations because of the following benefits: (1) enriched curriculum, (2) professional/personal networks, (3) reduced ethnocentrisms, (4) increased professional competence, (5) adaptability to "change," (6) educational entrepreneurialism, and (7) cross-cultural research possibilities. (Sample of interview from, AppendixQ, p.536)

On December 10, 2007, meeting with a top professor of ICT, Professor Dr. Yean Phoovawan in Faculty of Education, Kasetsart University (KU), Thailand, the researcher got the information that KU has been implementing Knowledge and Innovation Management (K&IM) and linking to ICT of Eco –system (ecology) with the model: network with network of each user. And adding to this issue, Professor said that KU has had a "model to share international climate" built up so far (1) collaboration learning, (2) cooperative education, (3) faculty peer review, (4) cultural pluralism, and (5) learning communities. For Teachers' Action, he posed the model for the teacher (1) change "stage on the stage," that means guiding on the site and being a facilitator, (2) mentor that means developing faculty peer review and undergraduate research, (3) exchange ideas between student and teacher and between teacher and teacher, and (4) accepting "change" with e-learning, e-education, e-school and other online classrooms.

On December 14, 2007, when being asked about the present administration and future plans of Rotary Center for Peace and Conflict Studies, CU, Thailand, Mr. Tucker McCravy, Deputy Director, said that he was pleased about the management of the center with both Thai and foreign power sharing. The center had no Vietnamese lecturers or candidates. He wanted to invite some of lecturers and recruit candidates from Vietnam to join this program. And more importantly, the cooperation with Vietnamese counterpart would be the first thing to do. Then fieldtrips to Vietnam with real pictures from Vietnam War would be unique experiences to students (At this time the fieldtrips just were in Thailand, Laos and Cambodia). And the books in Vietnamese would be collected to make the center library more diverse. (Figure 33, Appendix, p. 526)

On December 29, 2007, when taking about ICT and HE with PhD students of Educational Technology,Faculty of Education, NU, Thailand, Prof. Deputy Director Xu Guang Ze, Modern Educational Technology Center, Yunan Normal University, China, said that, in the application of "change" in these areas, "instructional design" is very important because each teacher has to consider learners' need to design the process (1) Design, (2) Development, (3) Implantation and (4) Evaluation.

On May 23, 2008, at the 2nd International Conference on "Comparative Education; Vietnamese Education in the Globalization Context", HCMC University of Education, Vietnam, Professor Jim Cobber, Florida State University, U.S.A, when taking about "Globalization of education: Cooperation, Competition and Policy," indicated that education and HE in particular can be viewed as "an industry." Cobber also (2008) expressed, "Universities compete in many ways, but particularly for students. This kind of competition is likely to increase within Vietnam for domestic students as university funding in Vietnam moves more towards an enrollment-driven methodology without strict controls on enrollment, as policy statements have said it will."

On March 8, 2008, Do Quoc Trung, Director of Kiengiang Community College (KCC), Mekong Delta Region, South Vietnam, once mentioning about "Globalization and HE: The Emergence of Community Colleges (CC) in Vietnam," spoke out that there are three global trends in HE (1) diversification, (2) decentralization and (3) restructuring HE. Do Quoc Trung (2008) added, "In the sense of the CC roles and its autonomy, regulations from Vietnam's HE should specify that CC fulfils the two primary purposes (1) educating students the basic curriculum for the 1st two years, thereby, enabling themselves to continue the following two years at a university, and (2) training the community's workforce with knowledge and skills that serve the local socio-economic developments." At the same token, Do Quoc Trung (2008) suggested that CC should be able to operate in a flexible manner, allowing for responsiveness to the evolving needs for their local communities. And Vietnam HEIs and CC need regulations that enhance increased responsibilities for management and operations as well. (Figure 41, Appendix, p.530).

On September 12, 2008 Dr. Lo-Fu Yin Wah Priscilla, The Hong Kong Institute of Education, Centre for Learning-study and School Partnership, when talking about "Teacher' development in a professional learning community in Hong Kong schools," expressed that "professional learning" to the improvement of their students' learning, where the teachers take collaborative responsibility for students' learning and work together to maximize their learning. The shift from focusing on teaching to students' learning has profound implications for schools. Teachers in the professional learning communities should be able to do the following three things: (1) care about what should be worthwhile for students to learn; (2) think carefully on how to help students learn better and (3) find out if each child is learning. This distinguishes them from other teachers. Learning Study can be regarded as a powerful agent in the development of such community. There are various key ways to make this happen.

Priscilla (2008) added that during the Learning Study cycle, teachers meet regularly over a period of about four to six months, to clarify about the object of learning of the research lesson. As every teacher in the group has to participate in the teaching of the lessons, the discussions are always fruitful and dynamic. Each teacher has his or her contributions to make by sharing previous experiences in teaching the topic. The pulling together of their experiences and ideas proves to be very useful in researching into one lesson. They recognize that they must work together to achieve their collective purpose of helping students to learn better. Thus, Learning Study creates the structure to promote a collaborative culture among peers.

On September 13, 2008, Dr. Grace Koko Etuk, and Dr. Eno Etudor-Eyo, Department of Curriculum Studies, Educational Management and Planning, Faculty of education, University of Uyo, Akwa Ibom State, Nigeria, while expressing "school climate and curriculum implantation posed that the term, 'school climate' is a loosely-defined, fluid and global construct, which has been indicated as being a veritable contributor to effective instruction and learning in schools. The notion of the school climate in terms of the norms, beliefs and attitudes reflected in attitudinal patterns and behaviors that enhance or impede students' learning. It is more embracive view of the organizational climate as being the internal atmosphere of the organization; a relatively enduring quality of the internal environment of an

organization, which is experienced by its members and influences their behaviors. The distinction between the organizational climates from the confusions of organizational culture is by maintaining that culture includes deeply held values, beliefs and assumptions which are generally deep and stable. Organizational climate on the other hand is the recurring patterns of behaviors, attitudes and feelings that characterize life in the organization

Meanwhile, curriculum implementation is a very vital work in schools which is usually done by teachers. This is the last activity in the curriculum development process. It is usually preceded by such activities as problems identification, curriculum planning, personnel and materials development and trial-testing. Curriculum implementation is limited to classroom instruction by teachers and how they go about doing it; teachers' effective their behaviors in curriculum implementation. Teachers play major roles in schools through curriculum implementation. They interpret the curriculum and formulate class-level objectives from the broad objectives contained in the curriculum blue-prints, thus translating the broad and open-ended objectives into specific ones and they relate systems' objectives with those in their different subject-areas. In doing this, teachers form a link between the policy makers and school-leadership on the one hand, and between school leadership and students on the other hand. By virtue of their training, teachers can identify the intellectual and psychological needs of learners. Teachers help select learning opportunities for learners and material resources for curriculum implementation. They translate the curriculum and help evaluate the students. The level of success attained in curriculum implementation very much depends on what teachers do with learners within the confines of the classroom, because the hidden curriculum is partly under teachers' control

On September 13, 2008, Dr. Dante V. Andal, San Antonio, InfoTech School DEPED Quezon, Philippines, addressing "an alternative learning system: current trends and innovators for community learning –based program," a case in Philippines, said that The Non Formal Education Accreditation and Equivalency (NFE A&E) offers an Alternative Learning System (ALS) which aims to : (1) provide a system for assessing levels of literacy and non formal learning achievement based on the NFE Curriculum covering basic and functional education skills and competencies;

(2) offer an alternative pathway by which out of school youths and adults earn an educational qualification; and (3) enable out of school youths and adults to meet their learning goals as they define them and to gain the skills they need to improve their economic status and function more effectively in society. The curriculum for Alternative Learning System (ALS) reflects the set of skills and competencies and learners should develop to meet the minimum requirements of basic education. It is comparable to the formal school curriculum as it addresses the learning needs and interest of out – of – school youth and adults. The key components of the NFE A&E system: (1) Curriculum Framework which contains a learning continuum of essential skills, knowledge, attitudes and values; (2) Learning Materials comprising learning modules, print and non provide learners a range of flexible learning support services; and (3) Accreditation and Equivalency Testing designed to provide two levels of certification of learning achievements. Education or Literacy in the present time is not only a human right but also a key for conquering the 21st century. The NFE A&E is a powerful tool for sustainable development on peace and stability as well as poverty and ignorance of the nation.

On March 25, 2009 at the 2nd International Conference on Educational Reform 2009 (ICER): Cultural Diversity and Sustainable Education in a Changing World" hosted by Mahasarakham University (MSU), Thailand, Prof. Gary Glen Price, School of Education, University of Winsconsin-Madison, U.S.A, expressed his ideas about 'Challenges to the Sustainability of Educational Reform: in HE level that the most common reforms have been 'curricular." There implicitly assumes that the adoption of a new curriculum is the most effective or enduring way to "change" the practices and outcomes of colleges or universities.

On March 25, 2009, Professor Dr. Bob Chiu-Seng Yong, an international dissertation advisory member, Sultan Hassanal Bolkiah Institute of Education, Universiti Brunei Darussalam, Brunei, concurrently an advisory member, once being asked about educational reform in Brunei with the active participation of teachers, said that Brunei Darussalam is embarking on a new national education reform system called "The 21st Century National Education System (SPN21). The reform will involve "major: changes" in the education structure, school curriculum and assessments. The trial run has already started in 2009 and will be fully implemented in

2016. The success of this reform will inevitably involve the active participation. Yong (2009) added that an important question is that whether the teachers are well prepared for their full support to this new initiative at a time when demands made upon them have been increasing over the years.

On that occasion, Dr. Prayon Wongchantra, Faculty of Environment and Resource Studies, Mahasarakham University (MSU), Thailand, on speaking about "Teaching Environmental Ethics for Undergraduates," stated that environmental problems were made by human beings because they lack environmental ethics. Thus, the sustainable solution to these issues must partly rely on a teaching process of environmental ethics infusion methods. Environmental education teaching process used with ethics infusion could develop the students' environmental knowledge and environmental ethics. In this context, the roles of teachers are recognized.

On March 26, 2009, Dr. Riswanda Setiadi, Indonesia University of Education, Badung, West Java, Indonesia, when discussion "professional development" through "Indonesia's In-service Teacher Education and Certification Program" from the Indonesian government, said that, with increasingly intensifying demands for education reform in Indonesia, the quality and qualifications of teachers have become a burring issue among those who are concerned about education. In 2005, House of Representatives passed Law No. 14 on School Teachers and University Lecturers which requires the Indonesian government to run a Teacher Professional Education and Certification Program and HEIs with accredited teacher training programs and appointed by the government assume the responsibility for the program management and implementation According to Riswanda Setiadi (2009), it is likely that the program will help teachers with more professional, effective and instructional teaching methods and managerial techniques.

Also on the same occasion, Dr. Baratali Monfaredi Raz, Islamic Azad University-Bojnord Branch-Iran, being questioned about "educational and development" in the global perspectives, replied that, not regarded to any definition given to the term "development" including to cause to grow expand or human advancement in face, the point is that it flows in order to elevate the human lives in a society, at least, people can say that it must be realized by everyone in the society. Undoubtedly, anyone who has benefited from specific capabilities, so-called the

prerequisites of development is mainly provided by educational system. Raz (2009) added that in the third word, education and development must be based on cultural heritage of a nation in order that the critical needs and mentalities of the nation are understood. The development plans in the third world countries are often "socially, culturally, politically and economically" unsuited and are merely copied from a global pattern rather than the exact condition of the related society. Therefore, though the development technology pattern has brought advancements in the Western imperialistic countries, the same pattern has brought poverty and under development for the marginal countries. Thus, learners often look for the effective elements and psychological readiness for innovations in mass media expansion, literacy, higher level of education and partnerships. On the whole, they [learners] explore within individuals and society and hold on that humans provoke development; therefore, well-educated humans bring out innovations.

On March 27, 2009, Dr. Kyawswar Tint, Mandalay Technological University, Myanmar, when replying his ideas to "the roles and responsibilities of the Government in the management processes to promote Sustainable Development" in the case of industrial project with the help of HEIs in Myanmar, pointed out that, to obtain sustainable development in every industrial project of all countries, it is necessary to get all the stakeholders involved in: investors, donors, national government, local communities, NGOs, international NGOs, academic researchers, and other interested parties, which help maintain and improve conservation and community development efforts. Here in this sense, the roles and responsibilities of the government are to monitor, enforce the industrial projects and to promote sustainable development besides proper policies, planning and management.

Also, on that time, Dr. Suresh Kumar Srivastava, Vice principal, Hans Raj College, University of New Delhi, India, when responding to the ideas "Globalization and Education for Social Transformation: Problems and Strategies," indicated that the turn of this century has witnessed significant transformation in technology that has, on the one hand, brought the world closer and, on the other hand, created disparities in terms of access and consumption of resources. Denial of access to education, healthcare, food and shelter and legal resources has undermined the very fabric of people's civil society that ensures human rights to all. The Universal

Declaration of Human Rights proclaimed the Right to Education for All (EFA); that education be directed to the full development of human personality and strengthening of human rights; that the parents have a prior right to choose the type of education they want for their children. These rights are repeated by the UN Declaration of the Rights of the Child. In Indian cases, there have been studies about educational development from the colonial times up to now, which have clearly shown that there is a growing awareness of education as an instrument for social transformation and significant steps have been taken in this direction. Yet, there is also the realization that the measures have been inadequate. Srivastava (2009) added that problems are many, and solutions are not easy to offer. The foremost need is to make education available to all, and this calls for a large-scale movement to make people literate and also achieve higher goals of education.

On August 6, 2009, Professor Dr. Govinda Bhattarai, Tribhuvan University, Kathmandu, Nepal, while being asked about "Highlights on the "Roles of Higher Education" with reference to Nepal," replied that Nepal freed herself from the fetters of a century old dictatorial rule in the second half of the 20th century and sprang out of the cocoons of a dark medieval world in 1951. Eight years later, the first university was set up in the kingdom under the name of the then King Tribhuvan. Tribhuvan University (TU) is situated in Kirtipur, a small town located five kilometres away from downtown Kathmandu, the ancient capital city of Nepal. 2009 is the Golden Jubilee Year of Tribhuvan University. By now there are altogether 7 universities functioning, a few more in the pipeline in the country; however, Tribhuvan, the eldest and the largest one has laid the strong foundation of the nation by opening up colleges, producing high level manpower required for the nation. Today almost 95 percent of the total manpower technical and non-technical together working in the capacity of administrators, lawyers, teachers, and politicians-all is the graduates of Tribhuvan University. Tribhuvan University is a non-profit making institution financed mainly by the Government of Nepal. It has a nationwide network of 51 Constituent and some 500 affiliated campuses that provide higher education to 171,592 students in different disciplines and subjects across different Institutes and Faculties distributed from Certificate level to Doctorate degrees for which some 7,049 teaching faculties and 5,607 non-teaching staff are involved. Tribhuvan University has

a set of four objectives as: (1) To provide skilled manpower essential for the overall development of Nepal, (2) To preserve and develop historical and cultural heritage of the nation, (3) To accumulate, advance and disseminate knowledge, and (4) To encourage and promote research in arts, science, medicine, engineering, agriculture, management and education as well as the vocational fields. Tribhuvan University has five Technical Institutes, namely Institute of Science and Technology, Institute of Engineering, Institute of Medicine, Institute of Forestry, and Institute of Agriculture and Technical Sciences each headed by a Dean.

Zhang Xuhong, Teaching Quality Manager for Foreign Students in English Teaching Program, International Exchange Center, China Medical University, Liaoning Province, P.R. of China, while talking about "management of work for education," posed that main purpose of education management is to provide efficient and appropriate methods for teaching, adequate content and conducive conditions for learning so as to make education more attractive in itself, to cultivate the characteristics of the times more people. Thus, education management is the cornerstone of education, which plays a supervisory role in education. Since the education management has a clear purpose, and then we should also have the measures and methods to achieve this purpose as well as the specific operators. Zhang Xuhong (2009) added that "education management" can be done a good job with any code of conduct; more work should not be taken for granted. The people who engaged in educational management, should be in line with the objective reality, and practical management methods in their mind, and seek the practical results, any measures to be adopted in their work must be given a reasonable explanation. For example, in the beginning of a semester, they have to make the work plan and the implementation of the main points in order to do a good job for this semester. The important matters have to be on its agenda directly, such as graduate students, new students etc. In the specific implementation process, it must discover and solve the practical problems happened in the work of education at any time, in order to ensure the successful completion of education. This is not only the work of the educational management responsibility, but also the educational management of the science lies.

On September 11, 2009 at the International Conference on Educational Research 2009 (ICER): Learning Community for Sustainable Development at KKU, Thailand, Dr. Aan Komariah, Indonesia University of Education, when being interviewed about 'change management in education' said that the aspects of 'change' in management must be observed from the transformational leadership, organizational environment, organizational structures, the efficient use of human resource and the implementation of technology (ICT). And towards "Quality Assurance Education," she added that it can make a start with self-evaluation to identify the forces and the main areas, where the needs for improved performance in the benefits of the creating. Self-evaluation process allows the authority to determine how to increase again the target of education, and to plan next steps in the development to maintain quality, secure sustainable improvements to the desire to excel.

In addition, at the same time, at the International Conference on Educational Research 2009 (ICER): "Learning Community for Sustainable Development at KKU, Thailand, Prof. Richard K. Coll, University of Waikato, New Zealand, when asked about ESD, said that it is linked to the roles of science and technology, population control, social justice issues, the tension between competing needs of economic development and environmental impacts, poverty, developed versus developing nations and so on. Thus, the roles of educational units, especially HEIs, are of great importance to spread out ESD to all kinds of students.

On September 12, 2009, Oduro-Mensah and I. K. Biney, Institute of Adult Education, University of Ghana, Legon, said that globally, lifelong education has been identified as the most important driver of social, economic, political, technological and environmental development. However, meaningful and realistic national development can only be achieved when sufficient attention is paid to strengthening the implementation of lifelong education. It, therefore, becomes imperative that governments and the private sectors in developing countries make a lot of sacrifices in terms of resources, time, energy and expertise, toward the promotion of sustainable lifelong education. It is by this process that developing countries like Ghana can derive the fullest benefit from lifelong education and achieve the desired development objective of improving upon the quality of life of citizens.

The Government of Ghana, through The New Education Reform has improved, extensively, facilities in the formal education system at the basic, secondary and tertiary levels. The Government also strengthened apprenticeship training to build skills and capacities of teeming unemployed youth who could not further their education formally. Training in apprenticeship is organized around master-craftsmen who mostly adopt demonstrations, discussions and some minimum amount of lecture in their training to improve upon employable skills and employability of unemployed youth and adults. A modular skills training programs named Skills Training and Employment Program (STEP) has since 2003 been instituted. The program had trained 27,500 youth and adults as at the year 2007 (UNDP, 2007). This would go a long way to help address the seemingly insurmountable youth unemployment, low productivity in workplaces and the thorny issue of streetism confronting Ghana.

On September 13, 2009, Dr. Kim Fong Poon-Mc Brayer, The Hong Kong Institute of Education, Hong Kong, when taking about "Hong Kong Qualifications Framework for Lifelong Learning," said that, in order to respond to the fierce competition resulting from the globalization of knowledge-based economy, the Hong Kong Government launched the massive education reform in 2000 as the central strategy to improve manpower quality. The ultimate goal sets a foundation for the establishment of its companion structure: Qualifications Framework (QF), which started operating on May 5, 2008. The QF is expected to be the catalyst for lifelong learning through its two mechanisms: Recognition of Prior Learning (RPL) and training programs based on Specification of Competency Standards (SCD). Thus, the decision making process from the government and the current policies governing the RPL mechanism and SCD-based programs of the QF, especially in HEIs, are very important

On October 16, 2009, at International Conference about "Learning &Teaching: EDUCA 2009," hosted by BUU, Thailand, Oct., 15-17 2009, Gavin Dudeney, Project Director, British council, UK, when talking about "Community Service: Virtual Teachers Support Networks, replied that the community service consists of (1) shared space, (2) changing roles, (3) voluntary memberships and (4) negotiated goals. The community needs practice (1) social scaffolding, (2) reflection, (3) artifacts, and (4) negotiated meanings, and the service for this

community is likely to meet challenges such as (10 infrastructure: facilities (computers) and access, (2) regulations: teaching materials, curriculum and examinations, (3) technical skills: digital skills such as digital literacy and pedagogy, and (4) competencies: English language, and methodology. He concluded that when creating this kind of community, the designer must have an overall plan: lecturers, materials, methodology and community itself.

Meanwhile, Professor Dr. Tan Oon Seng, National Institute of Education, Nanyang Technological University, Singapore, once talking about "Active Learning and Cyberspace Engagement through Problem-Based Learning," posed his ideas about "knowledge-based education" with the following suggestions (1) encouraging curiosity and discovery, (2) fostering lifelong learning (Transfer of learning across contexts and disciplines), (3) independent learning- assuming greater personal responsibility for one's learning, (4) learning how to learn from multiple sources and resources, (5) learning collaboratively, and (6) learning to adapt and to solve problems (i.e. to cope with change).

At the same time of this event, Nutsita Sirirat, Lecturer, National Institute for Development of Teachers, Faculty Staffs and Educational Personnel (NIDTEP), created a model "The Development of Knowledge sharing via network model." She told that "Knowledge Sharing is the method which knowledge, experience, expertise and skills are exchanged and transferred from one to others in order to initiate the collaborative learning among individuals who are working on or interested in the same topic. The important part of this model is the diversity of experiences and expertise of the participants while sharing the common goal in learning. Nowadays, knowledge sharing is possible both in real space and in virtual space. In view of Knowledge Managers, knowledge sharing in virtual space is a suitable approach as it is fast and convenient through the use of the internet. And in this model, it is seen with its components: (1) Resources based via network is the compilation of information concerned with the performance of educational personnel, divided in categories, shown as knowledge sharing website for research. (2) Team learning via network is a group of 4 or 5 samples who have the similar learning target. They used the appropriate method to build the confidence and believed in each other to encourage team learning, (3) Knowledge sharing equipment via network is the use

of appropriate method for the members in team learning to build the understanding and improve the skill in using various knowledge sharing equipment, (4) Expert via network is the process for choosing 4 experts who have expertise and experiences which support learning target of members in team learning. They have the responsibility to advise and give suggestions during the process of knowledge sharing activities, (5) Technology supported collaboration via network Also, Nutsita Sirirat (2009), showed out seven steps in knowledge sharing: These steps are the strategic planning to encourage, support, stimulate and motivate the learners. They were adapted to face to face and online instructional activities via internet and communication technologies, which are (i) Plan and identify the learning goals, (ii) Create learning motivation, (iii) Support learning data and resource, (iv) Collect and utilize data, (v) Practice investigation skills and trial and error skills, (vi) Review and improve learning achievement , and (vii) Evaluate learning achievement.

On October 17, 2009, Titus Adesegun Benedict, Lecturer, Department of Teacher Education, Faculty of Education, University of Ibadan, Nigeria, West Africa, when addressing about "ICT: Vehicle for Educational Development and Social Transformation," expressed the ideas from Nigerian cases, that the integration of information and communication technologies (ICT) into education has been an important concern in many countries as its potentiality as a new technological tool could revolutionize an outmoded and outdated educational system. The provision of an appropriate framework for the full integration of ICT into the education system of any nation is the responsibility of the federal or central government as the case may be. It should be noted that ICT is not only the backbone of the information age, but also an important catalyst and tool for inducing educational reforms that change our students into productive knowledge workers.

Titus (2009) added that ICT plays a critical role in information of societies educational systems. In these societies, the stakeholders of educational policy redesign and reconstruct their educational systems based on the new educational paradigms such as constructivist theory so that both teachers and students develop the necessary knowledge and skills sought in this digital age. Hence, most countries around the world are focusing on approaches to integrate ICT in teaching and learning to improve the quality of education by emphasizing competencies such as critical

thinking, decision making, handling of dynamic situations, working as a member of a team, communicating effectively. Also governments especially in developing countries have tried to improve their national programs to integrate ICT into education. For the proper integration of the computer, and other ICT elements into the education system, there is the need for a comprehensive policy document to serve as a guide for stakeholders in the education sector. Perhaps; it will not be out of place to say that Nigeria has no national policy on the integration of ICT into her education system. In 2001, the federal government of Nigeria, published the National Policy on Information Technology Development Agency (NITDA) to serve as the umpire in the implementation of the policy, however this document failed to adequately address the issue of the integration of ICT into the Nigeria education system, and no emphasis was given on the development of indigenous software's that are in tune with the educational needs of Nigerians, neither does it address issues of its incorporation into teacher training classroom instruction and education. Information is considered today as one of the basic needs of people after air, water, food and shelter .Information is not a luxury, it is essential for survival. It is therefore an essential instrument for development.

