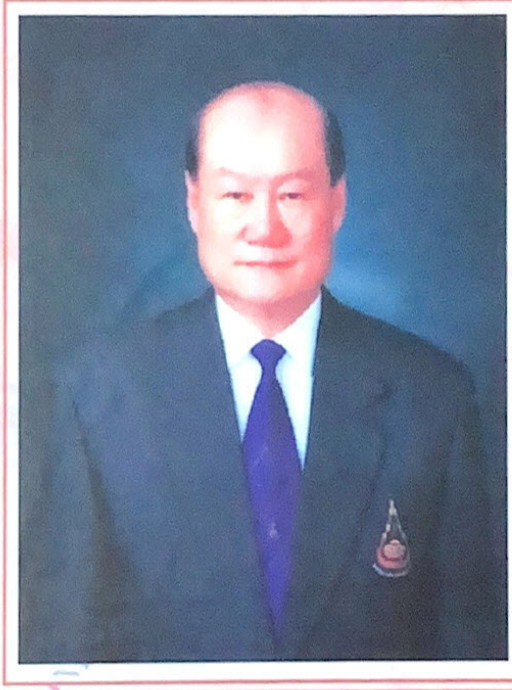
SUT 8th Year Anniversary

GLOBAL EDUCATION : BORDERLESS WORLD

Collection of Academic Papers on Higher Education Innovations

By

PROFESSOR DR.WICHIT SRISA-AN



SURANAREE UNIVERSITY OF TECHNOLOGY (SUT)

ASSOCIATION OF UNIVERSITIES OF ASIA AND THE PACIFIC (AUAP)

GLOBAL EDUCATION: BORDERLESS WORLD

Collection of Academic Papers on Higher Education Innovations

By Professor Dr. Wichit Srisa-an

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ABOUT THE AUTHOR

Professor Dr. Wichit Srisa-an, a native of Chachoengsao Province, eastern Thailand, is a multi-talented international personage, prominent in several fields of knowledge: education, administration, science and technology, law, politics, and many others. He received his B.A. in 1959 and B.Ed. in 1961 from Chulalongkorn University, Thailand. At a more advanced level, he obtained his M.A. and Ph.D. degrees in Educational Administration, from the University of Minnesota, U.S.A. in 1964 and 1967, respectively.

Currently, he is Founding Rector of Suranaree University of Technology and Walailak University, both being the first autonomous, public universities in Thailand, Vice President of Chulabhorn Research Institute, Senator of the Thai Parliament, and Adjunct Professor of Chulalongkorn University.

Formerly, to mention only a few of his positions, he served as Founding Rector of Sukhothai Thammathirat Open University, the first open university in Thailand and Southeast Asia, Acting Rector of Thammasat University, Bangkok, Acting Rector of Khon Kaen University, Acting Secretary-General of the Civil Service Commission, Secretary-General of Chulalongkorn University, Permanent Secretary to the Ministry of University Affairs, Bangkok, (the highest position for civil services in Thailand), President of Phi Delta Kappa Thailand, President of Thai-American Association, President of The Fulbright Alumni Association, Chairman of The University of Minnesota Alumni

Association, and Director of the WORLDTECH'95 Management Center. On an international level, Professor Dr.Wichit Srisa-an has served as President of the International Council on Education for Teaching,(ICET), President of the University without Walls International Council(UWC), Chairman of the Consortium on Innovations in Higher Education for Asia and the Pacific, UNESCO, Founding President of the Asian Association of Open Universities(AAOU), Executive Member of the International Council for Distance Education(ICDE), and President of the Board of the Steering Committee for the Establishment of the Association of Universities of Asia and the Pacific. He is also a Member of the Board of Directors of International Council on Education for Teaching(ICET), Member of the Board of Directors of The Council on International Educational Exchange (CIEE), Founding President of The Association of the Universities of Asia and the Pacific(AUAP). His latest appointment (February, 1998) is Member of the Council of United Nations University.

Throughout his career, Professor Dr.Wichit Srisa-an has been energetically and creatively involved in development of and innovation in education, be it formal, non-formal, distance or borderless. His outstanding contributions have been welcomed and recognised nationally and internationally alike. He carries with him commitment, responsibilitiy, missions, vision, and enthusiasm, all of which are related to and have great impact on innovations in world education as a whole.

His momentous achievements, especially in the field of education, have so far earned him five honorary doctorate degrees from different universities in Thailand, United Kingdom (The Open University), and India (Andhra Pradesh Open University), eight outstanding awards from Thailand and abroad, UNESCO in particular, and four most prestigious decorations and orders from Thailand and abroad. His significant and influential publications include three research studies on higher education, ten textbooks on education, and about 80 articles of high academic value on education, published in both national and international journals.

Now Professor Dr. Wichit Srisa-an is actively pursuing his career vision and missions in three provinces of Thailand, as Senator in Bangkok, and as rector of the two universities in Nakhon Ratchasima and Nakhon Sri Thammarat. His e-mail address is: **wichit@ccs.sut.ac.th**

CONTENTS

EDITORS' PREFACE

PROFESSOR DR. WICHIT SRISA-AN, a man of endless achievements and an intellectual pillar of Thailand's higher education, has legitimately earned an international fame and reputation as the father of innovations in higher education of Thailand and the Asia Pacific regions. He has introduced reforms in educational policies, management, administration, and procedures through his various capacities past and present, such as, to name just a few, Adjunct Professor of Education at Chulalongkorn University, former Permanent Secretary to the Ministry of University Affairs, the Founder President of many universities, for examples, Sukhothai Thammatirat Open University (STOU), the first open university in Southeast Asia, Suranaree University of Technology (SUT) and Walailak University(WU), the first and second autonomous, non-bureaucratic public universities respectively, the Asian Association of Open Universities (AAOU), and the Association of Universities of Asia and the Pacific (AUAP). Not only has he clear visions and goals, especially for higher education in Thailand, but he also translated them into reality. His major innovation in higher education was officially recognized by the UNESCO Award in 1997.

Professor Dr. Srisa-an has been a strong advocate of appropriate technology and education all along. He considers the traditional system of education a **"limited form of education"** as it is restricted by admission procedures, rigid curricula and limited textbooks, structured schedule, venues, modes of delivery, and evaluation. Still worse than that, the administrators are tied down by the government rules and regulations which are not, in many ways, conducive to innovations and creative adventures in education. With the **"open system of education"** as in open universities and distance modes of delivery, most of the intellectual walls and barriers have been removed. Education is now available and accessible without the previously mentioned constraints or limitations.

In addition, with the advances in telecommunication and multimedia information technologies applied to educational modes of delivery, the concept of true **"education for all and all for education"** can be fully realized.

Moreover, the convergence of computer technology, telecommunication technology, and information technology has made it possible to access myriad forms of information and convert them into practical knowledge and skills anywhere, any time, and by anybody. Students can now have access to information not only from teachers and libraries of their own universities, but also from limitless sources and resources, other students, and experts directly or indirectly. Then, the new roles to be assumed by teachers is to guide students how to analyse and utilize the information in solving problems and engaging themselves in critical thinking to improve the quality of their life and society as a whole. They are , therefore, more of tutors and mentors than just teachers in the traditional sense.

These new technologies have revolutionized and will continue to play a dominant role in improving the systems of educational delivery, the teachers' and administrators' roles, as well as how students learn and apply their acquired knowledge. Professor Dr. Srisa-an further expounded on the global competences that graduates of any universities must possess as a hallmark of their success in