On November 21, 2009, Miguel Chacon, a researcher, Institute of Advanced Studies, United Nations University, Mexico, when addressing about "Transformation of Higher Education and Education for Sustainable Development" expressed his ideas that, in general terms, there are the three types of higher education programs for the development in the Latin American region. The first types are Traditional Development Master programs. They have different focus, such as Rural Agricultural Development in some cases, Community Development in other cases, and Territorial Development Planning and Policy Making, besides traditional programs. The second types are Management Development programs, which are recently introduced and mostly cover topics of Tourism, Forestry, and Sustainable oriented careers: Architecture, Urbanism; and Regional Sustainable Development, Natural Disaster, and Environmental management. And the third type is the new Sustainable Development in the areas of Environmental Education, Engineering and sustainability science. That first and second type of curriculum programs hast the learning methods which are very innovative since they are problem solving with project in real case and

applied science in field work with action research during academic work. Interestingly, there are a few Master and PhD programs in Sustainable Development, in Costa Rica, in Chile, in Argentina, Venezuela, Colombia, Uruguay, Guatemala and Mexico. The main bases for designing curriculum for those programs were theories of sustainable development and the experience from experts who did local and national development projects in Latin America following different methodologies and theories. In contrast, it seems that some undergraduate programs in Latin American universities will follow as references for curriculum the learning outputs from the multinational studies of competences (TUNING), which was not totally intended to be as reference for competencies for sustainable development. There are not many studies of competences for sustainable development for higher education in Latin America.

Miguel (2009) added that the Bologna Declaration of 1999 foresees a European higher education coherent and compatible by 2010, which includes mobility and academic credit systems in European area; although it includes lifelong learning, it is not related directly to ESD. There is a new Bologna target by 2020, the council of European Union adopted on the Education, Youth and Culture Council meeting in Brussels on May 2009. It is about four strategic objectives in lifelong learning perspective, include formal, informal and non formal education, and different levels from childhood education, schools to higher education, vocational education and learning: a) making lifelong learning and mobility, b) quality and efficiency of education, c) promoting equity, social cohesion and active citizenship, and d) creativity and innovation, including entrepreneurship at all levels of education. Interestingly, ESD is not directly mentioned, but the transversal key competences in curricula, assessment and qualifications. The output of TUNING is a methodology to design, develop and implement and evaluate study programs curricula. TUNING Europe did a consultation with surveys in 175 European higher education institutions and 182 in Latin America. The TUNING surveys were not answered by current university students but employers, graduates (former students), academic staff, faculty to identify the most important competences in degree programs. The results were learning outcomes and competences, which are also some reference points for curriculum design and evaluation. Tuning Latin America report included 190 universities in 19 countries between 2004 an 2007, it included 12 careers (business administration,

education, history, mathematic, architecture, law, nursing, physics, geology, engineering, medical school and chemistry.

In the case of the mentioned programs, they are led by the partnership of multiple organizations (for instance, Argentinean case FLACAM- Foro latinoamericano de Ciencias Ambientales-; and Chilenean case CLADES, Centro Latinoamericano Desarrollo Sustentable; for Central America case, FLACSO, Facultad latinoamericana Ciencias Sociales) contributed in the definition of the expected professional profile of the future graduated student, it is a core competence: applied research, action-research, and management of development projects with participatory methodologies considering environmental, economic, social-cultural aspects. In some cases, the projects are related the activities of NGOs in indigenous communities related to forestry, eco-tourism, education, community development. The students are practitioners in development management of projects in different sectors, although few of them are also university teachers, from several Latin American countries, they are required a very specific research project to be implemented to solve local development problems. They follow pedagogies influenced by constructivist and holist approaches, and their activities with communities involved social learning techniques. However, they are not traditional teacher-centered approach in classrooms, but rather applied research methodology with advisor, and social learning with community.

On the same occasion, Dr. Renate Kärchner-Ober and Uwe Dippel , Universiti Putra Malaysia, Malaysia, and Universiti Tenaga Nasional, Malaysia, with their research about "Sustainability Education-A Challenge for Southeast Asia and Europe," posed that in nations already industrialized, e.g. Germany, structures of university systems undergo tremendous changes, whereas in countries like Malaysia, a rapid expansion of universities took place during the past two decades. The term "education" unfortunately has a wide range of meanings in English, while its counterpart in German, 'Bildung', not really translatable, signifies a state of advanced - and general- knowledge. Germany serves as a model in the field of education and technology, and a good number of Malaysian students have chosen Germany to further their studies, particularly in the field of science and engineering, as German

universities offered study programs different to those in other countries, and come with a high reputation.

Malaysia strives to become a regional hub for tertiary education and numerous efforts are undertaken to achieve this goal. Standardization appears to be an equivalent for quality, not taking into account that human beings cannot be standardized. Standards are somewhat illusionary in the field of education and neglect the fluidity of all life and changes in the world. Current shifts in German tertiary education show a strong tendency towards homogenization and standardization, whereas in Malaysia voices become louder to shift away from a test-based learning environment, but paradoxically emphasizes ISO 9001 and other measurements to ensure quality. Present curricula do not really foster thinking skills (Lourdunathan and Menon, 2007, p.119), though subjects like Creative Thinking are taught.

Renate and Uwe (2009) added that the university system in Malaysia, as based on the British system from colonial times (Malaysia was granted independence in 1957), has always been based on the sequence of Bachelor's and Master's degrees. The major transformation was the setting up of a huge number of new universities. At the time of independence, Malaysia had only 2 universities, and only a decade ago, only a handful. In 2009, there are close to 30 public universities and a dozen of private universities. Most are based on technical and engineering subjects. Comparatively few programs are offered in the social sciences. This goes very much in hand with the aspiration of Wawasan 2020, the vision of the former Prime Minister, Dr. Mahathir, to render Malaysia a fully developed economy by the year 2020. It is therefore no surprise that Malaysia experiences ongoing reforms in curricular work that illustrate the move forward to a k- and an e-society. It ought to be added, that Malaysia does not have a large number of qualified craftsmen, due to the lack of institutions like GMI in larger numbers. Therefore, it will not be able to service a market for small series, prototyping industries; it cannot compete in a market of turnkey projects.

On November 22, 2009, Dr. Matthias Barth, Leuphana University of Luneburg, Germany, when introducing a "General Module" for HE in SD, said that against the background of globalization and increasing complexity, Higher Education for Sustainable Development aims at the individuals' competencies not only to collect and generate knowledge but also to reflect on the complexity and interrelations of behavior as well as decision-making in a future-oriented and global perspective. (Adomßent, et al., 2006). Taken that into account, education for sustainable development is "not just another issue to be added to an overcrowded curriculum, but a gateway to a different view of curriculum, of pedagogy, of organizational change, of policy and particularly of ethos" (Sterling, 2004, p. 50). Quite contrary, it means to re-adjust academic teaching and to offer new learning settings. The aim of such a re-adjustment of existing curricula is to design learning settings, which asks for an ethically reflected decision-making, which bridges disciplinary knowledge and interdisciplinary, problem-oriented approaches and allows for the integration of different types of knowledge for solutions of practical relevance. For such a re-design at least four challenges may be named:

1. Inter- and transdisciplinary problem-solving: Sustainability-related problems will not be solved by taking into account only one discipline by itself. There is a need to link knowledge of structures and interrelations with ethical orientations and anticipatory thinking. Thus, interdisciplinary settings in Higher Education, integrating stakeholders and working closed to a specific real-life context will be needed.

2. Dealing with complexity: Higher Education has to familiarize students with the changeability of complex systems to better understand society and its development against the background of increasingly complex and interrelated world.

3. Self-directed, collaborative learning: Education for sustainable development is an open process of negotiation that needs reflexive group discussions. Furthermore, to support the development of competencies, self-directed learning processes will be needed.

4. Competence development: In today's society individuals have to handle complex situations and to consider different consequences at the same time to be able to decide and act reflexively. Higher Education for Sustainable Development therefore needs to support the development of relevant competencies by combining meaningful interdisciplinary topics with innovative learning settings.

On November 22, 2009, Dr. Toh Seong Chong, Centre for Instructional Technology and Multimedia, Universiti Sains Malaysia (USM), while talking about the "magic keys" for successful teaching and learning in ESD, posed that these are 6 "magic keys" as follows: (1) Design (Not just function but also Design: It's no longer sufficient to create something for functional purposes but today it also has to be beautiful and emotionally engaging. Design is a combination of utility and significance, (2) Story (Not just argument but also Story): At the heart of any argument is the ability to also shape a compelling narrative that goes beyond a simple line of reasoning. Story is context enriched by emotion, (3) Symphony (Not just focus but also Symphony): The greatest demand today is not analysis but synthesis. It is about seeing the big picture and crossing boundaries. Symphony is the ability to see relationships and put the pieces together, (4) Empathy (Not just logic but also Empathy): It is the capacity to go beyond logic and understand others and forge relationships. What will distinguish those who thrive will be their ability to understand what makes their fellow woman and man tick, to forge relationships, and to care for others. Empathy is the ability to experience the world from another person's perspective, (5) Play (Not just seriousness but also Play): Seriousness has its place but everyone needs some light heartedness and time to play. Too much sobriety can be bad for your career and worse for your general well-being. In the Conceptual Age, we all need to play. Play includes games, humor and joyfulness, and (6) Meaning (Not just accumulation but also Meaning): In a world of material plenty has freed us to pursue more significant desires: purpose, transcendence and spiritual fulfillment. Meaning is the ability to find purpose in life.

On the same occasion, Professor Hirofumi Abe and Professor Masahiro Habu Graduate School of Environmental Science, UNESCO Chair in Research and Education for Sustainable Development, Okayama University, Japan, once mentioning about "a sustainable society" talked about a Japanese case that Okayama Municipal Government started the Environmental Partnership Project in April 2001 to promote voluntary environmental activities by citizens and private companies. The project also aims at increasing the awareness of environmental conservation efforts. In 2005, the municipal government determined that more than 10 percent of the population was involved in activities aimed at making society sustainable; of this group, about 30,000 people were engaged in environmental protection, about 34,000 in the promotion of gender equality, and about 7,000 in health promotion (Okayama ESD Promotion Commission, 2006).

In April 2005, an agreement was reached among experts and leaders, including university researchers in Okayama City to work together for the creation of a local base for the promotion of ESD. The result was the establishment of the Okayama ESD Promotion Commission. The United Nations University recognized Okayama as one of seven initial Regional Centers of Expertise (RCE) at the UNU/UNESCO International Conference "Sustaining the Future-Globalization and Education for Sustainable Development," which was held on 28-29 June 2005 in Nagoya City, Japan.

In Okayama City, various initiatives, especially in the spheres of "environment" and "international understanding," have been carried out. The central stakeholders are local NGOs. The NGOs and the relevant organizations in Okayama have held thirteen annual international conferences aimed at resolving issues related to the creation of a sustainable society. At the last three conferences, ESD was the main theme.

Another feature of ESD efforts in RCE Okayama is "kominkan-based activities." "A kominkan" is a type of community center in Japan that provides opportunities for lifelong education in local communities. Many "kominkan" in Okayama City are now being engaged in ESD activities and play important roles in disseminating ESD to the whole community.

Okayama University is the largest higher education institution in the Okayama region. It established the Faculty of Environmental Science and Technology in October 1994 and the Graduate School of Environmental Science in April 2005. Consequently, special focus is being given to research and education in environmental science by the university. In order to enhance research and education for a sustainable society, Okayama University submitted a proposal for a UNESCO Chair Program on ESD to UNESCO in 2006 and received accreditation in April 2007. The proposed Chair has been collaborating with RCE Okayama, local governments, NGOs, the University Consortium of Okayama, and other stakeholders to promote ESD activities in Japan and in the Asia-Pacific region.

In summary, the interviewees posed their ideas about HE issues with discussing themes around the world when educational reforms, innovation and changes are being implemented in their own working places, which supply with the useful information to the researcher's model.

Fourthly, for the review of the classroom interaction, besides meeting with the key note speakers and advisory members at the special events, the researcher had a talk with the undergraduates presented below:

On February 22, 2008 in Faculty of Education, NU, Thailand, the researcher had an opportunity to lecture to 20 English-majored juniors, (Figure 36, Appendix, p.528), within two hours about Vietnamese Education System, particularly HE level. Through this interaction, the lecturer and the whole class came straightly to the objectives: (1) to get an overall picture of Vietnamese education system, especially HE level and (2) to compare some issues between Vietnamese HE and global one in terms of the similarities and differences of HE administration with models and "best practices" and international exchange students prior to globalization and internationalization. And NU, Thailand and Can Tho University (CTU), Vietnam was taken as examples. Then many questions and responses went around the objectives of the lecture were summarized: (1) roles of the Ministry of Education in HE administration (top down administration) (2) not strong quality assessments towards teaching and learning in HEIs, (3) not full autonomy and accountability as NU, Thailand does, (4) different jobs after graduation compared to students' majors, and

(5) few HEIs with admitted requirements to international programs. (Sample of interview from, Appendix Q, p.537)

To sum up, from this event, it was found by the researcher that it is necessary to have ideas from the students, who will be future leaders to make a change in their venues with new try-outs.

Fifthly, in the summaries of the 9 feedbacks from participants for the oral dissertation presentations at the international conferences, here are also other ideas from the international participants to the researcher's oral dissertation presentations in order to adjust the research literature, questions, objectives, methods and process and the parts towards the models later as well.

On September 11, 2008 (Figure 42, Appendix, p.531). at the International Conference on Educational Research 2008 (ICER): "Learning Community for Sustainable Development," Khon Kean University (KKU), Thailand, September 11-12, 2008, the following are the summarized ideas from the participants to the researcher's oral presentation about part of his dissertation: (1) the objectives are acceptable, and the tools to the research are feasible, but the first thing is to find out needs for change in CTU, Vietnam, (2) the cultural aspects need to be considered in the model, and (3) there is no need in getting more students (large population) involved in evaluating the model and rating the questionnaire, just leaders of students groups. (Sample of interview from, Appendix Q, p.538)

And this full text of this paper was issued in the proceedings of the conference at the website

On November 7, 2008 at the International Conference "Commemorating the 25th Anniversary of Phi Delta Kappa (PDK) (Thailand Chapter): Ethics vs Technology in Postmodern Era of Education," Assumption University (AU), Thailand, November 7-8, 2008, below are the comments from the participants; (1) the model with factors is good. There is a must to get all the stakeholders to a change, (2) There is a selected list of population in judging the model and rating the questionnaire, not students in the list (only representatives of students), and (3) any change in a school in general and in HEIs in particular, school leaders (rector board, department board, office chiefs and others) must be fully aware of changes to lead a school to the circle of national, regional and global educational goals. (Figure 43, Appendix, p.531).

And this full text of this paper was issued in the proceedings of the conference at the website

In summary, besides the experiences and skills from the oral presentations at the international conference, the researcher got more ideas towards the research process with its questions, objectives, methods, samples and analysis as well to construct the models themselves and other issues dealing with educational administration, especially change management in this sector, too, in order to add to his research during his work from the external evaluators worldwide.

1.2 Constructing a Global Change Management Model in ESD in HEIs

1.2.1 The tentative global model with its main factors and sub factors would be displayed below:

This model reveals that there are 7 steps in Change Process (CP), which are fixed for any change. And Organizational Change (OC) and Change Agents (CA) operate under the CP, which deal with an organizational change in the former and in the latter with its personnel in its venue respectively. All the process must go through Education for Sustainable Development in Change (ESD) from UNESCO principles, with a view to sustaining the education development. Here in this point, ESD in the light of UNESCO, there are just 4 issues, and the matter "Cultured-based education" is inserted by the researcher, which is regarded as a "new ingredient" to the sub factors of the model.

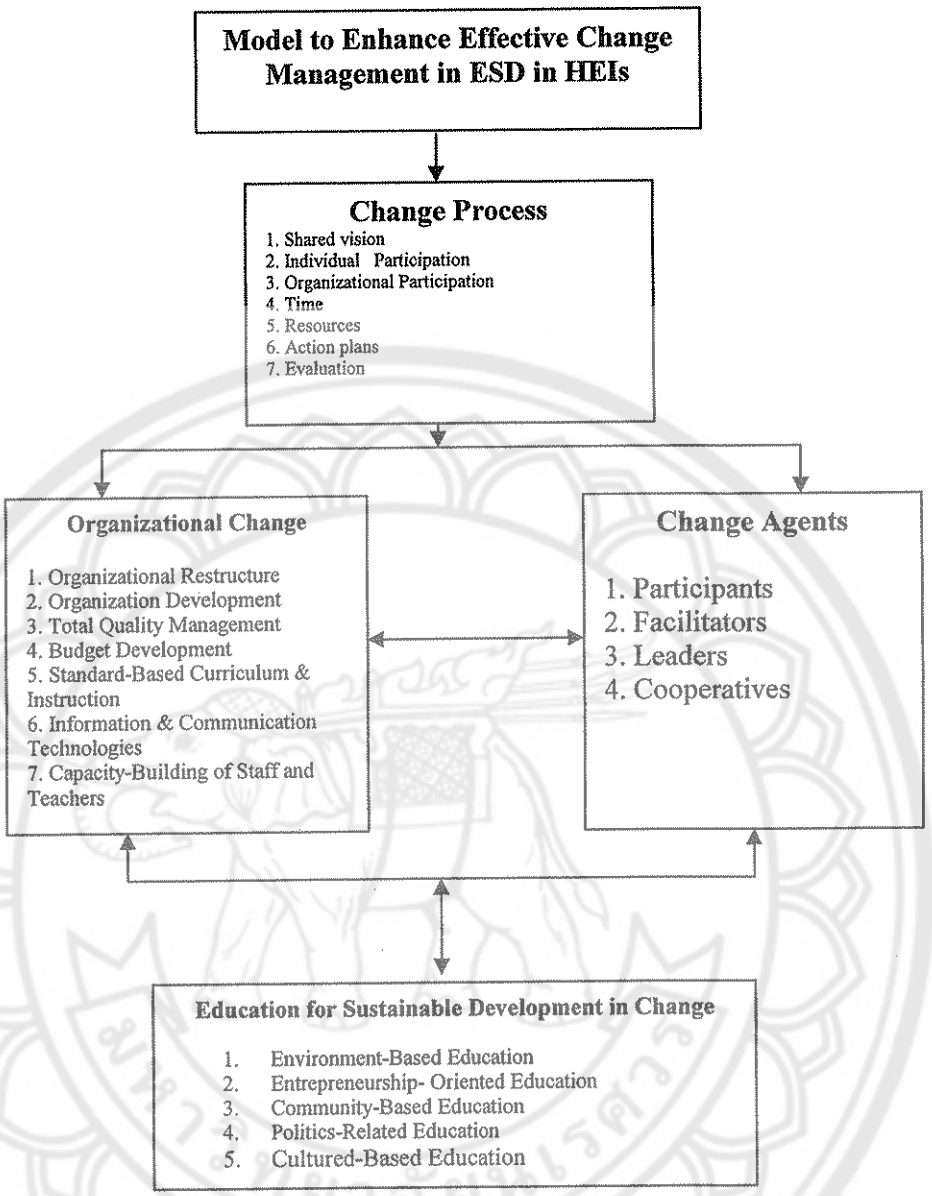

Figure 9 The Tentative Global Effective Change Management Model (up-left-right &down) in ESD in HEIs

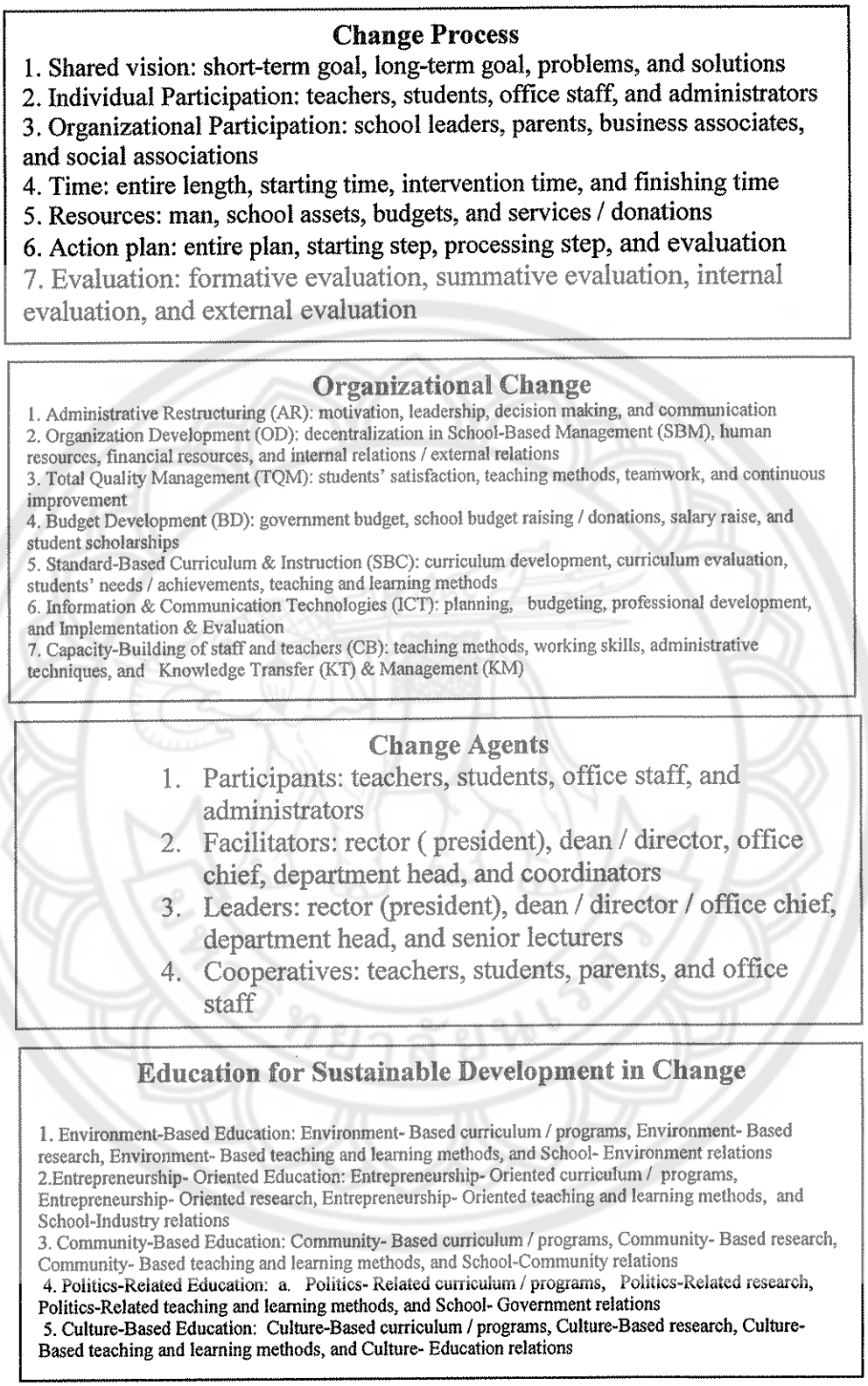

Figure 10 Sub-Factors and Elements of the Tentative Global Effective Change Management Model (up down) in HEIs

As mentioned earlier, the model with 4 main factors and 23 sub factors were created from the theories, models and practices, which have been implemented globally so far. And in order to put it in use, the 92 specific items were set up to make the model a complete application in a real HEI. Each sub factor is of at least 4 elements as explanation below:

In the **Change Process** (CP) there are of: (1) **Shared vision**: short-term goal, long-term goal, problems, and solutions; (2) **Individual Participation**: teachers, students, office staff, and administrators; (3) **Organizational Participation**: school leaders, parents, business associates, and social associations; (4) **Time**: entire length, starting time, intervention time, and finishing time; (5) **Resources**: man, school assets, budgets, and services / donations; (6) **Action plan**: entire plan, starting step, processing step, and evaluation; and (7) **Evaluation**: formative evaluation, summative evaluation, internal evaluation, and external evaluation.

In the **Organizational Change** (OC), there appears as: (1) **Administrative Restructuring** (AR): motivation, leadership, decision making, and communication; (2) **Organization Development** (OD): decentralization in School-Based Management (SBM), human resources, financial resources, and internal relations / external relations; (3) **Total Quality Management** (TQM): students' satisfaction, teaching methods, teamwork, and continuous improvement, (4) **Budget Development** (BD): government budget, school budget raising / donations, salary raise, and student scholarships; (5) **Standard-Based Curriculum & Instruction** (SBC): curriculum development, curriculum evaluation, students' needs / achievements, teaching and learning methods; (6) **Information & Communication Technologies** (ICT): planning, budgeting, professional development, and Implementation & Evaluation; and (7) **Capacity-Building of staff and teachers** (CB): teaching methods, working skills, administrative techniques, and Knowledge Transfer (KT) & Management (KM).

In the Change Agents (CA) there consists of (1) **Participants**: teachers, students, office staff, and administrators; (2) **Facilitators**: rector (president), dean / director, office chief, department head, and coordinators; (3) **Leaders**: rector (president), dean / director / office chief, department head, and senior lecturers; and (4) **Cooperatives**: teachers, students, parents, and office staff.

And in the **Education for Sustainable Development in Change** (ESD), there are of (1) **Environment-Based Education**: Environment- Based curriculum / programs, Environment- Based research, Environment- Based teaching and learning methods, and School- Environment relations; (2) **Entrepreneurship-Oriented Education**: Entrepreneurship- Oriented curriculum / programs, Entrepreneurship- Oriented research, Entrepreneurship- Oriented teaching and learning methods, and School-Industry relations; (3) **Community-Based Education**: Community- Based curriculum/ programs, Community- Based research, Community-Based teaching and learning methods, and School-Community relations; (4) **Politics-Related Education**: Politics- Related curriculum / programs, Politics-Related research, Politics-Related teaching and learning methods, and School- Government relations, and (5) **Culture-Based Education**: Culture-Based curriculum / programs, Culture-Based research, Culture-Based teaching and learning methods, and Culture-Education relations.

1.2.2 The complete global model with its main factors and sub factors would also be shown below.

This complete model also shows that there are 7 steps in Change Process (CP), which are fixed for any change. And Organizational Change (OC) and Change Agents (CA) operate under the CP, which deal with an organizational change in the former and in the latter with its personnel in its venue respectively. All the process must go through Education for Sustainable Development in Change (ESD) from UNESCO principles, with a view to sustaining the education development. However, the model was redrawn to make it clear and the underlined expressions added to make it more meaningful as well, which are posed with similarities and differences in the next part.

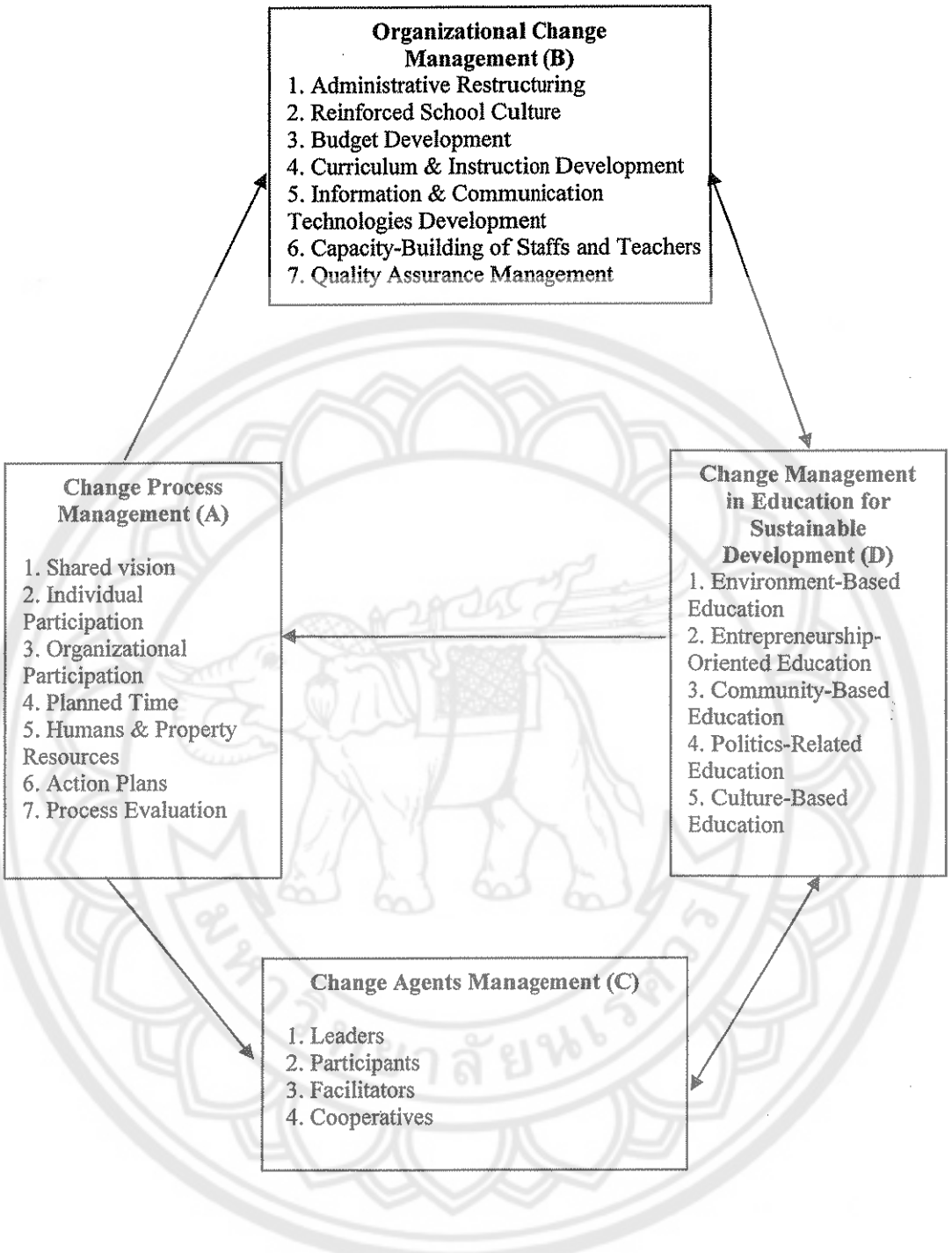

Figure 11 The Complete Global Effective Change Management Model (ABCD) in ESD in HEIs

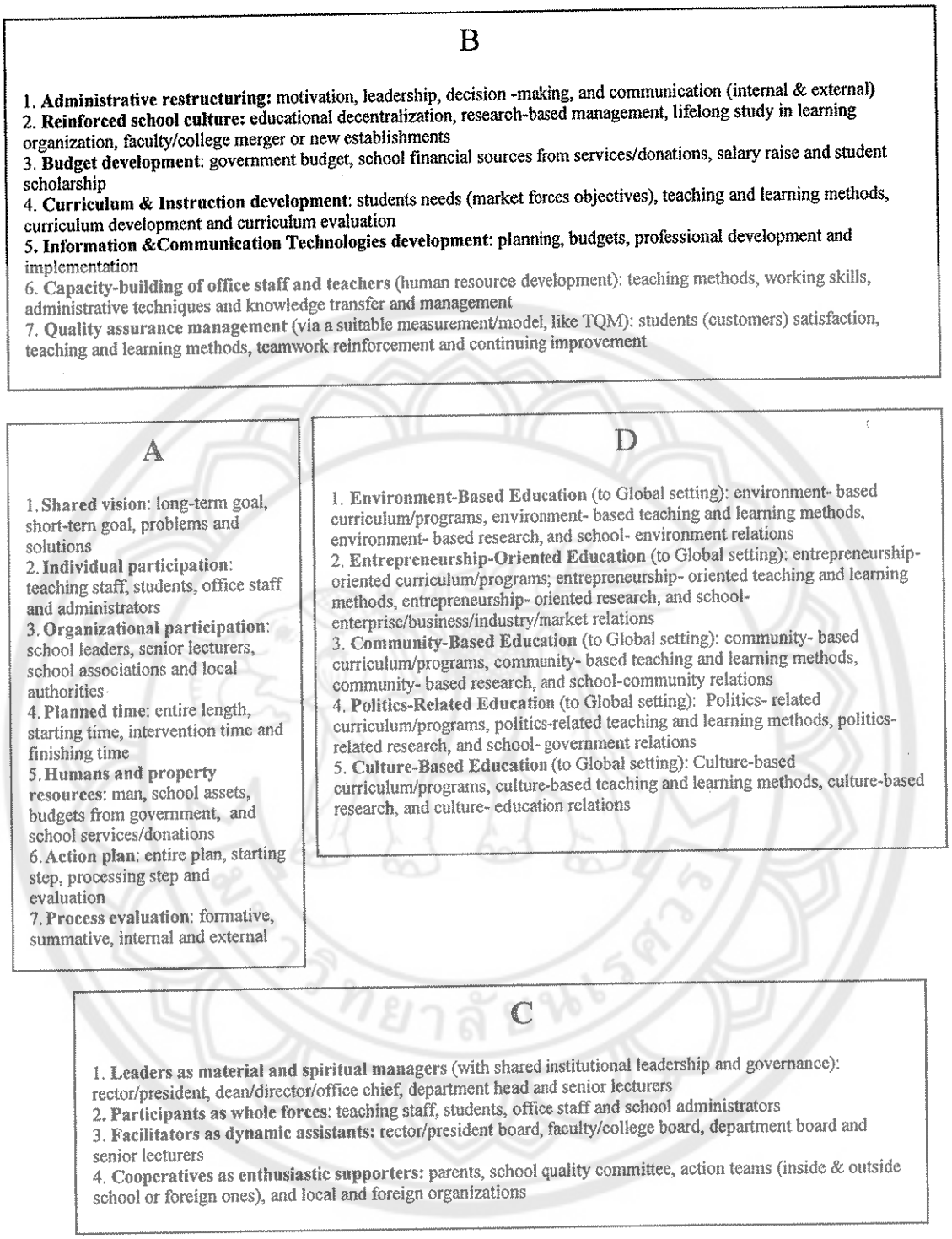

Figure 12 Sub-Factors and Elements of the Complete Global Effective Change Management Model (ABCD) in ESD in HEIs

From the complete global one, it is found out in details below: In the **Change Process Management** (A), there are of: (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 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; (6) **Capacity-building of office staff and teachers** (human resource development): teaching methods, working skills, administrative techniques and knowledge transfer and management; and (7) **Quality assurance management** (via a suitable measurement/model, like TQM): students (customers) satisfaction, teaching and learning methods, teamwork reinforcement and continuing improvement.

In the **Organizational Change Management** (B), there includes as follows: (1) **Shared vision**: long-term goal, short-tern goal, problems and solutions; (2) **Individual participation**: teaching staff, students, office staff 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, and school services/donations, (6) **Action plan**: entire plan, starting step, processing step and evaluation, and (7) **Process evaluation**: formative, summative, internal and external.

In the **Change Agents Management** (C), there consists of (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**: teaching staff, students, office staff and school administrators; (3) **Facilitators as dynamic assistants:** rector/president board, faculty/college board, department board and senior lecturers; and (4) **Cooperatives as enthusiastic supporters:** parents, school quality committee,

action teams (inside & outside school or foreign ones), and local and foreign organizations

And in the **Change Management in Education for Sustainable Development** (D), there follows: (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; and (5) **Culture-Based Education** (to Global setting): Culture-based curriculum/programs, culture-based teaching and learning methods, culture-based

1.3 Comparing the Tentative and Complete Global Effective Change Management Model in ESD in HEIs

In order to get the two models compared, the steps would deal with as follows:

1.3.1 Similar factors, sub factors and elements

Table 2 Let us take a look at the similarities of the two models.

No	Similar items	Tentative model	Complete model
1.	**Four main factors** -Change Process -Organizational Change -Change Agents -Education for Sustainable Development in Change	x	x
2.	**23 sub factors** **Change Process** 1. Shared vision 2. Individual Participation 3. Organizational Participation 4. Time 5. Resources 6. Action plans 7. Evaluation **Organizational Change** 1. Organizational Restructure 2. Organization Development 3. Total Quality Management 4. Budget Development 5. Standard-Based Curriculum & Instruction 6. Information & Communication Technologies 7. Capacity-Building of Staff and Teachers	x	x

Table 2 (Cont.)

No	Similar items	Tentative model	Complete model
	Change Agents		
	1. Participants		
	2. Facilitators		
	3. Leaders		
	4. Cooperatives		
	Education for Sustainable Development in Change		
	1. Environment-Based Education		
	2. Entrepreneurship- Oriented Education		
	3. Community-Based Education		
	4. Politics-Related Education		
	5. Cultured-Based Education		
3.	Factors-Organizational Change and Change Agents operate inside Change Process and go through Change Management in ESD, which are seemed like a "framework."	x	x

Note: x: information mentioned

1.3.2 Different factors, sub factors and elements

Table 3 Let us take a look at the differences of the two models.

No	Different items	Tentative model	Complete model
1.	Label A, B, C and D after each factor to make it easier to observe.		x
2.	Add the word "Management" after each factor to express full meanings. -Change Process Management (A) -Organizational Change Management (B) -Change Agents Management (C) -Change Management in Education for Sustainable Development (D)		x
3.	Add the word "planned" before "time," (planned time) the words "humans &property" before "resources" (humans & property resources) and the word "process" before "evaluation" in Factor A to express clear meanings.		x
4.	Replace the sub factor "Organization Development" with "Reinforced School Culture," and the sub factor "Total Quality Management" with "Quality Assurance Management" in Factor B to make the model diverse with change issues.		x
5.	Move the agents "leaders" to be the first group of Factor C.		x
6.	Renew some underlined elements in Factors A, B and C suitable to the previous changes.		x

Note: x: information mentioned

To sum up, both models (tentative and complete) in ESD in HEIs were successfully created, and they provided a solid foundation to be judged by the international experts and email respondents through the questionnaires via online data collection in the next phase. More importantly, the added information from the international email respondents helped to finalize the complete global change management one.

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

So as to have the complete global model verified, here are the results:

First, it was the five -scale (Strongly Disagree, SD: 1; Disagree, D: 2; Undecided, U: 3; Agree, A: 4; and Strongly Agree, SA: 5) questionnaire with 92 items (Appendix M, pp.500-518) represented for 92 elements in the model. The questionnaire went through Factor A: Change Process Management with 28 items marked from A1 to A28, Factor B: Organizational Change Management with 28 items from B1 to B28, Factor C: Change Agents Management with 16 items from C1 to C16, and Factor D: Change Management in Education for Sustainable Development from D1 to D20.

Second, for the validity of the global model through the questionnaire via IOC, 5 experts from 3 from Asia & Pacific regions (2 from Thailand, 1 from Brunei), 1 from Spain, and 1 from the U.S.A (namely, Associate Professor Dr. Panuwat Pakdeewong, NU, Thailand; Dr. Wipa Mhunpiew, Assumption University, Thailand; Professor Dr. Bob Chiu-Seng Yong, Universiti Brunei Darussalam, Brunei; Aggregate Professor Pablo Campos, University CE-San Pable, Spain; and Professor Gary Glen Price, University of Winsconsin-Madison, U.S.A) were invited to rate the questionnaire with +1, 0 and -1. And the outcomes of the total of 4 main factors with 23 sub factors in 92 items of the questionnaire are as follows:

Factor I: Change Process Management (A) with 28 items: 0.83 (20.75%)

Factor II: Organizational Change Management (B) with 28 items: 0.80 (20.00%)

Factor III: Change Agents Management (C) with 16 items: 0.81 (20.25%)

Factor IV: Change Management in Education for Sustainable Development (ESD) with 20 items: 0.93 (23.25%) And the total of IOC from this part is 0.85.

Third, for the reliability of the model through the questionnaire via international experts' ratings., 19 international experts (Appendix S, p.580) were invited to join the rating of the questionnaire (modified from IOC results of the rating and the ideas of the international experts) with 5 levels: SD: 1 (Strongly Disagree), D: 2 (Disagree), U: 3 (Undecided), A: 4 (Agree), and SA: 5 (Strongly Agree). And the reliability analysis via scale Alpha (α) orderly:

Factor I: Change Process Management (A) with Alpha= 0.8951 (No of cases = 40.0, No of items =28)

Factor II: Organizational Change Management (B) with Alpha =0.9187 (No of cases =38.0, No of items = 28)

Factor III: Change Agents Management (C) with Alpha = 0.8967 (No of cases = 38.0, No of items = 16)

Factor IV: Change Management in Education for Sustainable Development (ESD) with Alpha = 0.9359 (No of cases = 38.0, No of items = 20)

And the total of the reliability analysis was Apha=0.9624 (No of cases = 34.0, No of items =92).

Fourth, for the practicability of the global model through the questionnaire via more sampling ratings, 86 international email respondents (Appendix S, p.582) responded as follows:

According to the summary of the study, there were 120 emails sent to the international users. Among them, 105 up to 87.00% responded their choices via the website. Yet, finally, 86 up to 71.66% were accepted because they went through Sections 1, 2 and 3 to add to the official data collection results of the research. Furthermore, the charts below would pose more data about the working places of the international respondents.

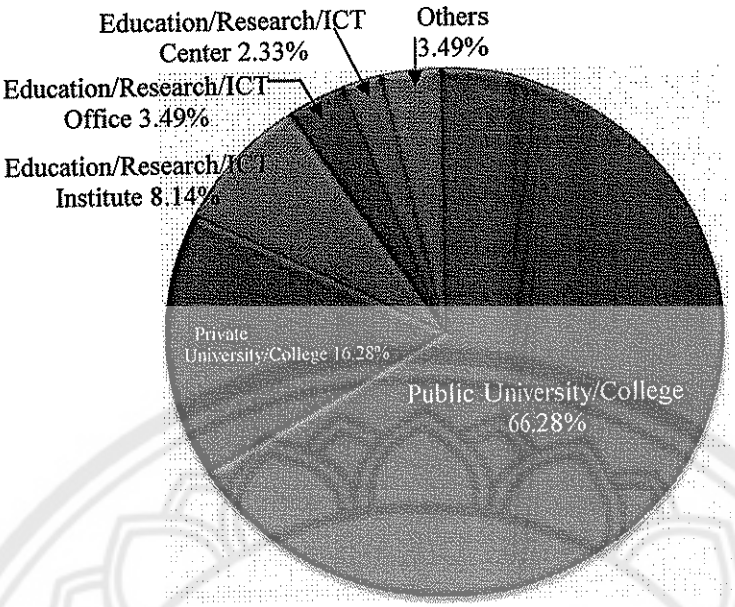

Figure 13 Distribution of Working Places

Note: N= 86 from 27 Countries Worldwide

From the Figure 13, it shows that the study focuses on the participation of all the educational sectors in HE level to join the judgment towards the model through the questionnaires. 57 respondents up to 66.28% came from public university or college, 14 up to 16.28% from private one, 7 up to 8.14% from education, research or ICT institute, 3 up to 3.49% to both education, research or ICT office or center, and 2 up to 2.33% make up with others, who were MA or PhD students, just working in the library for their theses or dissertations.

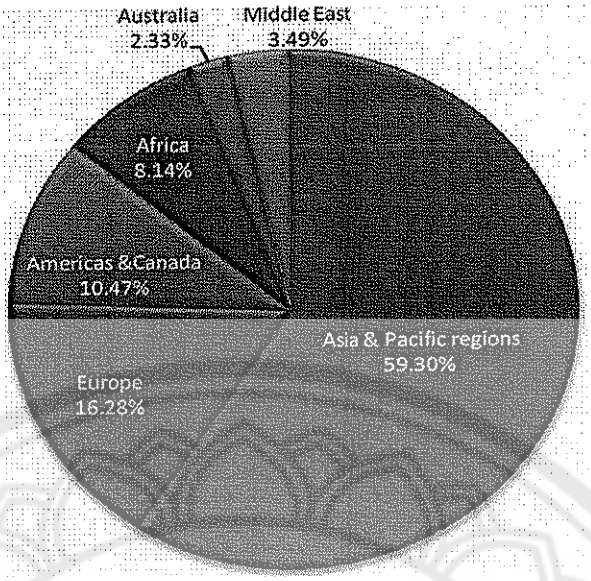

Figure 14 Distribution of Nationalities

Note: N= 86 from 27 Countries Worldwide

And in the Figure 14, it is known that the study also enlarges its scale to cover all the geographical areas with the contribution of 51 respondents up to 59.30% from Asia & Pacific regions (the most important places to put more useful ideas to the model), 14 up to 16.28% from Europe, (the center of HE development with theories, models and best practices of change management), 9 up to 10.47% from Americas & Canada (the new venues towards educational reforms and innovations), 7 up to 8.14% from Africa (the new place to have creative perspectives about HE reforms and experiences), 3 up to 3.49% from Middle East (the cradle of intelligent cultures of learning communities) and 2 up to 2.33% (the continent with more practicable educational changes and implementations with more practitioners).

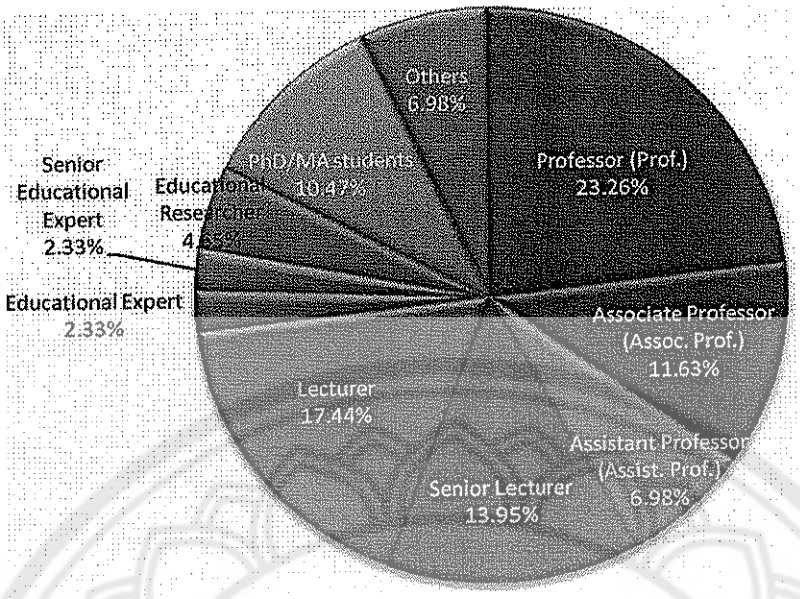

Figure 15 Distribution of Respondents' Professional Titles

Note: N= 86 from 27 Countries Worldwide

Besides, in the Figure 15, it is learned that the important ideas from the respondents with high positions and titles in their HEI, which adds to more valuable judgments to the model as well. Among 86, 20 up to 23.26% are Professors, 10 up to 11.63% are Associate Professors, 6 up to 6.98% are Assistant Professors, 12 up to 13.95% are Senior Lecturers, 15 up to 17.44% are Lecturers (the main agents in any change in an HEI), 2 up to 2.33% are equal numbers to both Senior educational experts and experts, 4 up to 4.65% are educational researchers, 9 up to 10.47% are current MA and PhD students, and the rest are others (retired professors) with 6 up to 6.98%.

And the next part shows the results from 86 email respondents through the website (in English).

Table 4 Practicability of the Global Change Management Model via the Questionnaire Items from 86 International Email Respondents

No.	Items	Mean	SD
	Change Process Management (A)		
A1.	Shared vision deals with both a short-term goal, and a long-term goal.	4.22	0.82
.....			
A28.	External evaluation often helps the evaluation process with objective judgments.	3.89	0.76
Total A		**3.93**	**0.43**
	Organizational Change Management (B)		
B1.	In change management, motivation from the school leaders to avoid change resistance, develop confidence and get success is very important.	4.37	0.77
.....			
B28.	In Quality Assurance Management, a selected measurement or model should be used to assess a continued success of a change process.	3.86	0.84
Total B		**3.89**	**0.54**
	Change Agents Management (C)		
C1.	Teachers are active forces in school change.	4.33	0.79
.....			
C16.	Co operation from local and foreign associations (business associates, employment agency, ICT groups, ect) often helps school change develop a vision, experiences and even funding.	4.06	0.77
Total C		**4.04**	**0.60**

Table 4 (Cont.)

No.	Items	Mean	SD
	Change Management in Education for Sustainable Development (D)		
D1.	Education for Sustainable Development (ESD) in school change requires a suitable environment-based curriculum/program.	4.35	0.71
.....			
D20.	The education curriculum/program on the relations between school and culture is often taught towards a global climate and a culture of cultures in the era of globalization besides cultural aspects of a nation.	3.97	0.89
Total D		**3.91**	**0.73**
Total A,B C&D		**3.93**	**0.53**

Note: Items: 92, Number of experts (N): 86; Scale was 1 to 5, where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Undecided (U), 4= Agree (A), and 5= Strongly Agree (SA)

From this short cut of Table 4, it is learned that, there are 2 for SA up to 2.17%, 85 for A up to 92.39%; and 5 for U up to 5.44%. And the total results for the 4 factors is at the Mean of 3.93 (SD=0.53), which is proved to be A (Agree) to the model, strong and applicable to the real application (Boonchom, 1996). One thing in this part reveals that Factor C of Change Agents Management takes a leading role with the Mean of 4.04 (SD=0.60), next was Factor A of Change Process Management with the Mean of 3.93 (SD=0.43), and then was Factor D of Change Management in ESD

with the Mean of 3.91 (SD=0.73), and finally Factor B of Organizational Change Management with the Mean of 3.89 (SD=0.54).

Also, there are summaries of 92 items analyzed through Mean and SD as follows: (1) Mean from 4.00 (SD=0.84) to Mean of 4.58 (SD=0.71), Factor A is of 15, Factor B of 13, Factor C of 11 and Factor D of 13, (2) Mean from 3.28 (SD=1.10) to Mean of 3.95 (SD=0.79), Factor A is of 12, Factor B of 16, Factor C of 5 and Factor D of 7). And finally (3) there is ONLY the item A26 gets Mean of 2.73 (SD=1.19)

From these findings, it was known that the leadership was in leading roles in HEIs on the way of making a change.

And here are the summaries of the open-ended responses and email feedbacks from the international experts, email respondents and advisory advisors.

First of all, there were the reviews of the 11 open-needed responses from the international respondents as follows:

One of the channels to get more information to the model is to have ideas in the form of the open-ended question in the questionnaire. And the following are what the respondents expressed at this part: (Appendix, S, p.553)

Professor Bob Chui-Seng Yong said that change management was never an easy task and the engagement of internal stakeholders is most important. While timelines for change processes were useful, often there would be issues and matters affecting the pace and milestones of change which administrators had to confront and manage.

Dr. Roel D. Taroe posed that if you please looked at related policies that would support direction of change. Governance which was related to legitimate rules, laws and regulations by which to anchor the need and reason for change should be known so as not to alienate the different aspects or component which should be included in the change process.

Professor Rory McGreat remarked, "The model is balanced and nearly all aspects have been covered related to the topic under study. I suggest that if parents or other community members like politicians or active social worker were involved then it could have brought a better picture."

Deputy Director Nguyen Buu Huan simply gave out the idea that the model covered essential vectors to develop the subject of the dissertation.

Senior lecturer Luu Nguyen Quoc Hung just indicated, "The best thing is organizational culture and it is the leader's role to act as a sentinel who knows which aspects of culture to shape, which to respect, and which to change."

Professor Brent D. Ruben said, "Interactive sharing among stakeholders in horizontal climate should be aware for key successes factor for school change."

Director Reynold Gonzales stated, "Change, by definition, is fluid and not static, that is indeed its very nature. As such, while it is possible to go into a sequence of events involving structural change with a general set of ideas or objectives in mind, the key thing is to remain flexible and ready to meet with the opportunities and challenges as they arise in a proactive manner."

Director Nils Gerberg concluded, "I think that students, teachers, administrators, stakeholders all should work together to develop sustainable development in higher education. Ideally is easy to change and plan but to implement the model is not that easy because some people don't want to follow or give up their old habit. But on the other hand also students' achievement and quality of education they get it from the school is also importance."

Deputy Director Suvi Nenoen expressed, "I enjoy the model because it offers me good insights into the significance of leadership and managing change skills and then I can make a difference in leading others to change for the better."

Dr. I. Doherty put down some words, "In order to enhance change management in higher education institutions it will be important for local people to participate in the reform as well as the stakeholders. Higher education institutions should consider not only national and world level issues but also local level ones, too."

Dr. Rusell Brooker seemed to know about Can Tho University, Vietnam much, so this is the suggestions, "I know that CTU has conducted a SWOT analysis and it may be useful for informing the model. Shared governance that enables participation by administrators, staff, and teachers, with some inputs to students, can help to gain buy-in (cooperation), but this is extremely difficult to accomplish in Vietnam due to extensive moonlighting. Also, in some cultures (e.g., SE Asia) a more authoritarian leadership style is sometimes more respected. Strategic and shorter term planning, with specific details for implementation, and formative and summative assessments that are used contribute to positive change. Globalization of the

curriculum and teaching are important to the economy of Vietnam, but this will require teaching globalization topics at the undergraduate level so that the future higher instructors can teach it themselves. Information Technology is important in teaching but it also contributes to the coordination of important operation processes in the administrative aspects of higher education management (e.g., scheduling classrooms, registration of students for classes, staff management, financial and facilities management."

In a nutshell, these ideas from the open-ended section (Section 3) in the questionnaire towards the change management model (Global Model) in ESD in HEIs are very constructive and useful for the strengthened model and for the researcher's warm motivation and practical encouragements.

And second, there listed the reviews of the 15 email discussions from the international respondents and advisory members. The next things were the ideas from the email contacts, which added the precious information to the model, displayed below.

Kyawawar Tint, a PhD student from Pakistan, said, "Suggested models seem robust model and with my Pakistani experience please let me say that emphasis may be given on the development of commitment in staff of the school so that they work earnestly for the promotion of school. I think dedicative efforts may bring better results."

Erwin Adi suggested adding "ethic for monitoring /controlling all factors" (A, B, C and D), which makes the model to be sustainable.

Professor Terry Anderson gave out the ideas, "The model is appropriate and workable, I hope you process your dissertation and complete your work very soon."

Professor Supit Karnjanapun stated, "As one of its main virtues, it considers the connection between universities and social and cultural contexts, which has to do directly to the transcendental role that institutions of higher education have to play within the society."

Dr. Tran Thanh Ai recommended, "The model includes a lot of elements, most of which are not very controversial. The relationships are very general. You will need to try to develop a more specific set of relationships from the model for it to be useful. Good luck."

In short comments, Professor James Cross said, "The model seems to me sensible and widely enough planned."

Professor John Renner affirmed, "Change management in education for sustainable development in higher educations will be successful or not depending on how to change everyone mind, idea or concept, especially, how to be a good man in a global world."

One of the respondents, Professor Paplo Campos from Europe put down the ideas,

"I think the model is well developed. I will like to see change that takes into consideration changes in the global system. Most often our education systems are far removed from the reality of what is happening around us. If our students are to be better participants in change they need to have"

Pointing out the complexity of change, Professor Pantelis Ipsilands said, "Change at a higher institution is not easy to be made in a short time. It takes times and energy and needs lots of pilot studies to practice different models. A very careful plan for the change needs to be thoughtfully considered."

Giving out the future practice, Director Tran Thanh Be expressed, "On my view, I think this model can really practice in the future. Nevertheless I think you and your teamwork can change management in higher education."

Understanding well about change, Dr. Diane E. Oliver said, "Change should not be a top down process but needs to be supported within the institution or emirate at grassroots level. Unless teachers and stakeholders are conversant with the goal of change and believe in its value, it will not be successful."

Parallel with this, on May 13, 2009, Professor Dr. Gary Glen Price, an international dissertation advisory member, School of Education, University of Winsconsin-Madison, U.S.A, wrote that (1) some change is best seen as an asymptotic approach to an ideal and specification of what constitutes a meaningful increment toward the ideal is more realistically given an updated definition at pre specified

occasions. The length of time of a school change to updated specification must be estimated, but not the entire length., that (2) constant improvement and updating of curriculum is desirable, but a "schedule-demanded" shift to a "new curriculum" places too great a premium on novelty and too little a premium on suitability. Talking about "capacity-building" for teachers, Price (2009) stated that the ways in which teachers think about (1) what they are trying to accomplish, (2) the sources of students' difficulties, (3) the range to pedagogical choices available to themselves, and (40 ways of gauging students' knowledge are more important than specific teaching methods.

On May 26, 2009, Associate Professor Dr. Bob Chiu-Seng Yong, an international dissertation advisory member, Sultan Hassanal Bolkiah Institute of Education, Universiti Brunei Darussalam, Brunei, put down his ideas that (1) teachers are important "agents" in a change, (2) and that the yearly budget from the national funding allocated by the government provides an important financial source to a change.

On June 13, 2009, Associate Professor Dr. Panuwat Pakdeewong, an international dissertation advisory member, NU, Thailand expressed (1) that a school change may happen if there is a social change, and (2) that all of the school staff are the active forces in a change, not only teachers or students.

One June 17, 2009, Aggregate Professor Pablo Campos, an international dissertation advisory member at the University CE-San Pablo, Spain, posed his ideas that (1) school changes will affect all types of stakeholders, (2) that budgets for change is frequently a "tough problem" to solve, (3) that external opinions in evaluation have the virtue of analyzing the situation with true objectiveness, (4) that motivation from the school leaders in a change is an outstanding energy at all levels, (5) that communication in a change is a key issue for planning changes, (6) and that ICT must play a predefined role in the formation of human beings in order to avoid impersonal relations. Also, Campos (2009) added that new learning modalities must be progressively implemented in changes, and that political aspects should be more present in all the changes. And taking about ESD, Campos (2009) stated that a culture-based curriculum is necessary to carry out sound changes in sustainable development.

To summarize, like the useful ideas from the open-ended sections, the comments, additions and even advice are very invaluable, too, which helped to have an insight consideration into the parts of the study and modify the model better.

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

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

3.1.1 Data Survey for Constructing a CTU Change Management Model in ESD

These would be necessary supporting materials helping to create a CTU change management in ESD in Vietnam.

1) Documentary research

Also, in this part, firstly, 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, helped construct a CTU Change Management Model. Secondly, the information and the results from Phases 1 and 2 presented earlier were fairly sufficient for the researcher to create a tentative CTU change management model in ESD in HE level and a final one later with its factors, sub factors and elements.

2) Reviews of the fields

Firstly, in the reviews of the fieldtrips to HEIs in Vietnam, they were listed in the earlier part 1.1.2, Chapter III, p.178, namely (1) Kiengiang Community College (KCC), Vietnam, is located in Rach Gia City, Kien Giang Province in Vietnam's Mekong Delta, (2) Angiang University (AGU), the second university in the Mekong Delta in 1999, (3) Vietnam National University, Ho Chi

Minh City was founded on January 27, 1995 on the basis of merge of 9 universities (members), under the management of the Ministry of Education, and (4) Ho Chi Minh City University of Economics, a university specializing in tertiary-level training of teachers. And also, there was a site visit to Universiti Sains Malaysia (USM) in November, 2009, noted previously.

Secondly, in the reviews of the 5 interviews of Vietnamese educators at the 2nd International Conference "Comparative Education: Vietnamese Education in the Globalization Context," HCM University of Education, on May 23, 2009, there were summaries below:

On May 25, 2008, Dr. Bach Van Hop, Rector of HCMC University of Education, Vietnam, when marking his speech at the conference about "Vietnamese education in the context of globalization," said that in its thousands-year –old history, never before has Vietnamese education faced great challenges. Globalization is necessary, and it could be great opportunity; however, it could also widen the distance between wealthy developed countries and developing ones. Education, especially HE, plays a crucial role in narrowing this gap. As interdependency between countries grows stronger, the important roles of education are undeniable. Not only commodity and services are flowing in the world marketplace but also cross border education and knowledge. Vietnamese people are working in a global environment; therefore, education needs to prepare people to adapt to new conditions, new concepts, new competencies, new ways of thinking and working as well. It would be almost impossible for Vietnamese education to fulfill this difficult task without examining the experiences and achievements of the international education.

Meanwhile, Associate Professor Dr. Hoang Tuy, Vietnam National Institute of Mathematics, Vietnam, once addressing "Educational crisis: Reasoning and solutions in globalization challenges," stated that in 1980s the Vietnamese economy reached a deadlock and the educational system was almost collapsed. The main reason is that this educational system was just partly and carelessly modified, instead of being radically reformed its overall structure and philosophy, which originated in an obsolete ideology. Consequently, a "strange" educational system was produced, different from the former one. Hoang Tuy (2008)

added that the major mistake is running after quantity, scarifying quality, regardless of international standards, common rules and experiences. This makes the international integration process of Vietnam more difficult and the education less competitive than those in the region. This can be most clearly seen in HE. Actually, conflicts between quality and quantity have been very popular in education development.

In addition, Associate Professor Dr. Pham Xuan Hau, Institure for Educational Research, Vietnam, once mentioning about, "Vietnamese education within integration and market economy development," expressed," In the context that market economy has been increasingly developed and advanced attracting many countries admitted to WTO (World Trade Organization). Market mechanism has had deeper and deeper impact on various social aspects including education in terms of both challenges and opportunities. A current issue of common concern is the reciprocal relationship between market mechanism and educational development in regard to development policies and structure. Along with the country's development through various historical stages, Vietnam's education has undergone a multitude of right-determined and policy-based steps. Present stage of development- a stage of socialist-oriented market economy development and international integration-; however, has brought about a great deal of challenges for our own educational system. Therefore, any reform step should be critically considered in order for education to contribute to integration process as well as to certify our national identity and sovereignty."

Associate Professor Dr. Vu Ngoc Hai, National Institute for Education Strategy and Curriculum, Vietnam, when speaking about "Identifying challenges, opportunities and requirements of Vietnamese education in the context of globalization," answered that, for challenges, Vietnamese education lagging behind has created a rather larger distance between it and regionally education system. Take some examples in HE level as follows: (1) Faculties and management staff are not skilled enough, (2) Curricula and methodologies are out-of-date, (3) Average national budget spending per student has not noticeably increased, and (4) Organization of educational management is not efficient, incapable of preventing the risks of the global integration process. Then Vu Ngoc Hai (2008) mentioned about some opportunities for Vietnamese education development. He said that (1) the renovation

process in education is happening globally, creating good opportunities for Vietnamese education to be exposed to new trends and methods and to take advantage of experiences from developed education systems, (2) that technological developments, especially ICT, have been greatly useful for education to reach all the students who are in need, even in the rural areas, (3) that rapid economic development creates dynamic and increasing investment resources for education development, and (4) socio-economic developments and the demands of the industrialization and modernization process place pressure on the human resources quality and quantity, thus require education to renovate. (Sample of interview from, Appendix Q, p.540)

Associate Professor Dr. Pham Lan Huong, Center for International Education Research, Vietnam, when talking about "Opportunities and challenges for Vietnamese Higher Education on the way to international integration," revealed that Vietnamese HE has a long history. It has been influenced by some well-established educational systems, including those of the Chinese, French, Americans, and Eastern Europeans. The Vietnamese people value diligent study and are not lacking in intelligence. This means that the market for HE in Vietnam has great potential. In this new era of international integration, the Vietnamese HE market is developing step by step. It is now for another renewal of Vietnamese HE into the 21st century. If the target for Vietnam to attain an industrialized economy is the year of 2020, Vietnamese HE will catch up with more advanced countries in the region and the world as well. (Figure 40, Appendix, p.530).

Thirdly, in the review of the workshop at CTU, Vietnam, there was one held at Center for Foreign Languages. The following was a summary.

On May 12-13, 2008 (Figure 39, Appendix, p.529) at Centre for Foreign Languages (CFL), CTU, Vietnam, the researcher joined a workshop "Establishing Key Perspectives for Center for Foreign Languages" with 25 other participants from CFL and Department of English, School of Education, CTU, Vietnam, trained by international experts: Ms. Dominique Neyts and Ms. Leen De Boom, University Language Center, Ghent University, Belgium. The workshop aimed at establishing key directions for language centers by advanced staff development. During the workshop, the following contents were discussed in details :(1) general issues in language curriculum development including learners' needs, specification of

a curriculum, and curriculum evaluation, (2) curriculum design, and (3) case study. The workshop was of great importance for CFL to revisit its overall operation with a focus on existing training curriculum. At the end of the workshop, the participants were provided with some fundamental knowledge of how to develop a responsive curriculum for teaching their own courses as well as their departments and centers' training programs. The CFL also recognized some strengths (English textbooks with all levels supported by foreign counterparts, and foreign help with curricula evaluation) to be enhanced and weaknesses (curriculum changed more often, and the unsatisfying quality of the tests designed) to be improved in order that it would develop stronger and stronger to become the leading foreign languages center in the Mekong Delta Region, South Vietnam. The two-day workshop was organized on the basis of learning by doing. The Belgian presenters were very helpful and professional, and the participants were all hard-working and interested. They both cooperated together in an informal and relaxing atmosphere. (Sample of interview from, Appendix Q, p.542)

Fourthly, in the reviews of the two classroom interactions in CTU, Vietnam, there were two carried out at the two occasions as follows:

On March 25, 2008, (Figure 37, Appendix, p.528) in School of Education, CTU, Vietnam, the researcher met with 22 English -majored seniors within two hours and a half and had a talk about Global Teaching and Learning Systems. Here in this event, the talk would cover the aims: (1) to give out an overall picture of teaching and learning models and practices at HE level worldwide in the era of globalization and internationalization, and (2) to compare some points similar and different between Vietnamese and global issues with NU, Thailand and CTU, Vietnam's examples. The lecturer and all the participants got to discuss: (1) the roles of HEIs in decentralized administration from the Ministry of Education, (2) teaching and learning methods, curricula, professional development and quality assessments at NU, Thailand and CTU, Vietnam, (3) international administration to foreign students, (4) "brain drain" phenomenon in HEIs globally, and (5) English as international language in the period of globalization and internalization. (Sample of interview from, Appendix Q, p.538)

On June 16, 2009 (Figure 45, Appendix, p.532) in Center for Foreign Languages, CTU, Vietnam, the researcher taught English to 23 graduate students of chemistry and talked about Global HE within two hours. The talk covered with a short lecture and some of questions and answers: (1) decentralized administration models of graduate programs worldwide with the comparison between NU, Thailand and CTU, Vietnam, (2) teaching and learning methods in graduate programs (learning autonomy and self-regulation), (3) research issues with international standards in HEIs, and (4) international integration among graduates in terms of 'annually get together" for global issues like climate change and global warming and ESD as well. (Sample of interview from, Appendix Q, p.538)

Fifthly, in the review of the friendly talk with colleague, there was one last year in 2008 as summarized below:

On March 26, 2008, (Figure 38, Appendix, p.539) in School of Education, CTU, Vietnam, the researcher had a talk with a colleague in two hours, Ms. Bui Lan Chi, deputy head of the Department of English, about Teaching Methods worldwide. Both were discussing through: (1) English administration models towards undergraduates and graduates globally, especially in Thailand and in Vietnam, (2) Teaching English in the future in the time of globalization and internationalization, and (3) international exchange programs of lecturers and students. (Sample of interview from, Appendix Q, p.543)

Sixthly, in the reviews of the two CTU meetings with foreign counterparts in CTU, Vietnam, there displayed as follows:

On February, 27, 2009 and on May 28, 2009 (Figure 44, Appendix, p.532) at CTU, Vietnam, two meetings with 33 PhD students of Educational Administration and 25 PhD students of Educational Research and Evaluation, and Educational Technology, Faculty of Education, NU, Thailand were held at the two different dates, but at the same venue with similar lectures. Within one hour and half each, the chairman of the formal meetings, Deputy Director of the International Affairs Office, CTU, Vietnam (Mr. Huynh Van Hien) lectured to all the foreign participants. The objectives were (1) to get to know overall image of CTU and its CTU administration, and (2) its quality assessments activities and ITC teaching and learning. There were questions and answers during the event. All the participants knew

that (1) CTU is a comprehensive HEI in the Mekong Delta Region, South Vietnam, (2) that CTU gets the top down administration from the Vietnamese Ministry of Education and Training with some practices of decentralization, (3) that the quality assessment activities are not effective because of the shortage of members (Director of the office of Testing and Quality Assurance center is Rector of CTU, one Deputy Director and the rest of two employees), and (3) that Learning Resource center, central library, has a "cyber" network to all the teaching, office staff and students. Each student has his or her password, which is checked by teachers about their internet time fixed by the university. (Sample of interview from, Appendix Q, p.544)

Seventhly, in the reviews of the nine feedbacks from participants for the three oral presentation of part of dissertation at the international conferences in Thailand and Malaysia as well, there posed below:

Besides the two oral dissertation presentations mentioned earlier, on August 5, 2009, (Figure 47, Appendix, p.533) the researcher performed both as a presenter and panelist at the International Conference on "Society and University-ICSU 2009: Roles for Community Strengthening," Rambhai Barni Rajabhat University (RBRU), Chantaburi, Thailand, August 5-6, 2009, when delivering his paper about the roles of CTU, Vietnam in the Mekong Delta region and local cooperation between CTU and surrounding areas in terms of HE development towards HE curriculum and human resources. These are the ideas from the participants (1) CTU roles are very vital in this region, so the leadership needs to be strong in both quality and quantity to make the relationships last long, (2) the CTU change management model should include the active participations of the local authorities as important cooperatives, and (3) CTU leaders should help to give their consultancies towards the HE curricula and human resources at HEIs in the region.

And this full text of this paper was issued in the proceedings of the conference at the website

On October 17, 2009, at the 1st International Conference Learning &Teaching: Active Learning (EDUCA 2009) hosted by Burapha University (BUU), Thailand, October 15-17, 2009, the summaries were displayed bellows: (1) the sample worldwide reflected their own ideas in the real situation, HE level to this model, which was of sufficient issues, (2) Nowadays transformational leaders need to

show their roles in any change at their venues, and CTU change management model would be a right one to this place along with the changes in Vietnamese education system on the way to go regional and global as well, and (3) the implementation of the CTU change management model would be interesting with the participation of all the stakeholders in CTU and in the surrounding areas in the Mekong Delta regions as well. (Figure 40, Appendix, p.534).

And this full text of this paper was issued in the proceedings of the conference at the website

Furthermore, on November 22, 2009, (Figure 51, Appendix, p.535), at the 3rd International Conference of UNESCO Chair: Higher Education for Sustainable Development, Universiti Sains Malaysia (USM), Penang, Malaysia, November 20-22, 2009, another paper of the dissertation was presented and the summaries were displayed bellows: (1) the model with the link to ESD is very practical and on the tight track of UNSECO principles, (2) Nowadays, when ESD is being applied, the curricula need to add more ideas leading to a lifelong learning community, and (3) the application of the CTU change management model would be beneficial with the participation of all the stakeholders in CTU and in the Lower Mekong Delta regions as well. And the abstract and full paper of this presentation was also retrieved from the website

In addition to the conference presentations noted previously, the researcher's abstract and full text were accepted for the 2009 International Conference on "Global Issues on Business and Technology", Modern Technology and Management Institute, Inc., Indore, Madhya Pradesh, India on December 22-24, 2009, at the website (Appendix R, pp.548-552).

In a nutshell, all the reviewed issues and summarized information above supplied with a wide range of useful data, helping the researcher to establish the factors, sub factors and elements towards the CTU change management model in ESD later.

3.2 The Needs for Effective Change Management in CTU, Vietnam

In order to find out the specific things needed for more effective change management in CTU, Vietnam, the following would be the steps, which helped to make a strong motive towards the CTU model.

Table 5 Survey about CTU Administrators' Demographic Data to SWOT Analysis

Items	Sub-items	Frequency (f)	Percentage (%)
Gender	Male	44	86. 27
	Female	07	13. 73
Position	Dean	06	11. 76
	Deputy Dean	21	41. 17
	Director	03	05. 88
	Deputy Director	07	13. 72
	Dept Head	06	11. 76
	Deputy Dept Head	08	15. 68
Degree	Ph.D	23	45. 09
	MA/MED/MS/MBA	24	47. 05
	BA/BED/BS/MS	04	07. 84
Professional title	Assoc. Prof. Dr.	04	07. 84
	Senior Lecturer	26	50. 98
	Lecturer	05	09. 80
	Senior Specialist	11	21. 56
	Specialist	05	09. 80
Age	30s	18	35. 29
	40s	29	56. 86
	50s	04	07. 85
Workplace	Colleges/Schools	26	50. 98
	Institutes/Centers	11	21. 56
	Departments/Offices	13	25. 49
	Rector Board Office	01	01. 96

Table 5 (Cont.)

Items	Sub-items	Frequency (f)	Percentage (%)
The length of time teaching/advising or researching	5-9 years	05	09. 80
	10s	13	25. 49
	20s	22	43. 14
	30s	11	21. 57
The length of time working as a leader	5-9 years	24	47. 05
	10s	23	45. 10
	20s	04	07. 85

Note: N= 51

From this Table, it is known that the purpose of this study at this stage was to get the ideas from the top CTU leaders (Appendix, Q, p.545) about the present administrations and to figure out the issues needed to improve for more effective change management in the future. And the researcher's point was to focus on the contributions of the department levels, where a change often occurs. Thus, the results revealed that Deputy Dean accounted for 21 respondents up to 41.17%, respondents with the degrees of Master with 24 up to 47.05%, senior lecturers with 26 up to 50.98%. And their ages were in 40s up to 56.86%. The length of working time was in 20 years with 22 respondents up to 43.14%. More importantly, they were young compared to the time of working as larders from 5 to 9 years up to 47.05%. Promisingly, the young administrators would help to manage CTU effectively in the long run.

And the summaries of the survey about CTU present administration and needs for effective change management come next

Table 6 Survey about CTU Present Administration and the Needs for Effective Change Management

No	Can Tho Current University Change Management	Strengths (f)	Percentage (%)	Weaknesses (f)	Percentage (%)
1.	Shared vision in the workplace (College/School, Institute/Center and Department/ Office) in university change	41	80. 39	10	19. 60
2.	Individual participation in the workplace in university change	38	74. 50	13	25. 40
3.	Organizational participation in the whole university	35	68. 62	16	31. 37
4.	Planned time in university change	34	60. 78	17	33. 33
5.	Used resources in university change	34	60. 78	17	33. 33
6.	Action plans in university change	30	58. 82	21	41. 17
7.	Evaluation in university change	32	62. 74	19	37. 25
8.	Administrative Restructuring in university change	35	68. 62	16	31. 37

Table 6 (Cont.)

No	Can Tho Current University Change Management	Strengths (f)	Percentage (%)	Weaknesses (f)	Percentage (%)
9.	Organization Development in university change	40	78. 47	11	21. 56
10.	Using university quality assurance in change	21	41. 17	30	58. 82
11.	Budget Development in university change	08	15. 68	35	68. 62
12.	Curriculum Development in university change	47	92. 15	04	07. 84
13.	Teaching and Learning Innovation	39	76. 47	12	23. 52
14.	Roles of University Teachers' Union in university change	23	45. 09	28	54. 90
15.	University leadership in university change	41	80. 39	10	19. 60
16.	Workplace leadership in university change	37	72. 54	14	27. 45
17.	University Communist Party leadership in university change	39	76. 47	12	23. 52

Table 6 (Cont.)

No	Can Tho Current University Change Management	Strengths (f)	Percentage (%)	Weaknesses (f)	Percentage (%)
18.	Activities of Ho Chi Minh Youth League in university change	36	70. 58	15	29. 41
19.	International affairs in university change	46	90. 01	05	09. 08
20.	Implementation of Information & Communication Technologies (ICT) in teaching and learning process in the university level	35	68. 62	16	31. 37
21.	Community-Based Education in university change	30	58. 82	21	41. 17
22.	Politics-Related Education in university change	38	74. 50	13	25. 49
23.	Culture-Based Education in university change	26	50. 98	25	49. 01
24.	Environment-Based Education in university change	21	41. 17	30	58. 82

Table 6 (Cont.)

No	Can Tho Current University Change Management	Strengths (f)	Percentage (%)	Weaknesses (f)	Percentage (%)
25.	Entrepreneurship-Oriented Education in university change	09	17. 64	42	82. 25
26.	Capacity-Building of Staffs and Teachers in university change	34	66. 66	17	33. 33
27.	Internal Communication in university change	37	72. 54	14	27. 45

Notes: Items: 27, Number of experts (N): 51; Checklist items

From this Table, it is seen that, with S (Strengths) analysis, there orderly were 92.16% for Curriculum Development in CTU, 90.01% for International Affairs, 80.39% for Shared vision in the workplace, 80.39% for CTU leadership, 76.47% for the roles of the Communist Party, and 70.58% for the roles of the HCM Youth League. However, there was still W (Weaknesses), which needed to improve, namely 82.25% for the item 25 (Entrepreneurship- Oriented Education in university change), 68.62% for the item 11 (Budget Development in university change), 58.82% for the item 24 (Environment-Based Education in university change), 58.82% (the same percentage as the item 24) for the item 10 (Using university quality assurance in change), and 54.90% for the item 14 (Roles of University Teachers' Union in university change).

In short, there were over 15 (the scores with >30% in Weaknesses) among 27 items needed to improve CTU change management for its effectiveness. And from the open-ended responses in the table below in the questionnaire, the data would add to more ideas about the needy requirements in CTU change management.

Table 7 Reviews of the Open-ended Responses in the Questionnaire through SWOT Analysis of CTU Administrators

Factor	Strengths (S)	Weaknesses (W)
Administrative Process (A)	• The clearly and sufficiently legal rules, regulations and decrees for the university administration • Enthusiasm of the Rector board and the university administrators	• Slow administrative process • Slow decentralization process with outdated documents from the Ministry of Education and Training
Organizational Management with university culture (B)	• Suitable curricula and IT transfer • Increasing scientific research • Continuing "Credit-based" programs to all departments	• Low effectiveness of scientific research • Weak activities for quality assessments because of the shortage of the members
Agents Change (C)	• Teaching and office staff are devoted to their jobs • Many well-trained teaching, office staff and experts	• Insufficient personnel, especially lecturers, with higher degrees such as MA and PhD

Table 7 (Cont.)

Factor	Strengths (S)	Weaknesses (W)
		• Dissatisfied stakeholders with decision-making from the rector board
Education for Sustainable Development (D)	• The good relationships with the local communities in the Mekong Delta regions, especially with Can Tho City authorities • Recognized university in the region because of contributions to agricultural sectors	• Low effectiveness of environmental-based education • No data to get graduates' jobs
	Opportunities (O)	**Threats (T)**
Administrative Process (A)	• More effective policies from the Ministry of Education and Training • More effective administrative process	• More complex to paper procedures owing to international standards • More time consuming to administrative procedure

Table 7 (Cont.)

Factor	Strengths (S)	Weaknesses (W)
	Opportunities (O)	**Threats (T)**
Organizational Management with university culture (B)	• Successful "credit-based" programs • More funding from the Ministry of Education and Training, and more budgets from international cooperation, donations and services	• Slow investment from the Ministry of Education and Training • More suitable curricula to meet students' needs in the era of international integration
Agents Change (C)	• More well-trained personnel from foreign countries with perspectives • Younger teaching and office staff	• Unbalanced Human resources development • Big gaps between young and retired teaching and office staff

Table 7 (Cont.)

Factor	Strengths (S)	Weaknesses (W)
	Opportunities (O)	**Threats (T)**
Education for Sustainable Development (D)	• Better curricula to environment-based education, entrepreneurs-oriented education, politics-related education, community-based education and culture-based education • Increasing cooperation with the local, regional and global communities	• Competitive with other HEIs in the region • Difficult to have cooperation with international counterparts

Note: N= 51, Open-ended Question (Section 3 in the Questionnaire with 27 items)

From this Table, there were summaries of 9 ideas for Strengths, 8 ideas for Weaknesses, 8 ideas for Opportunities and 8 ideas for Threats. Here in this part, although the highest percentage for leadership in CTU, but from the written materials from the open-ended section, it was realized that there were still complaints about CTU administrative process, and insufficient personnel in terms of qualified issues to lead the working place in the change process. And from the Threats: "More suitable curricula to meet students' needs in the era of international integration, big gaps between young and retired teaching and office staff, and competitive with other HEIs in the region and so on, which paved more heavy tasks to CTU administrators to manage any change in this venue."

In addition, the information summarized from the 11 interviews with CTU administrators, lecturers and student leaders surely added to the need fro effective change management in CTU as well.

Table 8 Reviews of the Interviews of CTU Administrators through SWOT Analysis

Factors	Strengths (S)	Weaknesses (W)
Administrative Process (A)	• Allowed parts of decentralization in personnel recruitments and quotas of new students • Legal forms of administrative procedures	• Limited shared vision among stakeholders • Slow process for administrative procedures
Organizational Management with university culture (B)	• New establishments of schools and colleges such as School of Pre-university and College of Environment &Natural Resources • Initially successful implementation of "credit-based " programs in all the departments	• Low funding to scientific research • Ineffective quality assessments • Inexperienced long-termed planning

Table 8 (Cont.)

Factors	Strengths (S)	Weaknesses (W)
Agents Change (C)	• Well-trained young teaching and office staff • Solidarity and unity found in the workplace among department board, teaching and office staff	• Conflicts in leadership about the university plans • Low numbers of qualified teaching and office staff in terms of MA and PhD degrees • Low numbers of responsible young staff
Education for Sustainable Development (D)	• The fame of the university nationally and regionally • Ranking 100th in Asian HEIs.	• Ineffective environment-based education • Ineffective entrepreneur -based education
	Opportunities (O)	**Threats (T)**
Administrative Process (A)	• Autonomy from the Ministry of Education and Training • More decentralized rules, regulations and decrees from the Ministry of Education and Training	• More complicated policies from the Ministry of Education and Training due to international integration • National, regional, and global standards : HE level

Table 8 (Cont.)

Factors	Strengths (S)	Weaknesses (W)
	Opportunities (O)	**Threats (T)**
Organizational Management with university culture (B)	• New schools or colleges • New curricula to some changes • Furnished university facilities	• Difficult for quality assessments • New curricula prior to new jobs for graduates
Agents Change (C)	• Better leadership to some changes towards one of the biggest universities in the country • Increasing numbers of teaching and office staff with higher degrees, especially PhD degrees	• Increasing "brain drain," especially in the numbers of young staff because of slow salary and bad working conditions • Insufficient personnel with higher degrees, especially PhD to meet the expansion of new fields of study

Table 8 (Cont.)

Factors	Strengths (S)	Weaknesses (W)
	Opportunities (O)	**Threats (T)**
Education for Sustainable Development (D)	• Better relations with all the stakeholders in the local, regional and global scales • Sustainable development with better curricula and programs dealing with natural environment, business, community, government and couture.	• More completive with new local HEIs to remain the university fame and culture • More responsible for the local sustainable development

Note: N=17, Structured Questions with SWOT analysis

From this Table, there were summaries of 8 ideas for Strengths, 10 ideas for Weaknesses, 9 ideas for Opportunities and 8 ideas for Threats. Here in this part, although the highest percentage for leadership in CTU, but from the face to face talks, it revealed more ideas about SWOT analysis about CTU present administration. First, for Administrative Process, there were still "limited shared vision among stakeholders, and slow process for administrative procedures. "Second, for Organizational Management with university culture, "low funding to scientific research, ineffective quality assessments, and inexperienced long-termed planning" needed to be improved. Third, for Agents Change, "Increasing "brain drain," especially in the numbers of young staff because of slow salary and bad working

conditions, insufficient personnel with higher degrees, especially PhD to meet the expansion of new fields of study" poses other weaknesses. Fourth, Education for Sustainable Development, "More completive with new local HEIs to remain the university fame and culture, and more responsible for the local sustainable development" would be taken into account for better change management in the future. (Sample of interview from, Appendix Q, p.545).

Briefly, through SWOT analysis, CTU current administration displayed more problems to be solved in order to lead this HEI to one of the biggest universities in Vietnam and in the region of Asia.

3.3 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 researcher 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.

3.3.1 This is the tentative CTU Change Management Model in ESD

Like the Global Model posed earlier, the CTU one is displayed in this part with 4 main factors, 23 sub-factors and 92 elements.

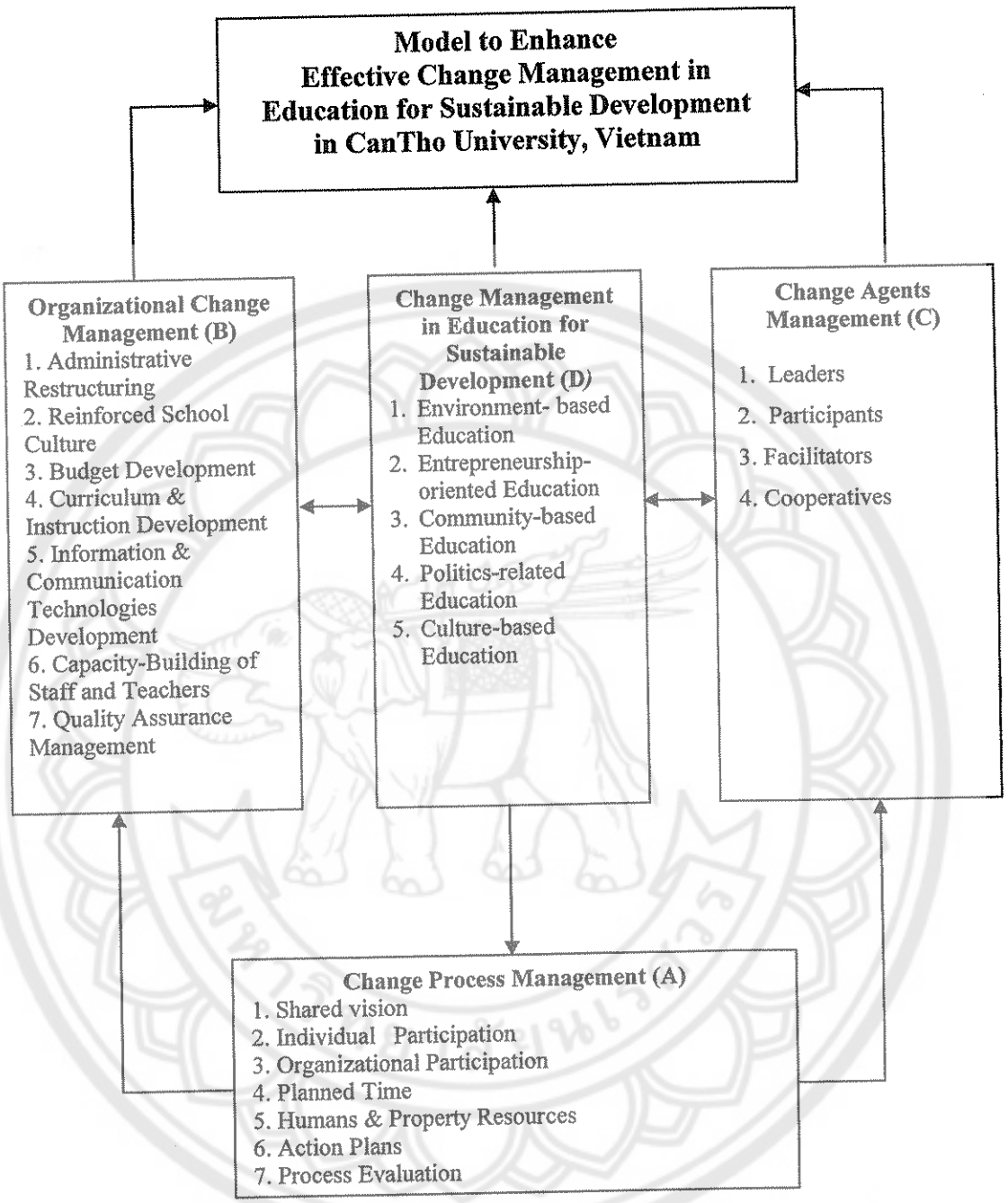

Figure 16 The Tentative Effective Change Management Model (ABCD) in ESD in CTU, Vietnam

This model was based upon the complete global model, but it was drawn in an easy way to observe. This model also reveals that there are 7 steps in Change Process Management (A), which are fixed for any change. And Organizational Change Management (B) and Change Agents Management (C) operate under the A, which deal with an organizational change in the former and in the latter with its personnel in its venue respectively. All the process must go through Change Management in Education for Sustainable Development (ESD) from UNESCO principles, with a view to sustaining the education development. Here in this point, ESD in the light of UNESCO, there are just 4 issues, and the matter "Cultured-based education" is inserted by the researcher, which is regarded as a "new ingredient" to the sub factors of the model.

In the **Change Process Management** (A), it is of (1) Shared vision; (2) Individual Participation; (3) Organizational Participation; (4) Planned Time, 5. Humans & Property Resources; (6) Action Plans; and 7). Process Evaluation.

In the **Organizational Change Management** (B), there displays (1) Administrative Restructuring; (2) Reinforced School Culture; (3) Budget Development; (4) Curriculum & Instruction Development; (5) Information & Communication Technologies Development; (6) Capacity-Building of Staff and Teachers; and (7) Quality Assurance Management.

In the **Change Agents Management** (C), it reveals with (1) Leaders; (2) Participants, (3) Facilitators and (4) Cooperatives.

And in the **Change Management in Education for Sustainable Development** (D), it comes up with: (1).Environment- based Education; (2) Entrepreneurship- oriented Education; (3) Community-based Education; (4) Politics-related Education; and (5) Culture-based Education.

In closing, this tentative model is similar to the global change management model as mentioned earlier, but it would be put into a real learning context at CTU, Vietnam, as a case study.

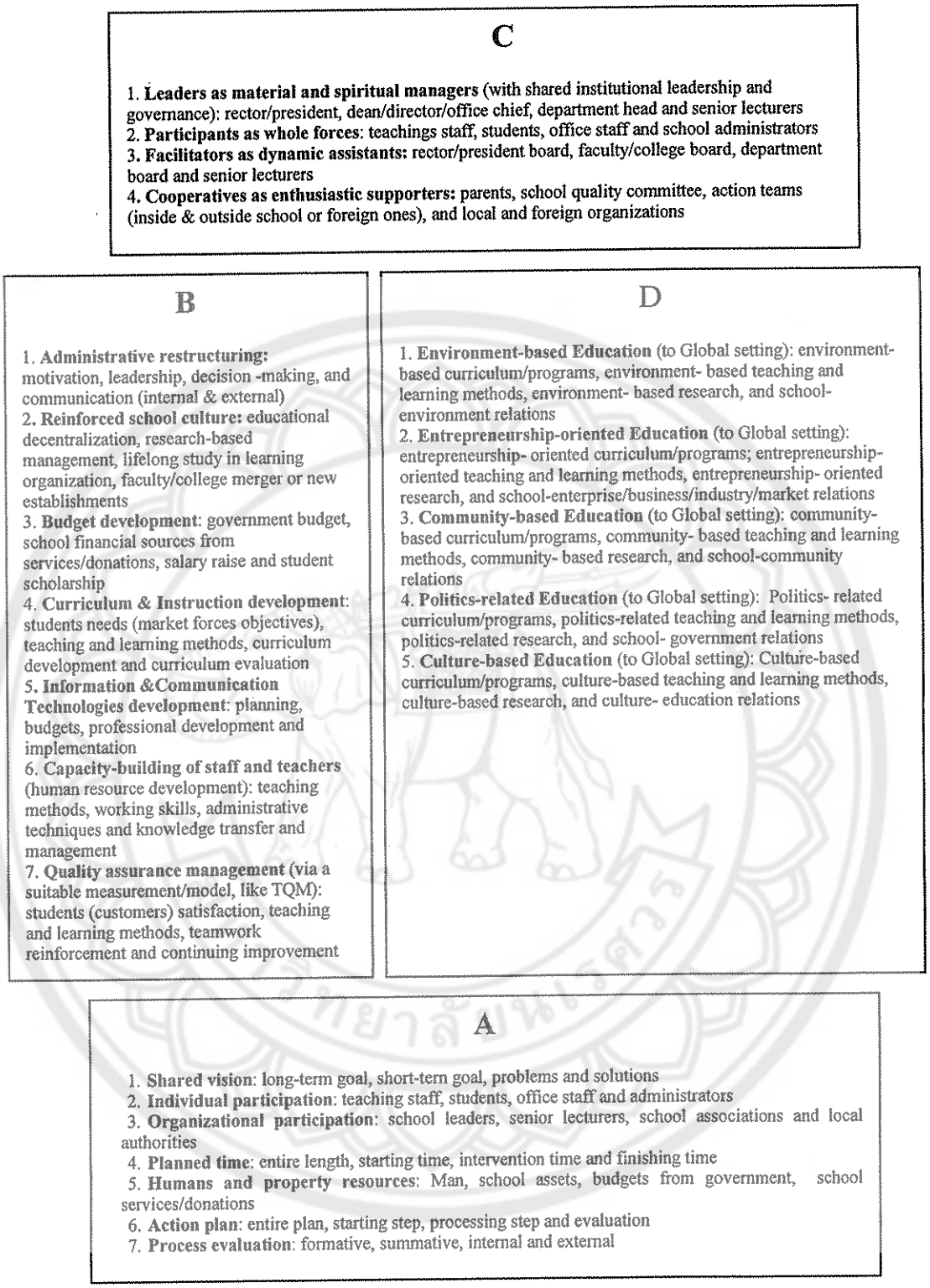

Figure 17 Sub-Factors and Elements of the Tentative Effective Change Management Model (ABCD) in ESD in CTU, Vietnam

In the **Change Process Management** (A), the sub factors and elements are of (1) **Shared vision**: long-term goal, short-tern goal, problems and solutions; (2) **Individual participation**: teaching staff, students, office staff 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; and (7) **Process evaluation**: formative, summative, internal and external.

In the **Organizational Change Management** (B), the sub factors and elements deal with (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 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; (6) **Capacity-building of staff and teachers** (human resource development): teaching methods, working skills, administrative techniques and knowledge transfer and management; and (7) **Quality assurance management** (via a suitable measurement/model, like TQM): students (customers) satisfaction, teaching and learning methods, teamwork reinforcement and continuing improvement

In the **Change Agents Management** (C), the sub factors and elements cope with: (1) **Participants as whole forces**: teachings staff, students, office staff and school administrators; (2) **Leaders as material and spiritual managers** (with shared institutional leadership and governance): rector/president, dean/director/office chief, department head and senior lecturers, (3) **Facilitators as dynamic assistants:** rector/president board, faculty/college board, department board and senior lecturers; and (4) **Cooperatives as enthusiastic supporters:** parents,

school quality committee, action teams (inside & outside school or foreign ones), and local and foreign organizations

And in the **Change Management in Education for Sustainable Development** (D), the sub factors and elements refer to (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; and (5) **Culture-based Education** (to Global setting): Culture-based curriculum/programs, culture-based teaching and learning methods, culture-based research, and culture- education relations.

To close, the model covered all the factors happening in an HEI from the development of an organization (maybe, a department, center, office or a school or faculty) with the participation of all the stakeholders to the lifelong learning community for the sustainable development.

3.3.2 This is the complete CTU Change Management Model in ESD

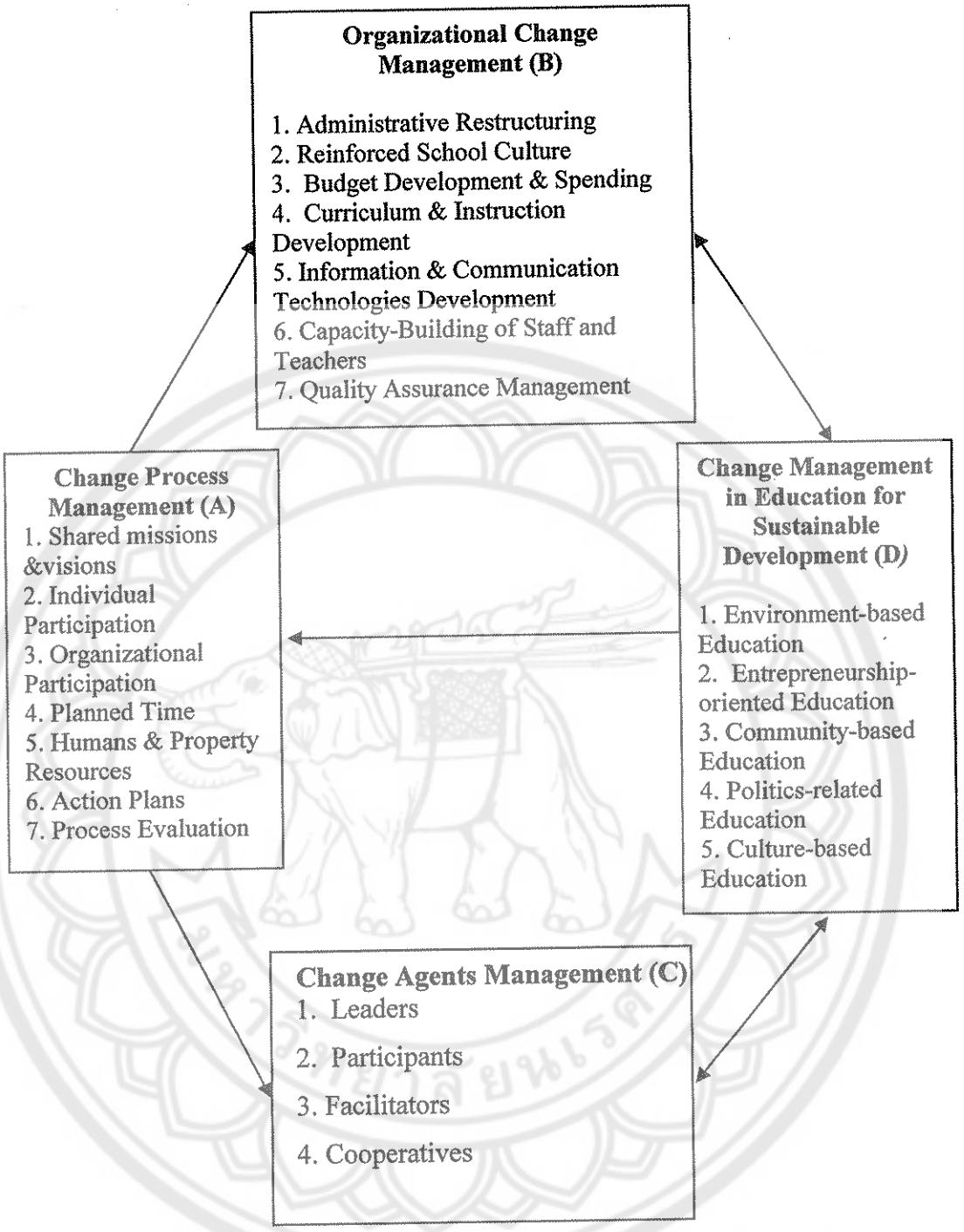

Figure 18 The Complete Effective Change Management Model (ABCD) in ESD in CTU, Vietnam

From the comments, ideas of the CTU and Vietnamese administrators in other HEIs in Vietnam and email respondents as well added some issues to the CTU model. This model was also put into 7 steps in Change Process Management (A), which are fixed for any change. And Organizational Change Management and Change Agents Management (C) work inside Change Process, which cope with an organizational change and with its personnel in its venue respectively. All the process has to go through Change Management in Education for Sustainable Development (ESD) with a view to sustaining the education development (in the lifelong learning community). In the **Change Process Management** (A), it is of (1) Shared missions and visions; (2) Individual Participation; (3) Organizational Participation; (4) Planned Time, 5. Humans & Property Resources; (6) Action Plans; and (7) Process Evaluation.

In the **Organizational Change Management** (B), there pose: (1) Administrative Restructuring; (2) Reinforced School Culture; (3) Budget Development & Spending; (4) Curriculum & Instruction Development; (5) Information & Communication Technologies Development; (6) Capacity-Building of Staff and Teachers ; and (7) Quality Assurance Management .

In the **Change Agents Management** (C), it is shown out with (1) Leaders; (2) Participants; (3) Facilitators; and (4) Cooperatives. And in the **Change Management in Education for Sustainable Development** (D), it bears with: (1) Environment- based Education, (2) Entrepreneurship- oriented Education; (3) Community-based Education; (4) Politics-related Education; and (5) Culture-based Education.

In conclusion, the CTU factors and sub factors, like the global change management one, pictured all the main "frame" of a change in an education unit.

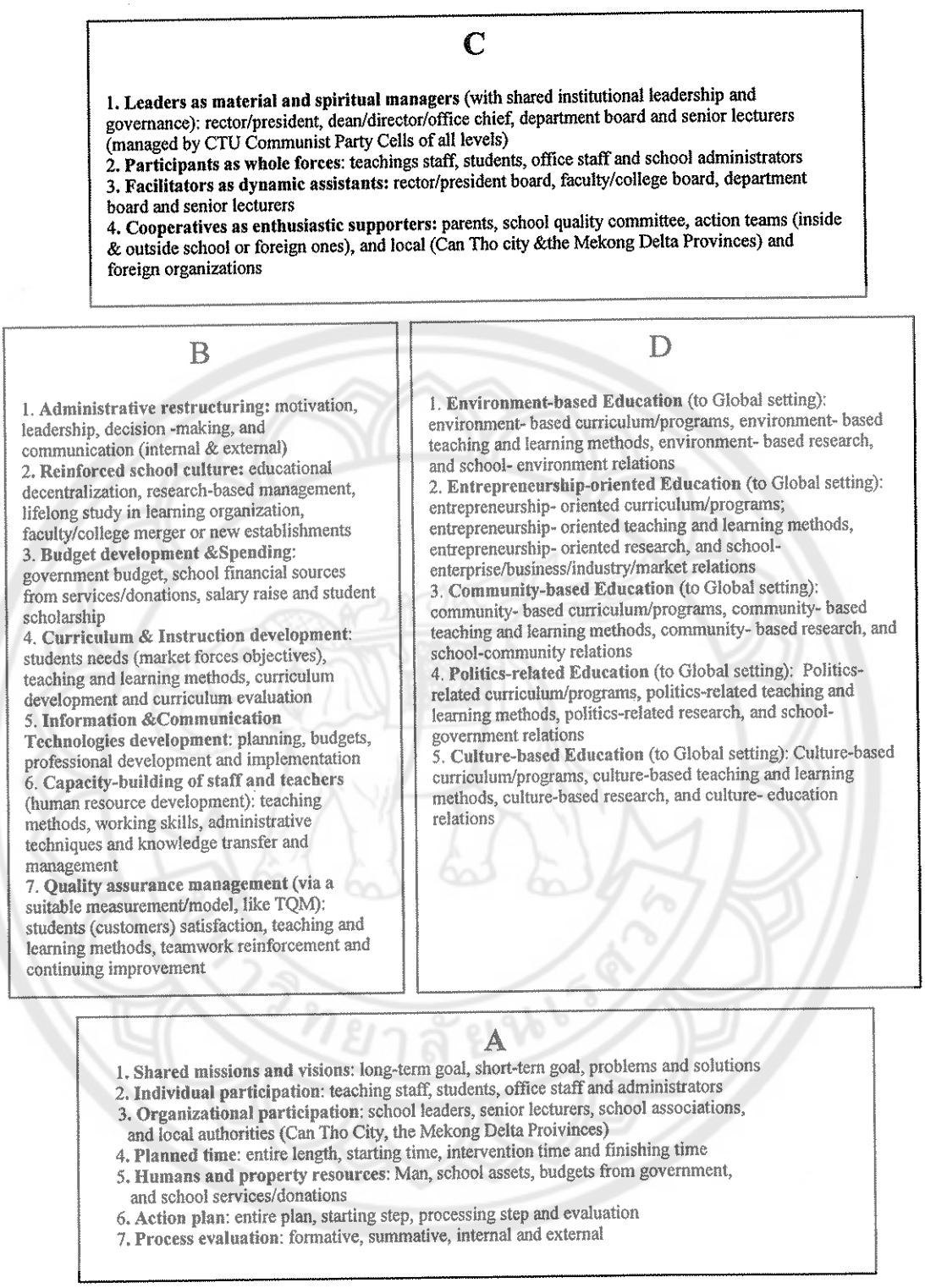

Figure 19 Sub-Factors and Elements of the Complete of Effective Change Management Model (ABCD) in ESD in CTU Vietnam

In the **Change Process Management** (A), the sub factors and elements are of (1) **Shared missions and visions**: long-term goal, short-tern goal, problems and solutions; (2) **Individual participation**: teaching staff, students, office staff and administrators; (3) **Organizational participation**: school leaders, senior lecturers, school associations and local authorities (Can Tho City, the Mekong Delta Provinces; (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; and (7) **Process evaluation**: formative, summative, internal and external.

In the **Organizational Change Management** (B), the sub factors and elements deal with (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; (6) **Capacity-building of staff and teachers** (human resource development): teaching methods, working skills, administrative techniques and knowledge transfer and management; and (7) **Quality assurance management** (via a suitable measurement/model, like TQM): students (customers) satisfaction, teaching and learning methods, teamwork reinforcement and continuing improvement

In the **Change Agents Management** (C), the sub factors and elements cope with: (1) **Leaders as material and spiritual managers** (with shared institutional leadership and governance): rector/president, dean/director/office chief, department head 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; and (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.

And in the **Change Management in Education for Sustainable Development** (D), the sub factors and elements refer to (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; and (5) **Culture-based Education** (to Global setting): Culture-based curriculum/programs, culture-based teaching and learning methods, culture-based research, and culture- education relations.

To close, the complete CTU was ready to be judged by the CTU experts and other stakeholders. And the next parts of the study would reveal some more results.

3.4 Comparing the Tentative and Complete CTU Effective Change Management Models in ESD in HEIs

In order to get the two models compared, the steps would deal with as follows:

3.4.1 Similar factors, sub factors and elements

Table 9 First, let us take a look at the similarities of the two models.

No	Similar items	Tentative model	Complete model
1.	**Four main factors** -Change Process Management (A) -Organizational Change Management (B) -Change Agents Management (C) - Change Management in Education for Sustainable Development (D)	x	x
2.	**23 sub factors** **Change Process Management** 1. Shared missions and visions 2. Individual Participation 3. Organizational Participation 4. Planned Time 5. Human & property Resources 6. Action plans 7.Process Evaluation **Organizational Change Management** 1. Administrative Restructuring 2. Reinforced School Culture 3. Budget Development &Spending 4. Curriculum & Instruction Development 5. Information & Communication Technologies Development 6. Capacity-Building of Staff and Teachers **Change Agents Management** 1. Leaders 2. Participants 3. Facilitators	x	x

Table 9 (Cont.)

No	Similar items	Tentative model	Complete model
	4. Cooperatives **Education for Sustainable Development in Change** 1. Environment-Based Education 2. Entrepreneurship- Oriented Education 3. Community-Based Education 4. Politics-Related Education 5. Cultured-Based Education		
3.	Factors-Organizational Change and Change Agents operate inside Change Process and go through Change Management in ESD, which are seemed like a "framework."	x	x

Note: x: information mentioned

3.4.2 Different factors, sub factors and elements

Table 10 Let us take a look at the differences of the two models.

No	Different items	Tentative model	Complete model
1.	In the sub factor 1 in Factor A, due to the Vietnamese language, some experts required to add "missions" before "visions" of HEI.		x
2.	In the sub factor 3 in Factor B: Add the word "Spending" to convey the idea that planning of spending then balancing between		x

Table 10 (Cont.)

No	Different items	Tentative model	Complete model
	"developments" and "spending."		
3.	In an element of the sub factor 1 in Factor C, add the clear roles of CTU Communist Party with the phrases "managed by CTU Communist Party Cells of all levels" in the university.		x
4.	And in the element of the sub factor 4 in Factor C, add the specific names of the "local authorities" with (Can Tho city &the Mekong Delta Provinces)		x
5.	Finally, there were some SMALL changes in terms of "word" or "phrase" equivalent to Vietnamese writing styles for the understandings of the whole CTU stakeholders. (See in the questionnaire in Appendix L, p.468)		x

Note: x: information mentioned

To end, the CTU change management in ESD in HE level was prepared to be judged by the CTU experts and other stakeholders. All would be displayed

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

3.5.1 Verifying the Effective Change Management in CTU in ESD in HEIs So as to have the complete CTU model verified, here are the results:

First, it was the five -scale (Strongly Disagree, SD: 1; Disagree, D: 2; Undecided, U: 3; Agree, A: 4; and Strongly Agree, SA: 5) questionnaire with 92 items represented for 92 elements in the model. The questionnaire went through Factor A: Change Process Management with 28 items marked from A1 to A28, Factor B: Organizational Change Management with 28 items from B1 to B28, Factor C: Change Agents Management with 16 items from C1 to C16 and Factor D: Change Management in Education for Sustainable Development from D1 to D20.

Second, for the validity of the global model through the questionnaire via IOC, 5 experts from CTU, Vietnam (namely, Dr. Trinh Quoc Lap, Deputy Dean, School of Education, Deputy Director, Nguyen Phuong Thao, Second General Secretary of HCM Youth League, CTU Youth Office, Dr. Huynh Thu Hoa, Deputy Dean, School of Sciences, Dr. Nguyen Lam Dien, Head of Letters and Vietnamese Literature, and Director Phan Huy Hung, Department of Legality) were invited to rate the questionnaire with +1, 0 and -1. And the outcomes of the total of 4 main factors with 23 sub factors in 92 items of the questionnaire are as follows:

Factor I: Change Process Management (A) with 28 items: 0.78 (19.50%)

Factor II: Organizational Change Management (B) with 28 items: 0.79 (19.75%)

Factor III: Change Agents Management (C) with 16 items: 0.80 (20.00%)

Factor IV: Change Management in Education for Sustainable Development (ESD) with 20 items: 0.85 (21.25%)

And the total of IOC from this part is 0.80.

Third, for the reliability of the model through the questionnaire via CTU experts' ratings., 11 CTU experts (Mr. Tran Thanh Ai- First Secretary General Communist Party , French Department , Mr. Tran Van Lua- Deputy Head of French Department, Mr. Tran Thanh Be, Director of Institute of Mekong Delta Research & Development, Mr. Nguyen Khanh Son, Deputy Director of CTU Quality Assessment Office, Mr. Phan Huy Cung, Deputy Director of CTU Academics Affairs, Mr. Nguyen Buu Huan, Deputy Director of Canter for Foreign Languages, Mr. Nguyen Hoang Vinh, Deputy Dean, School of Education, Mr. Le Phi Hung, Director,

Personnel Department, Mr. Le Viet Dung, Deputy Rector, Mr. Huynh Thu Hoa, Deputy Dean, Colleges of Sciences, and Ms. Nguyen Thi Phuong Thao, Second General Secretary, HCM Youth League) (Appendix Q, p.542) were invited to join the rating of the questionnaire (modified from IOC results of the rating and the ideas of the international experts) with 5 levels: SD: 1 (Strongly Disagree), D: 2 (Disagree), U: 3 (Undecided), A: 4 (Agree), and SA: 5 (Strongly Agree). And the reliability analysis via scale Alpha (α) orderly:

Factor I: Change Process Management (A) with Alpha= 0.8951 (No of cases = 40.0, No of items =28)

Factor II: Organizational Change Management (B) with Alpha =0.9187 (No of cases =38.0, No of items = 28)

Factor III: Change Agents Management (C) with Alpha = 0.8967 (No of cases = 38.0, No of items = 16)

Factor IV: Change Management in Education for Sustainable Development (ESD) with Alpha = 0.9359 (No of cases = 38.0, No of items = 20)

And the total of the reliability analysis was 0.9624 (No of cases = 34.0, No of items =92).

In addition, the results of the reliability was calculated through Mean and SD as follows

Table 11 Reliability of CTU Change Management Model through the Questionnaire Items from Focus Group with 11 CTU Experts

No.	Items	Mean	SD
	Change Process Management (A)		
A1.	In Can Tho University (CTU) context, in a change, e.g. application of "Learning by Doing" Approach, "Problem-solving" Approach, Quality Assessments in Teaching and Learning with Questionnaires, New	4.54	0.68

Table 11 (Cont.)

No.	Items	Mean	SD
	Change Process Management (A)		
	establishment of a school/faculty, center/institute, ICT-based or credit-based programs, ect. Shared vision deals with both a short-term goal, and a long-term goal.		
....			
A28.	External evaluation often helps the evaluation process with objective judgments.	4.36	0.67
Total A		**4.47**	**0.27**
	Organizational Change Management (B)		
B1.	In change management, motivation from the school leaders to avoid change resistance, develop confidence and get success is very important.	4.72	0.64
....			
B28.	In Quality Assurance Management, a selected measurement or model is often to assess a continued success of a change process.	4.36	0.67
Total B		**4.48**	**0.22**
	Change Agents Management (C)		
C1.	Teachers are active forces in school change.	4.72	0.46
....			

Table 11 (Cont.)

No.	Items	Mean	SD
C16.	Co operation from local and foreign associations (business associates, employment agency, ICT groups, ect) often helps school change develop a vision, experiences and even funding.	4.36	0.50
Total C		**4.47**	**0.30**
	Change Management in Education for Sustainable Development (D)		
D1.	Education for Sustainable Development (ESD) in school change requires a suitable environment (nature) -based curriculum/program.	4.27	0.78
....			
D20.	The education curriculum/program on the relations between school and culture is often taught towards a global climate and a culture of cultures in the era of globalization.	4.36	0.67
Total D		**4.50**	**0.38**
Total A,B C&D		**4.48**	**0.23**

Note: Items: 92, Number of experts (N): 86; Scale was 1 to 5, where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Undecided (U), 4= Agree (A), and 5= Strongly Agree (SA)

From this shortcut of Table 11, it is seen that there are no Us judged by Focus Group of CTU experts, compared to the international ones in the earlier parts, there are 48 up to 52.17% for SA, 44 up to 47.83% for A, which makes up the total Mean of 4.48 (SD=0.23), considered to be a strong and applicable model with A (Agree).

Also, there are summaries of 92 items analyzed through Mean and SD as follows: (1) Mean from 4.00 (SD=0.84) to Mean of 5.00 (SD=0.00), Factor A is of 24, Factor B of 26, Factor C of 14 and Factor D of 20, (2) Mean from 3.63 (SD=0.92) to Mean of 3.95 (SD=0.79), Factor A is of 3, Factor B of 2, Factor C of 1 and Factor D of 0. And finally (3) there is TWO items: A13 and C10 get Mean of 5.00 (SD=0.00)

Also, from this finding, it was known that the leadership was in leading roles in CTU on the way of making a change with the Mean of 4.47 (SD= 0.30).

Fourth, for the practicability of the CTU change management model through the questionnaire via more sampling ratings, 83 CTU email respondents (Appendix S, p.569), responded as follows:

There were 115 emails sent to the international users. Among them, 96 up to 83.47% responded their choices via the website. Yet, finally 83 up to 72.17% were accepted because they went through Sections 1, 2 and 3, which added to official data collection for this Phase.

Table 12 Working Position from 83 Email Respondents in CTU, Vietnam and Local Communities

No	Working position	Frequency (f)	Percentage (%)
1.	Department Deputy Head	16	19. 28
2.	Deputy Head	12	14. 25
3.	Administrative Office Chief	8	09. 63
4.	Vice Dean	7	08. 43

Table 12 (Cont.)

No	Working position	Frequency (f)	Percentage (%)
5.	First Secretary General of HCM Youth League	6	07. 22
6.	Deputy Director/Manager	5	06. 02
7.	Chairman of Teachers' Union	4	04. 81
8.	Dean	3	03. 61
9.	Local Representative	3	03. 61
10.	Parents	3	03. 61
11.	Alumni	3	03. 61
12.	Director/Manager	3	03. 61
13.	Second Secretary General of HCM Youth League	3	03. 61
14.	First Secretary General of Communist Party	2	02. 40
15.	Administrative Office Deputy Chiefs	2	02. 40
16.	War Veterans Representative	2	02. 40
17.	Deputy Rector	1	01. 20
Total		**83**	

Note: N= 83

Here in this Phrase, the focus of the study about the population is just the main agents (the underlined titles), who help to move up the change in a real HEI, CTU, Vietnam. Thus, 16 respondents up to 19.28% and 12 up to 14.25% both cover the big groups, helping to make any decision with their lecturers to do any change. Then, First Secretary General of HCM Youth League and First Secretary

General of Communist Party are the important leaders at any organization in Vietnamese structure of all sectors in the society.

Here, they voice their ideas to the model, too. And with the participations of local representatives, parents, alumni (up to 3.61% each) and war veterans' representatives with 2 up to 2.40% help to make the CTU change management model strong in terms of the diverse stakeholders.

And the following charts may unveil some more data.

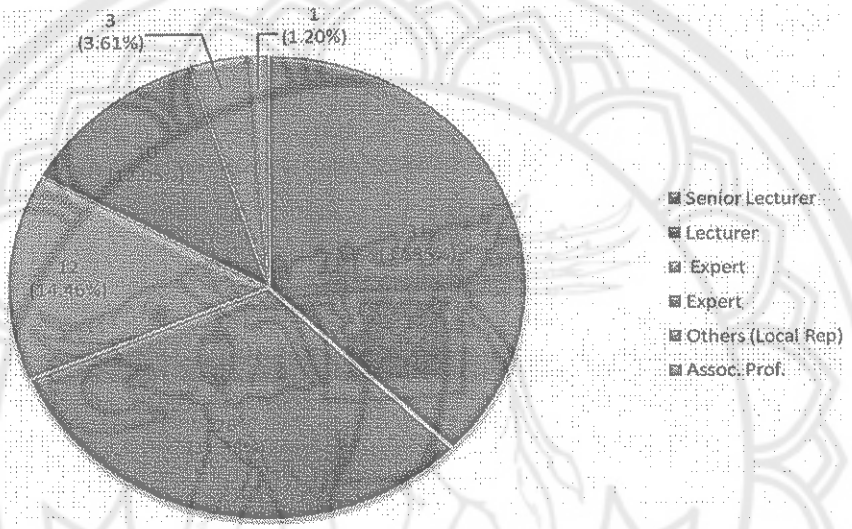

Figure 20 Distribution of CTU Email Respondents' Professional Titles

As once mentioned in the earlier part, the foci of the study in CTU, Vietnam environment are the department, which is used to be implemented any change in a HEI. In the Figure 20, 31 respondents up to 37.35% are Senior Lecturers, and 26 up to 31.33% are Lecturers, which make up the big group in this study. Senior experts account for 14.46% of 12 respondents. Experts cover 12.05% with 10 respondents. Then local representatives are 3 up to 3.61%, and 1 up to 1.20% is for a Deputy Rector of CTU, Vietnam, joining this study, too.

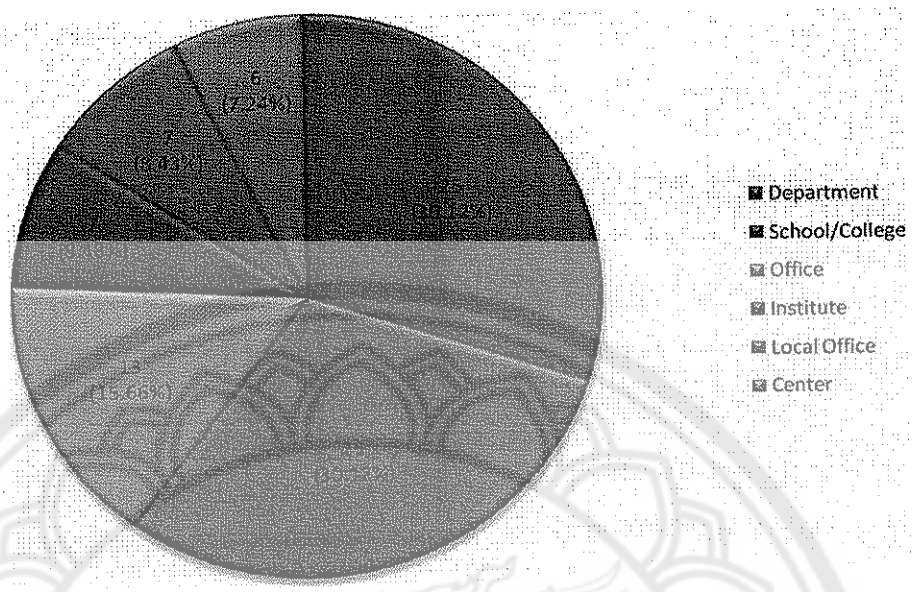

Figure 21 Distribution of CTU Email Respondents' Working Places

Figure 21 points out that the big group taking part in the judgment of the CTU change management model through the questionnaire is from the departmental level. 25 respondents up to 30.12% are from department, and 25 (the same number) are from school (faculty) or college. Then 13 up to 15.66% are from offices, 7 up to 8.43% from institute and from local office at the same percentage. And the rest are from center with 6 up to 7.24%.

Table 13 Practicability of CTU Change Management Model through the Questionnaire Items from 83 Email Respondents

No.	Items	Mean	SD
	Change Process Management (A)		
A1.	In Can Tho University (CTU) context, in a change, e.g. application of "Learning by Doing" Approach, "Problem-solving" Approach, Quality Assessments in Teaching and Learning with Questionnaires, New construction of a building, New establishment of a school/faculty, center/institute, ICT-based or credit-based programs, ect. Shared vision deals with both a short-term goal, and a long-term goal.	4.53	0.61
....			
A28.	External evaluation often helps the evaluation process with objective judgments.	4.37	0.60
Total A		**4.32**	**0.38**
	Organizational Change Management (B)		
B1.	In change management, motivation from the school leaders to avoid change resistance, develop confidence and get success is very important.	4.61	0.52
....			
B28.	In Quality Assurance Management, a selected measurement or model is often to assess a continued success of a change process.	4.26	0.68
Total B		**4.33**	**0.37**
	Change Agents Management (C)		
C1.	Teachers are active forces in school change.	4.62	0.51
....			

Table 13 (Cont.)

No.	Items	Mean	SD
	Change Process Management (A)		
C16.	Co operation from local and foreign associations (business associates, employment agency, ICT groups, ect) often helps school change develop a vision, experiences and even funding.	4.40	0.57
Total C		**4.35**	**0.43**
	Change Management in Education for Sustainable Development (D)		
D1.	Education for Sustainable Development (ESD) in school change requires a suitable environment (nature) -based curriculum/program.	4.14	0.72
....			
D20.	The education curriculum/program on the relations between school and culture is often taught towards a global climate and a culture of cultures in the era of globalization.	4.38	0.57
Total D		**4.37**	**0.44**
Total A,B C&D		**4.34**	**0.36**

Note: Items: 92, Number of experts (N): 86; Scale was 1 to 5, where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Undecided (U), 4= Agree (A), and 5= Strongly Agree (SA)

From this short cut of Table 13, it is known that there are no replies to Us, in both cases of the 11 CTU experts from the Focus Group and 83 email respondents. That can interpreter that all the CTU respondents are sure about their HEI and they voice their clear ideas to each item in the questionnaire and the model as well. There are 28 up to 30.43% for SA, and 64 up to 69.57% for A, which come up with the total Mean of 4.34 (SD= 0.36), showing the strong and applicable model of A (Agree), (Boonchom, 1996).

Also, there are summaries of 92 items analyzed through Mean and SD as follows: (1) Mean from 4.00 (SD=0.84) to Mean of 4.74 (SD=0.47), Factor A is of 22, Factor B of 25, Factor C of 16 and Factor D of 20, (2) Mean from 3.73 (SD=0.97) to Mean of 3.95 (SD=0.79), Factor A is of 6, Factor B of 3, Factor C of 0 and Factor D of 0. And finally (3) there is NO item with Mean uder 3.73 (SD-0.97).

Also, these findings, it was known that the leadership was in leading roles in CTU on the way of making a change with the Mean of 4.35 (SD= 0.36).

1) Reviews of the focus group discussion (Figure 46, Appendix, p.533) from 11 CTU experts

One method to collect the data for the CTU change management model was to get the consensus from the Focus Group Discussion (Appendix Q9, p.547), which was held on July 29, 2009 at Center for Foreign Languages, CTU, Vietnam. Here are the procedures.

Prior to the discussion, the five-scaled questionnaire of 92 items with the complete CTU model sent to 11 CTU experts (name list was mentioned earlier). Then, they came to the discussion with their rating questionnaires and comments, and ideas to talk. Yet, because of the foreign business trips, there were only 6 experts, turning in the discussion.

At the beginning of the discussion, Mr. Chairman (Nguyen Buu Huan) declared the reasons for this event. Then, each expert shared ideas (summarized in the next table) towards the model and the questionnaire from their understandings. Then, the researcher added ideas to make clear to the experts' open questions: (1) Who will be the CTU stakeholders to the rating for practicability towards the model? Is it necessary for one of the rector board members to join any

change in the university? How can the shared missions and visions be spread out to the lower level in a department, center, institute or office? When will the model be proposed to the CTU rector board? After taking about these issues, they [present experts] clearly and fully understood what the researcher did with his dissertation. And they came out with the high consensus to the model. (All of them raised their hands to pose their agreement). And after nearly two hours and a half, the discussion came to an end.

Besides the result from the Mean and SD of the questionnaire of the CTU experts through a Focus Group Discussion (Figure 46, Appendix, p.533), and the high consensus from this event, the following would be the summaries of the discussion held on July 29, 2009. (Sample of the Focus Group Discussion, Appendix Q, p.547)

Table 14 Reviews of the Feedbacks from the Focus Group Discussion, CTU, Vietnam

Participants	CTU Change Management Model	The Questionnaire
1.	In Factor A (Change Process Management), add "missions" after "shared visions" into "shared missions and visions."	I t should be essential to use the correct word in Vietnamese to convey the word "lecturers," of Factor C (Change Agents Management)
2	The model is acceptable. In the sub factors of Factor B (Organizational Change Management), put the phrase "budget development" before "budget spending" in the right order.	It is important to use some Vietnamese equivalent words or phrases from English such as "develop," "reinforce," and the pronouns "it" and "they."

Table 14 (Cont.)

Participants	CTU Change Management Model	The Questionnaire
3.	In the elements under Factor C (Change Agents Management), it is essential to write down the specific leaders, e.g. First Secretary General of Communist Party or of Ho Chi Minh Youth League, War veterans representatives and so on	If possible, underline the word "change" in any item in the questionnaire for all respondents to see it.
4.	In the model, it is necessary to consider the "transition" between the retied leader and the new one in the transformational leadership. Factor C (Change Agents Management) is sufficient.	It should be necessary to add some specific examples after the word "change," e.g. . a new established school or college, implementation of the "credit-based" program in the whole university, application of "Learning by Discovery" in teaching and learning and so on.
5.	"Leaders" in Factor C (Change Agents Management) must be put in the first place: Leaders, Participants, Facilitators and Cooperatives	When talking about the local community, it is important to mention directly to Can Tho city and the Mekong Delta provinces in Factor D (Change Management in Education for Sustainable Development)

Table 14 (Cont.)

Participants	CTU Change Management Model	The Questionnaire
6.	The model is interesting to CTU climate of change. In Factor C (Change Agents Management), the roles of the young teaching, office staff and students are very crucial to any university change.	It is necessary to add the word "natural" before "environment" into "natural environment" to distinguish with "school environment" or "learning environment," and so on in Factor D (Change Management in Education for Sustainable Development)
7.	The model is satiable to CTU. Senior teaching and office staff in the agents change are often eager to join "a change" in school, but the young ones are more enthusiastic.	Can Tho University has had a strong cooperation with the local communities, especially 13 provinces in the Mekong Delta Regions, and its main roles cannot be refused, and they (roles) must be strengthened. Thus, in community-based education of Factor D, it should mention this issue.
8.	ICT transfer is important to any change, and it makes the university culture closer. Thus, the model with this factor is good.	

Table 14 (Cont.)

Participants	CTU Change Management Model	The Questionnaire
9.	The model is interesting, feasible, and practical to Can Tho University context. Agents are still the most important actors in a change with the good leadership, which is likely to make the change a success.	
10.	It should be necessary to refer to the models of change management in educational sector in the world, then to pilot it in Vietnam. And the researcher did that. It needed to make a comparison.	
11.	In a change, financial supports from the government and other organizations are very important.	

Notes: 11 Experts, Present 6 at the Focus Group Discussion

In short, the results from the Focus Group Discussion added to more agreement to the CTU model, which would be proposed to the CTU rector board for the implementation in the long run.

And here are the summaries of the open-ended responses and email feedbacks from the CTU experts, email respondents and advisory advisors.

First of all, there were the reviews of the 10 open-needed responses from the international respondents. There appeared with the following summaries: (Appendix, S, p.569)

Dr. Tran Van Lua said, "I really agree on the model, but in the Factor D, it is necessary to add 'society-based education' to it."

Dr. Tran Thanh Be said, "At any change in education, it should be necessary to get all the stakeholders involved in it after they [stakeholders] are well-trained and fully aware of the change itself."

Associate Professor Dr. Tran Thanh Ai commented, "There are a wide range of 'changes' in education in terms of levels with the contribution of specific agents at departments, centers, or offices and with number of participants involved. And in other sense, a 'change; may be from 'top down' (from the decree of Ministry of Education and Training: MOET), or a change is a 'must' from the department, the direct unit with close relation with teaching and office staff and students. Or a change may last in a short time or a long time. In addition, there are internal and external factors, which should be chosen to be the main factor or subordinate one, affecting the change."

Deputy Director Nguyen Buu Huan stated, "The model proposed is very interesting and suitable to the current Can Tho University climate."

Deputy Director Nguyen Khanh Son posed, "The University should declare the clear missions or visions for a short and long-term strategy. Then when a 'change' is needed, all the stakeholders must be aware of the 'change,' and they all are enthusiastic to join the change process. And importantly, leaders of that change are to show their great devotion to it."

Director Truong Chi Hai briefly talked about a change process, "A school in general is considered to be 'a whole unit' consisting of rector board, colleges/ schools (faculties), institutes, centers, offices, administrators, teaching and office staff and students, and other stakeholders (parents, community representatives, local associations and so on). The leadership from the rector board is very essential. Rector board should share vision in a needy 'change,' give out their governing ideas, and then discussions come up with the consensus among the stakeholders. Then a change is undergone, and it is likely to make it a success."

Senior Lecturer Luu Nguyen Quoc Hung suggested, "It should be necessary to refer to the models of change management in educational sector in the world, then to pilot it in Vietnam. I do hope that your model is a great one to be piloted in Can Tho University, Vietnam."

Associate Professor Dr. Le Viet Dung posed the idea, "I really agree upon the model: (1) organizational change management and (2) human resource management towards teaching staff and students."

Deputy Dean Huynh Thu Hoa gave out the recommendations, "It is necessary to mention about the considerable contributions of the local communities, the Mekong Delta regions, especially Can Tho City and their impacts on any change in Can Tho University and market jobs after the graduations of students in these venues as well."

Dean Nguyen Hoang Vinh indicated, "Agents, active actors, in change, are the most important forces. Innovative teaching methods must be supported by teaching staff with great motivation from themselves and from the leaders. Here in this respect, 'Individual Property' (IP) and direct investment in each 'potential administrator' from the university leaders should be evaluated properly and the high priority to individual contributions to the working place development must be focused on, accompanied with the 'suitable bonus' in terms of 'rewards' or 'a raise' in salary in order to avoid the "brain drain' phenomena in school."

And secondly, there were the summaries of 14 email discussions to the model and the questionnaire. The selected email feedbacks are summarized as follows:

Senior Luu Nguyen Quoc Hung commented, "Change process must be based upon the climate of a school in the context of a country in a changing world. Yet, learners' needs are things to think about before hand towards the leaders. In another sense, in order to create a Change Management Model, the creator needs to rely on the 'missions,' 'visions,' and 'strategy' of a school. And it should be essential to use SWOT analysis to push up the change process."

Director Phan Huy Hung expressed, "If a change is required, there appears 'a plan,' 'agents,' and 'an organization." It is an agent that makes an agent that makes a plan, leads and motivates the change. It is necessary to encourage all the stakeholders to take part in it, and the leader is like 'captain' in a ship."

Director Phan Huy Cung said, "I agree on the model. Still, it will be better if the researcher adds 'scientific research' and IT transfer in order to implement between 'theory' and 'practice."

Director Truong Chi Hai expressed, "I am agreeable on the model with its sub factors. It will be strong for the model if the researcher put 'Budget Development' prior to 'Budget Spending' because that means that a school needs a budget in advance to have a plan to spend it to specific items."

Deputy Dean Huynh Thu Hoa commented, "In a change management model, it is necessary to consider the 'transition' between the 'predecessors' and 'successors' in leadership. And senior lecturers and experts' contributions in our university must be recognized."

Dr. Nguyen Lam Dien briefly expressed, "There must be specific arrangements and distributions about responsibilities and accountabilities among the agents in an organization in joining a change."

Second General Secretary, Bui Thanh Thao focused on the CTU context, "Can Tho University has had a strong cooperation with the local communities, especially 13 provinces in the Mekong Delta Regions, and its main roles cannot be refused, and they (roles) must be strengthened."

Deputy Head, Le Huu Ly broadly posed, "I do agree on the researcher's proposed CTU change management model. And I really think that all the stakeholders in the society should get involved in carrying out the educational goals, which helps develop Vietnam education to catch up with those of the regional and global educational settings, especially in higher education level."

Director Le Phi Hung stated, "The model is interesting, feasible, and practical to Can Tho University context. Agents are still the most important actors in a change with the good leadership, which is likely to make the change a success."

Respondent J said that the model is good. Young teaching and office staff also do make their great contributions to a change, and they are "volunteers" or "pioneers" in any change or project.

Second General Secretary, Nguyen Thi Phuong Thao a young leader in Youth League, expressed that, in Vietnamese education environment, the school organizations such as Communist Party Agencies, Ho Chi Minh (HCM) Youth League, Teacher's Union (Worker's Union), Alumni Association, War Veterans

Association and others with the "backbone" of the young teaching and office staff' have really helped make any changes successful in CTU so far.

Director Truong Chi Hai summarized, "In a change, 'budget' is a needy factor."

Along with this issue, On June 25, 2009, Dr. Nguyen Lam Dien, former Head of Letters & Vietnamese Language Department, concurrently an advisory member, School of Education, CTU, Vietnam, expressed his ideas that the model was of sufficient factors to a change in HEI and at any educational establishment. Yet, Dien (2009) added that when a change is needed, school leaders should "maintain" and "reinforce" what they have done in the field of the change, and then "improve" it to get new outcomes and benefits to all the stakeholders.

On June 26, 2009, Dr. Tran Thanh Be, Director of the Mekong Delta Development Research Institute, CTU, Vietnam, stated that the model covers all the factors in an HEI development. However, because of the word "environment" with many meanings in the real contexts, such as "learning environment," "cooperation environment," or "competition environment," it is necessary to add the word "natural" before this term when using it in Vietnamese school climate in ESD related to the environment-based education in order to get rid of such misunderstandings.

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

The following would be counted on the similar and different things between the two models: Global and CTU Change Management Models in ESD in HE level in terms of the summarized tables.

1) Similarities

First, let us take a look at the similarities of the two models in the table below with the main factors and sub factors like a "framework."

Table 15 Similarities

No	Similar items	Global model	CTU model
1.	**Four main factors**	x	x
2.	**23 sub factors**	x	x
3.	Factors-Organizational Change Management (B) and Change Agents Management (C) operates inside Change Process Management (A) and go through Change Management in ESD (D)	x	x

2) Differences

First, in terms of IOC results, it is displayed below:

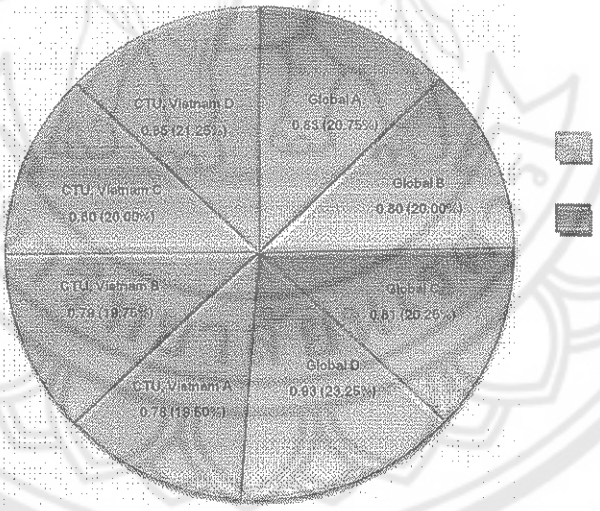

Figure 22 Comparisons of IOC between the Global and CTU Change Management Model from Experts

On the left side of the Figure 22, the results were from the CTU experts, and on the right side of the chart, those were from the international experts. Let us take a look at the results again.

Firstly, they are from the international experts: Factor I: Change Process Management (A) with 28 items: 0.83 (20.75%); Factor II: Organizational Change Management (B) with 28 items: 0.80 (20.00%), Factor III: Change Agents Management (C) with 16 items: 0.81 (20.25%), and Factor IV: Change Management in Education for Sustainable Development (ESD) with 20 items: 0.93 (23.25%) . And the total of IOC from this part is 0.85.. Second, they are from the CTU experts: Factor I: Change Process Management (A) with 28 items: 0.78 (19.50%), Factor II: Organizational Change Management (B) with 28 items: 0.79 (19.75%), Factor III: Change Agents Management (C) with 16 items: 0.80 (20.00%), and Factor IV: Change Management in Education for Sustainable Development (ESD) with 20 items: 0.85 (21.25%). And the total of IOC from this part is 0.80. Clearly, the CTU experts took their serious judgments for their ratings because the model would be piloted in their venue.

Secondly, in terms of demographic data, the table bellows would reveal other information.

Table 16 Frequency and Percentage of Age between Global and CTU Respondents

No.	Venue	Age					
		20s	30s	40s	50s	60s	70s
1.	IOC international experts			2 (40.00%)	3 (60.00%)		
2.	IOC CTU experts		1 (20.00%)	1 (20.00%)	3 (60.00%)		
3.	Global Model with 19 experts	1 (05.26%)	1 (05.26%)	6 (31.58%)	3 (15.79%)	8 (42.11%)	
4.	CTU Model with 11 experts (Focus Group)		1 (09.10%)	4 (36.36%)	6 (54.54%)		
5.	Global Model with 86 email respondents	6 (06.98%)	19 (22.09%)	30 (34.88%)	18 (20.93%)	12 (13.95%)	1 (01.17%)
6.	CTU Model with 83 email respondents	6 (07.22%)	27 (32.53%)	34 (40.96%)	16 (19.28%)		

Notes: N= 5 International Experts, and 5 CTU ones, Vietnam, in Validity Rating
N= 19 International Experts, and 11 CTU ones, Vietnam, in Reliability Rating
N= 86 International Email Respondents and 83 CTU ones, Vietnam, in Practicability Rating

Here in this part of the study, for the first sense of age from the respondents, it is known that the respondents joining this research from the global scale seemed older than those from CTU, Vietnam. It was because the purpose of the researcher was that he wanted to get the "core" ideas from the experts globally to make the model a "framework" before putting it into a real learning community, CTU, Vietnam.

Table 17 Frequency and Percentage of Gender between Global and CTU Respondents

No.	Venue	Gender	
		Male	Female
1.	IOC international experts	2 (40.00%)	3 (60.00%)
2.	IOC CTU experts	1 (20.00%)	4 (80.00%)
3.	Global Model with 19 experts	14 (73.68%)	5 (26.32%)
4.	CTU Model with 11 experts	10 (90.90%)	1 (09.10%)
5.	Global Model with 86 email respondents	56 (65.11%)	30 (34.89%)
6.	CTU Model with 83 email respondents	58 (69.88%)	25 (30.12%)

Notes: N= 5 International Experts, and 5 CTU ones, Vietnam, in Validity Rating

N= 19 International Experts, and 11 CTU ones, Vietnam, in Reliability Rating

N= 86 International Email Respondents and 83 CTU ones, Vietnam, in Practicability Rating

In the second sense of gender, it revealed that the majority of the respondents were males. They reflected the true phenomenon worldwide at any sector of the society, and the educational one was not in an exception. Yet, the researcher wanted to invite more female respondents to join the study in order to make a balance in terms of the gender, and the diverse ideas from all the two sexes as well.

Table 18 Frequency and Percentage of Length of Work between Global and CTU Respondents

No.	Venue	Length of work					
		5- 9	10s	20s	30s	40s	50s
1.	IOC international experts		1 (20.00%)	3 (60.00%)	1 (20.00%)		
2.	IOC CTU experts	1 (20.00%)	1 (20.00%)	2 (40.00%)	1 (20.00%)		
3.	Global Model with 19 experts	6 (31.58%)	3 (15.79%)	7 (36.84%)	3 (15.79%)		
4.	CTU Model with 11 experts	1 (09.10%)		5 (45.45%)	5 (45.45%)		
5.	Global Model with 86 email respondents	38 (44.19%)	17 (19.76%)	24 (27.90%)	6 (06.98%)	1 (01.17%)	

Table 18 (Cont.)

No.	Venue	Length of work					
		5- 9	10s	20s	30s	40s	50s
6.	CTU Model with 83 email respondents	12 (14 45%)	38 (45.78%)	28 (33.74%)	5 (06.03%)		

Notes: N= 5 International Experts, and 5 CTU ones, Vietnam, in Validity Rating
N= 19 International Experts, and 11 CTU ones, Vietnam, in Reliability Rating
N= 86 International Email Respondents and 83 CTU ones, Vietnam, in Practicability Rating

In the third sense of the length of working, like the comparison with the age issue, this table showed that time of the respondents for working in CTU, Vietnam is shorter than those in the world. It can be interpreted that they are so young and the HE institute is a new one, too. Yet, the numbers of the respondents in both scales were mature enough (in 20 years of working with the total of 69 among 200) to give out their ideas to an important change.

Thirdly, in terms of t-tests, these show out as follows:

Table 19 Comparison of t-test between the Global and CTU Experts with Group Statistics

Items	Group	N	Mean	SD	Std. Error Mean
A1.	1.00	11	4.18	0.75	.22
	2.00	11	4.54	0.68	.20
	2.00	11	4.45	0.52	.15
....					

Table 19 (Cont.)

Items	Group	N	Mean	SD	Std. Error Mean
A28.	1.00	11	4.00	0.63	.19
	2.00	11	4.36	0.67	.20
Total A	**1.00**	**11**	**3.98**	**0.44**	**.13**
B1.	1.00	11	3.90	1.37	.41
	2.00	11	4.72	0.64	.19
....					
B28.	1.00	11	3.81	1.07	.32
	2.00	11	4.36	0.67	.20
Total B	**1.00**	**11**	**3.86**	**0.62**	**.18**
	2.00	**11**	**4.48**	**0.22**	**.06**
C1.	1.00	11	4.36	0.67	.20
	2.00	11	4.72	0.46	.14
	2.00	11	4.36	0.50	.15
....					
C16.	1.00	11	3.90	0.83	.25
	2.00	11	4.36	0.50	.15
Total C	**1.00**	**11**	**4.02**	**0.45**	**.13**
	2.00	**11**	**4.47**	**0.30**	**.09**
D1.	1.00	11	4.27	0.64	.19
	2.00	11	4.27	0.78	.23
	2.00	11	4.45	0.52	.15
....					

Table 19 (Cont.)

Items	Group	N	Mean	SD	Std. Error Mean
D20.	1.00	10	4.10	0.87	.27
	2.00	11	4.36	0.67	.20
Total D	**1.00**	**11**	**3.71**	**1.07**	**.32**
	2.00	**11**	**4.50**	**0.38**	**.11**
Total A,B,C&D	**1.00**	**11**	**3.89**	**0.41**	**.12**
	2.00	**11**	**4.48**	**0.22**	**.06**

Notes: 1. Items: 92, Number of experts (N): 86; Scale was 1 to 5, where
1= Strongly Disagree (SD), 2= Disagree (D), 3= Undecided (U), 4= Agree (A), and 5= Strongly Agree (SA)
2. Group 1= Global respondents
Group 2= CTU, Vietnam respondents

From this Table, it is learned that, in Group 1 there are 4 for SA up to 4.35%, 85 for A up to 92.39%; and 3 for U up to 3.26%. And the total results for the 4 factors is at the Mean of 3.93 (SD=.53), which is proved to be A (Agree) to the model, strong and applicable to the real application. And in Group 2, there are 47 for SA up to 51.08% and 45 for A up to 48.91%. Yet there are no Us compared to 3 in Group 1. Ad the total Mean is 4. 48 (SD= 0.22), which is also proved to be A (Agree) to the model, strong and applicable to the real application.

From this comparison, it is learned that the leadership (Factor C: Change Agents Management) in both groups is higher: Group 1: 4.02 (SD=0.45) whereas Group 2: 4.47 (SD= 0.30).

Table 20 Comparison of t-test between the Global and CTU Experts with Independent Samples Test

Items		Sig.	t	df	Sig. (2-tailed) or p-value
A1	Equal variances assumed	.918	-1.18	20	0.250
....					
A7	Equal variances assumed	.012	-3.45	20	0.003*
	Equal variances not assumed		-3.45	13.906	0.004*
....					
A11	Equal variances assumed	.224	-3.04	20	0.006*
	Equal variances not assumed		-3.04	15.283	0.008*
....					
A13	Equal variances assumed	.000	-5.87	20	0.000*
	Equal variances not assumed		-5.87	10.000	0.000*
A14	Equal variances assumed	.037	-2.98	20	0.007*
	Equal variances not assumed		-2.98	16.335	0.009*
....					
A17	Equal variances assumed	.635	-2.21	20	0.039*

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-2.21	15.743	0.042*
....					
A22	Equal variances assumed	.075	-3.26	20	0.004*
	Equal variances not assumed		-3.26	14.979	0.005*
....					
A24	Equal variances assumed	.058	-2.47	20	0.022*
	Equal variances not assumed		-2.47	15.355	0.025*
A25	Equal variances assumed	.002	-2.45	20	0.024*
	Equal variances not assumed		-2.45	13.846	0.028*
A26	Equal variances assumed	.162	-3.48	20	0.002*
	Equal variances not assumed		-3.48	17.498	0.003*
....					
A28	Equal variances assumed	.236	-1.30	20	0.207
	Equal variances not assumed		-1.30	19.919	0.207

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
Total A	**Equal variances assumed**	**.441**	**-3.17**	**20**	**0.005***
	Equal variances not assumed		**-3.17**	**16.598**	**0.006**
B1	Equal variances assumed	.050	-1.79	20	0.089
.....					
B3	Equal variances assumed	.001	-2.34	20	0.030*
	Equal variances not assumed		-2.34	12.169	0.037*
....					
B5	Equal variances assumed	.012	-3.71	20	0.001*
	Equal variances not assumed		-3.71	13.906	0.002*

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-1.75	14.060	0.102*
....					
B8	Equal variances assumed	.283	-3.13	20	0.005*
	Equal variances not assumed		-3.13	17.101	0.006
....					
B11	Equal variances assumed	.314	-2.86	20	0.010*
	Equal variances not assumed		-2.86	18.376	0.010*
B12	Equal variances assumed	.181	-2.60	20	0.017*
	Equal variances not assumed		-2.60	16.000	0.019*
....					
B14	Equal variances assumed	.153	-2.19	20	0.040*

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-2.19	14.098	0.046*
B15	Equal variances assumed	.521	-2.12	20	0.046*
	Equal variances not assumed		-2.12	18.663	0.047*
B16	Equal variances assumed	.825	-2.09	20	0.049*
	Equal variances not assumed		-2.09	18.173	0.050*
....					
B18	Equal variances assumed	.009	-2.17	20	0.042*
	Equal variances not assumed		-2.17	12.975	0.049*
....					
B20	Equal variances assumed	.330	-3.00	20	0.007*

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-3.00	17.502	0.008*
B21	Equal variances assumed	.276	-2.76	20	0.012*
	Equal variances not assumed		-2.76	13.927	0.015*
....					
B27	Equal variances assumed	.895	-2.82	20	0.011*
	Equal variances not assumed		-2.82	19.992	0.011*
B28	Equal variances assumed	.051	-1.42	20	0.170
	Equal variances not assumed		-1.42	16.778	0.173
Total B	**Equal variances assumed**	**.077**	**-3.08**	**20**	**0.006***

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		**-3.08**	**12.497**	**0.009***
C1	Equal variances assumed	.112	-1.47	20	0.157
	Equal variances not assumed		-.81	15.241	0.428
....					
C5	Equal variances assumed	.026	-2.74	20	0.013*
	Equal variances not assumed		-2.74	12.020	0.018*
....					
C10	Equal variances assumed	.002	-4.28	20	0.000*
	Equal variances not assumed		-4.28	10.000	0.002*
....					
C16	Equal variances assumed	.184	-1.55	20	0.137

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-1.55	16.488	0.140
Total C	**Equal variances assumed**	**.341**	**-2.77**	**20**	**0.012***
	Equal variances not assumed		**-2.77**	**17.436**	**0.013***
D1	Equal variances assumed	.389	.00	20	1.000
	Equal variances not assumed		.00	19.282	1.000
....					
D14	Equal variances assumed	.019	-4.44	19	0.000*
	Equal variances not assumed		-4.29	12.276	0.001*
D15	Equal variances assumed	.441	-2.26	19	0.036*

Table 20 (Cont.)

Items		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-2.27	18.995	0.035*
D16	Equal variances assumed	.082	-3.35	19	0.003*
	Equal variances not assumed		-3.26	13.717	0.006
....					
D20	Equal variances assumed	.391	-.78	19	0.446
	Equal variances not assumed		-.77	16.898	0.453
Total D	**Equal variances assumed**	**.243**	**-2.30**	**20**	**0.032***
	Equal variances not assumed		**-2.30**	**12.532**	**0.039***
Total A,B,C &D	**Equal variances assumed**	**.072**	**-4.11**	**20**	**0.001***

Table 20 (Cont.)

Items	Sig.	t	df	Sig. (2-tailed) or p-value
Equal variances not assumed		**-4.11**	**15.555**	**0.001***

Notes: N= 92, and p≤ 0.05 * (sig.)

From this Table, there were 9 * in Factor A, 12* in Factor B, 2* in Factor C and 3* (the total of 26* of 92) in Factor D. And the total of t is = -4.11 with p= 0.001*. Here in this part, there is a significance between the ratings of the international and CTU, Vietnam respondents because (1) the different from the working places, and professional titles, (2) specific agents in CTU focus on the leaders such as Communist Party members, rectors, directors or department heads and deputy heads, and (3) Vietnamese translation from English, an aspect of "culture," that make sense towards the understandings to Vietnamese respondents, especially to CTU ones. Thus, the results of significances were found in the items of A7, A11, A13, A14, A22, A24, A25, A26, B3, B5, B8, B11, B12, B14, B15, B16, B18, B20, B21, B27, C5, C10, D14, D15, and D16.

Table 21 Comparison of t-test between the Global and CTU Email Respondents with Group Statistics

Items	Group	N	Mean	SD	Std. Error Mean
A1.	1.00	80	4.22	0.82	.12
	2.00	79	4.53	0.61	.07
....					
	2.00	78	4.37	0.51	.06
A28.	1.00	77	3.89	0.76	.11
	2.00	78	4.37	0.60	.07
Total A	**1.00**	**81**	**3.93**	**0.43**	**.06**
	2.00	**79**	**4.32**	**0.38**	**.04**
B1.	1.00	54	4.37	0.77	.11
	2.00	70	4.61	0.52	.06
....					
	2.00	69	4.20	0.66	.08
B28.	1.00	54	3.86	0.84	.12
	2.00	68	4.26	0.68	.08
Total B	**1.00**	**55**	**3.89**	**0.54**	**.07**
	2.00	**71**	**4.33**	**0.37**	**.04**
C1.	1.00	52	4.33	0.79	.11
	2.00	67	4.62	0.51	.06
....					
	2.00	67	4.23	0.67	.08
C16.	1.00	52	4.06	0.77	.11
	2.00	67	4.40	0.57	.07

Table 21 (Cont.)

Items	Group	N	Mean	SD	Std. Error Mean
Total C	**1.00**	**53**	**4.04**	**0.60**	**.08**
	2.00	**68**	**4.35**	**0.43**	**.05**
D1.	1.00	49	4.35	0.71	.10
	2.00	67	4.14	0.72	.08
....					
D20	1.00	48	3.97	0.89	.13
	2.00	67	4.38	0.57	.07
Total D	1.00	50	4.04	0.60	.10
	2.00	67	4.35	0.43	.05
Total A,B,C&D	**1.00**	**81**	**4.04**	**0.60**	**.07**
	2.00	**78**	**4.35**	**0.43**	**.04**

Note: 1. Items: 92, Number of experts (N): 86; Scale was 1 to 5, where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Undecided (U), 4= Agree (A), and 5= Strongly Agree (SA)

2. Group 1= Global respondents
Group 2= CTU, Vietnam respondents

From this shortcut of Table, it is learned that, in Group 1 there are 2 for SA up to 2.17%, 88 for A up to 95.65%; and 2 for U up to 2.18%. And the total results for the 4 factors is at the Mean of 4.04 (SD= 0.60), which is proved to be A (Agree) to the model, strong and applicable to the real application. And in Group 2, there are 27 for SA up to 29.35% and 65 for A up to 70.65%. Yet there are no Us compared to 2 in Group 1. And the total Mean is 4.35 (SD= 0.43), which is also proved to be A (Agree) to the model, strong and applicable to the real application.

From this comparison, it is learned that the leadership (Factor C: Change Agents Management) in both groups is higher: Group 1: 4.04 (SD=0.60) whereas Group 2: 4.35 (SD=0.43).

Table 22 Comparison of t-test between the Global and CTU Email Respondents with Independent Samples Test

		t-test for Equality of Means			
Items		**Sig.**	**t**	**df**	**Sig. (2-tailed) or p-value**
A1	Equal variances assumed	.280	-2.32	110	0.022*
	Equal variances not assumed		-2.19	75.735	0.031*
….					
A8	Equal variances assumed	.001	-4.82	111	0.000*
	Equal variances not assumed		-4.24	57.099	0.000*
….					
A13	Equal variances assumed	.000	-10.27	110	0.000*
	Equal variances not assumed		-9.11	58.963	0.000*
A14	Equal variances assumed	.100	-4.16	111	0.000*
	Equal variances not assumed		-3.94	77.562	0.000*
…..					

Table 22 (Cont.)

Items		t-test for Equality of Means			
		Sig.	t	df	Sig. (2-tailed) or p-value
A17	Equal variances assumed	.355	-5.05	111	0.000*
	Equal variances not assumed		-4.72	73.590	0.000*
A18	Equal variances assumed	.830	-4.12	111	0.000*
	Equal variances not assumed		-3.81	70.424	0.000*
....					
A21	Equal variances assumed	.003	-5.40	111	0.000*
	Equal variances not assumed		-4.89	60.324	0.000*
A22	Equal variances assumed	.000	-7.28	110	0.000*
	Equal variances not assumed		-6.52	61.272	0.000*
A23	Equal variances assumed	.003	-3.39	111	0.001*
	Equal variances not assumed		-3.09	66.600	0.003*
A24	Equal variances assumed	.001	-4.11	111	0.000*

Table 22 (Cont.)

Items		Sig.	t-test for Equality of Means t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-3.68	57.091	0.001*
A25	Equal variances assumed	.027	-3.32	111	0.001*
	Equal variances not assumed		-3.05	68.483	0.003*
A26	Equal variances assumed	.000	-7.90	109	0.000*
	Equal variances not assumed		-7.34	70.548	0.000*
A27	Equal variances assumed	.129	-2.46	110	0.016*
	Equal variances not assumed		-2.37	83.550	0.020*
A28	Equal variances assumed	.235	-3.76	110	0.000*
	Equal variances not assumed		-3.61	81.517	0.001*
Total A	**Equal variances assumed**	**.304**	**-5.05**	**111**	**0.000***
	Equal variances not assumed		**-4.94**	**88.672**	**0.000***

Table 22 (Cont.)

			t-test for Equality of Means		
	Equal variances not assumed		**-4.94**	**88.672**	**0.000***
B1	Equal variances assumed	.058	-1.91	110	0.059
	Equal variances not assumed		-1.77	70.293	0.081
....					
B3	Equal variances assumed	.012	-3.33	110	0.001*
	Equal variances not assumed		-3.05	66.612	0.003*
....					
B5	Equal variances assumed	.005	-6.52	111	0.000*
	Equal variances not assumed		-6.12	74.964	0.000*
B6	Equal variances assumed	.028	-3.33	111	0.001*
	Equal variances not assumed		-3.03	65.540	0.0038
B7	Equal variances assumed	.297	-3.02	111	0.003*
	Equal variances not assumed		-2.75	66.492	0.008*
....					

Table 22 (Cont.)

Items		t-test for Equality of Means			
		Sig.	t	df	Sig. (2-tailed) or p-value
B10	Equal variances assumed	.019	-3.43	111	0.001*
	Equal variances not assumed		-3.19	72.383	0.002*
B11	Equal variances assumed	.009	-5.60	110	0.000*
	Equal variances not assumed		-5.23	72.447	0.000*
B12	Equal variances assumed	.265	-4.53	111	0.000*
	Equal variances not assumed		-4.32	79.847	0.000*
B13	Equal variances assumed	.535	-1.82	111	0.072
	Equal variances not assumed		-1.77	86.535	0.081
....					
B18	Equal variances assumed	.002	-3.64	110	0.000*
	Equal variances not assumed		-3.47	80.049	0.001*
.....					
B20	Equal variances assumed	.442	-5.16	111	0.000*

Table 22 (Cont.)

Items		t-test for Equality of Means			
		Sig.	**t**	**df**	**Sig. (2-tailed) or p-value**
	Equal variances not assumed		-4.92	80.665	0.000*
B21	Equal variances assumed	.884	-5.88	110	0.000*
	Equal variances not assumed		-5.38	66.557	0.000*
....					
B27	Equal variances assumed	.083	-3.22	111	0.002*
	Equal variances not assumed		-3.01	74.045	0.003*
B28	Equal variances assumed	.961	-2.77	110	0.007
	Equal variances not assumed		-2.66	81.315	0.009
Total B	**Equal variances assumed**	**.740**	**-5.04**	**111**	**0.000***
	Equal variances not assumed		**-4.73**	**74.661**	**0.000***
C1	Equal variances assumed	.006	-2.36	110	0.020

Table 22 (Cont.)

Items		t-test for Equality of Means			
		Sig.	t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-2.18	68.723	0.033
....					
C5	Equal variances assumed	.000	-4.65	111	0.000*
	Equal variances not assumed		-4.08	56.594	0.000*
....					
C10	Equal variances assumed	.117	-3.90	111	0.000*
	Equal variances not assumed		-3.58	68.258	0.001*
....					
C12	Equal variances assumed	.661	-3.10	111	0.002*
	Equal variances not assumed		-3.03	89.428	0.003*
C13	Equal variances assumed	.128	-3.50	109	0.001*
	Equal variances not assumed		-3.42	88.232	0.001*
....					
C16	Equal variances assumed	.722	-2.66	111	0.009

Table 22 (Cont.)

Items		Sig.	t-test for Equality of Means t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-2.52	78.495	0.014
TotalC	**Equal variances assumed**	**.974**	**-3.14**	**111**	**0.002***
	Equal variances not assumed		**-2.96**	**76.072**	**0.004***
D1	Equal variances assumed	.868	1.49	110	0.139
	Equal variances not assumed		1.49	95.508	0.139
....					
D4	Equal variances assumed	.246	-3.02	109	0.003*
	Equal variances not assumed		-2.93	82.958	0.004*
....					
D6	Equal variances assumed	.409	-4.43	110	0.000*
	Equal variances not assumed		-4.01	63.668	0.000*
D7	Equal variances assumed	.034	-2.59	110	0.011*

Table 22 (Cont.)

Items		Sig.	t-test for Equality of Means t	df	Sig. (2-tailed) or p-value
	Equal variances not assumed		-2.61	95.973	0.011*
D8	Equal variances assumed	.010	-4.14	107	0.000*
	Equal variances not assumed		-4.10	89.305	0.000*
D9	Equal variances assumed	.139	-3.60	109	0.000*
	Equal variances not assumed		-3.34	69.410	0.001*
D10	Equal variances assumed	.005	-3.16	110	0.002*
	Equal variances not assumed		-3.08	86.252	0.003*
D11	Equal variances assumed	.348	-3.03	109	0.003*
	Equal variances not assumed		-2.78	65.966	0.007
....					
D14	Equal variances assumed	.081	-4.73	108	0.000*
	Equal variances not assumed		-4.58	81.946	0.000*

Table 22 (Cont.)

Items		t-test for Equality of Means			
		Sig.	t	df	Sig. (2-tailed) or p-value
D15	Equal variances assumed	.682	-3.77	110	0.000*
	Equal variances not assumed		-3.70	87.800	0.000*
D16	Equal variances assumed	.070	-4.52	110	0.000*
	Equal variances not assumed		-4.32	79.952	0.000*
....					
D18	Equal variances assumed	.332	-3.65	110	0.000*
	Equal variances not assumed		-3.28	61.711	0.002*
....					
D20	Equal variances assumed	.338	-2.96	110	0.004*
	Equal variances not assumed		-2.73	68.549	0.008
Total D	Equal variances assumed	.567	-4.09	111	0.000*
	Equal variances not assumed		-3.75	67.655	0.000*

Table 22 (Cont.)

		t-test for Equality of Means			
Items		**Sig.**	**t**	**df**	**Sig. (2-tailed) or p-value**
Total A,B,C& D	**Equal variances assumed**	**.876**	**-4.78**	**111**	**0.000***
	Equal variances not assumed		**-4.47**	**73.752**	**0.000***

Notes: N= 92, and $p \leq 0.05$ * (sig.)

From this Table, there were 16 * in Factor A, 10* in Factor B, 4* in Factor C and 9* in Factor D (with the total of 39* of 92). And the total of "t" is t= -4.78 and t= -4.47 with p= 0.000*. Here in this part, there is a significance between the ratings of the international and CTU, Vietnam respondents because (1) the different from the working places, and professional titles, (2) specific agents in CTU focus on the leaders such as Communist Party members, rectors, directors or department heads and deputy heads, and (3) Vietnamese translation from English, an aspect of "culture," that make sense towards the understandings to Vietnamese respondents, especially to CTU ones. Thus, the results of significances were found in the items of A1, A8, A13, A14, A17, A18, A21, A22, A23, A24, A25, A26, A27, A28, B3, B5, B7, B10, B11, B12, B18, B20, B21, B27, C5, C10, C12, C13, D4, D5, D6, D7, D8, D9, D10, D15, D16, D18 and D20.

3.5.3 Proposing the CTU Change Management Model to CTU Rector Board

The following would display the complete CTU Change Management Model in ESD in HE level, with the 4 main factors, 23 sub-factors and 92 items.

1) CTU Model Factors

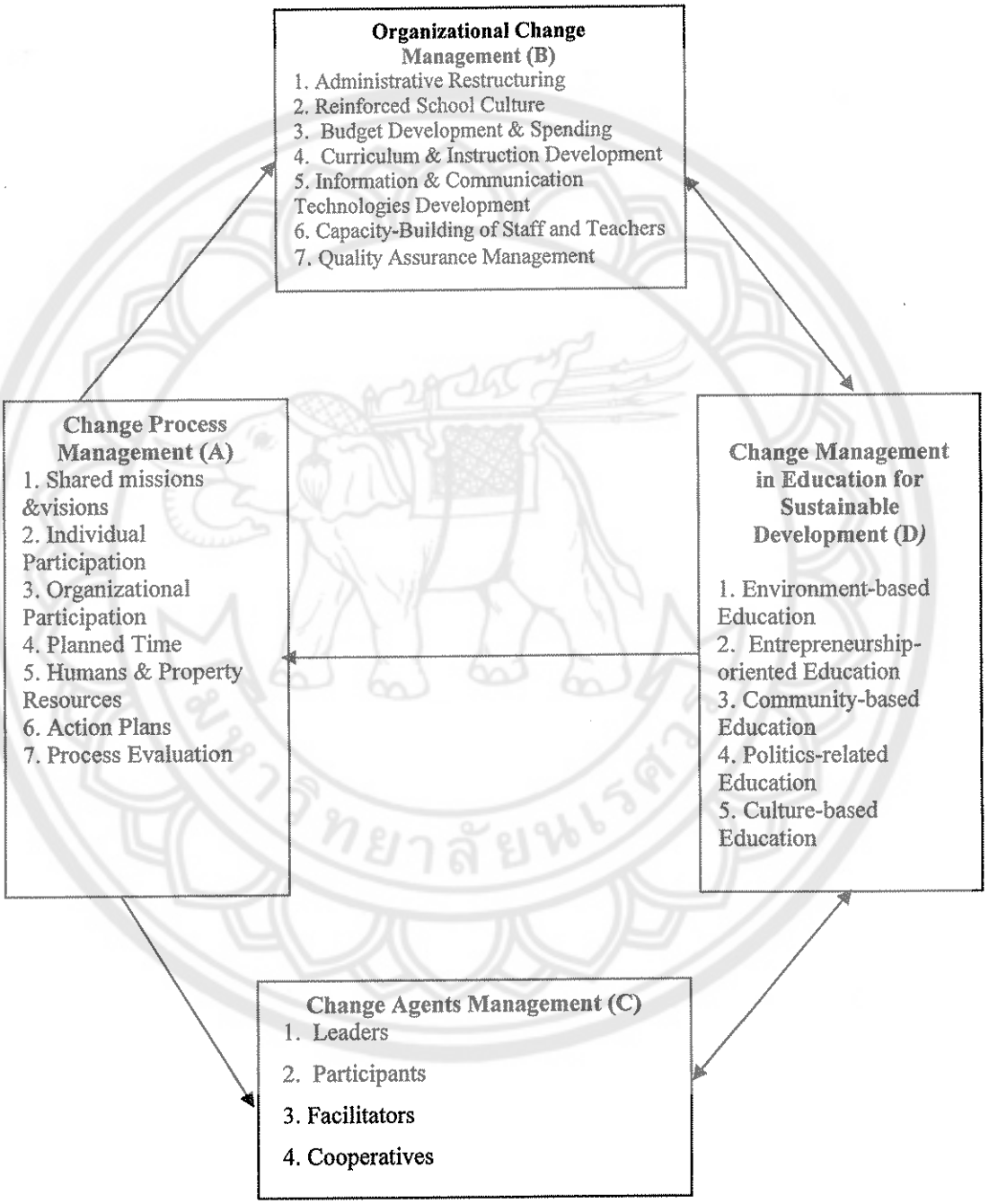

Figure 24 The Complete Effective Change Management Model (ABCD) in ESD in CTU, Vietnam

In the **Change Process Management** (A), it is of (1) Shared missions and visions; (2) Individual Participation; (3) Organizational Participation; (4) Planned Time, (5) Humans & Property Resources; (6) Action Plans; and (7) Process Evaluation.

In the **Organizational Change Management** (B), there displays: (1) Administrative Restructuring; (2) Reinforced School Culture; (3) Budget Development; (4) Curriculum & Instruction Development; (5) Information & Communication Technologies Development; (6) Capacity-Building of Staff and Teachers ; and (7) Quality Assurance Management .

In the **Change Agents Management** (C), it reveals with (1) Leaders; (2) Participants; (3) Facilitators; and (4) Cooperatives.

And in the **Change Management in Education for Sustainable Development** (D), it comes up with: (1) Environment- based Education, (2) Entrepreneurship- oriented Education; (3) Community-based Education; (4) Politics-related Education; and (5) Culture-based Education.

2) CTU Model Sub-factors and Elements

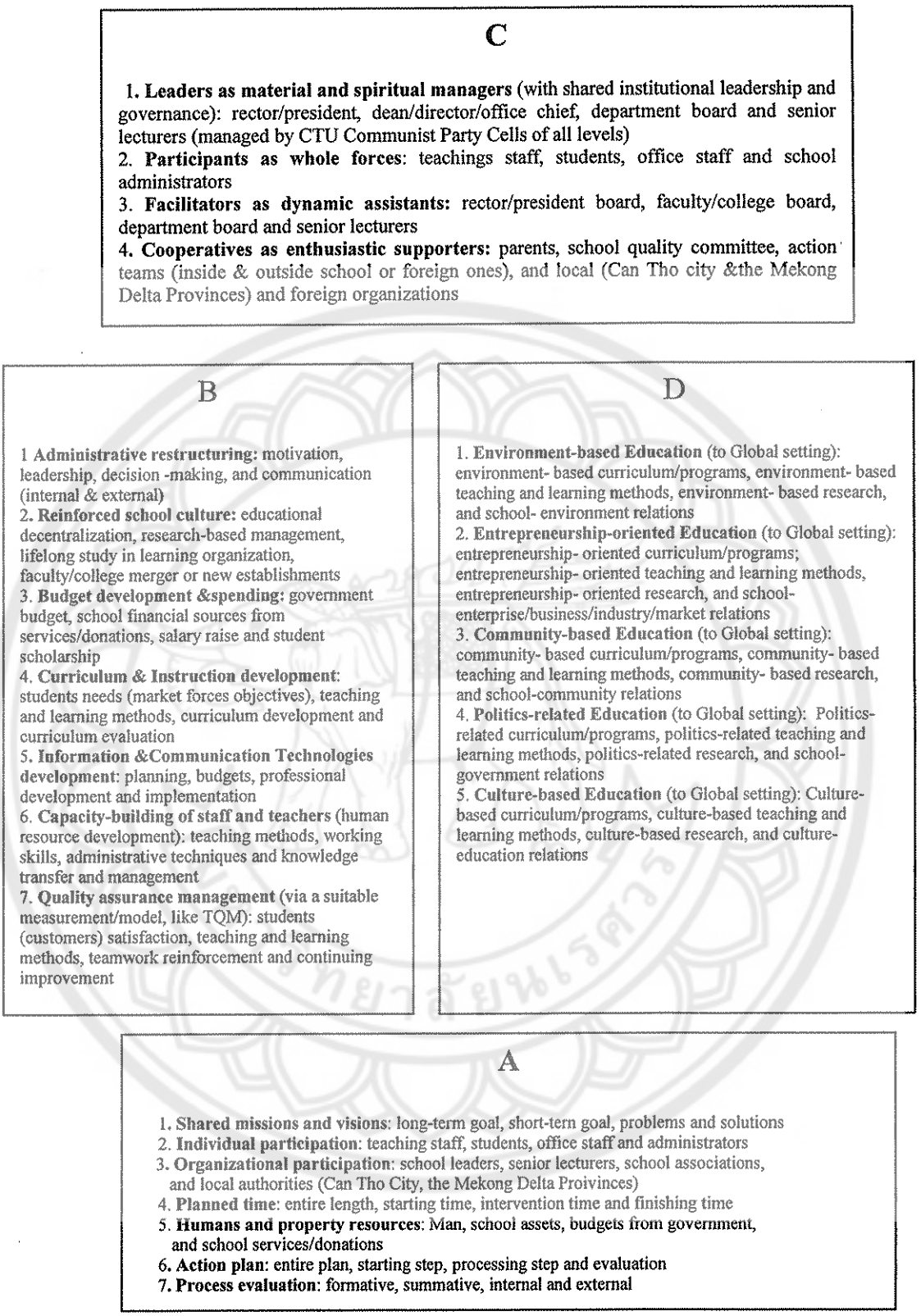

Figure 25 Sub-Factors and Elements of the Complete of Effective Change Management Model (ABCD) in ESD in CTU Vietnam

In the **Change Process Management** (A), the sub factors and elements are of (1) **Shared vision**: long-term goal, short-tern goal, problems and solutions; (2) **Individual participation**: teaching staff, students, office staff 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; and (7) **Process evaluation**: formative, summative, internal and external.

In the **Organizational Change Management** (B), the sub factors and elements deal with (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 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; (6) **Capacity-building of staff and teachers** (human resource development): teaching methods, working skills, administrative techniques and knowledge transfer and management; and (7) **Quality assurance management** (via a suitable measurement/model, like TQM): students (customers) satisfaction, teaching and learning methods, teamwork reinforcement and continuing improvement

In the **Change Agents Management** (C), the sub factors and elements cope with: (1) **Participants as whole forces**: teachings staff, students, office staff and school administrators; (2) **Leaders as material and spiritual managers** (with shared institutional leadership and governance): rector/president, dean/director/office chief, department head and senior lecturers; (3) **Facilitators as dynamic assistants:** rector/president board, faculty/college board, department board and senior lecturers; and (4) **Cooperatives as enthusiastic supporters:** parents,

school quality committee, action teams (inside & outside school or foreign ones), and local and foreign organizations.

And in the **Change Management in Education for Sustainable Development** (D), the sub factors and elements refer to (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; and (5) **Culture-based Education** (to Global setting): Culture-based curriculum/programs, culture-based teaching and learning methods, culture-based research, and culture- education relations.

In conclusion, this is the exact change management model in ESD in HE level that the researcher would like to propose to the CTU Rector board to implement in the academic year of 2010-2011 (from September, 2010 to May, 2011). There would be very interesting to have further research about the implementation of the model with real experiences, which would cover the Research and Development (R&D) process.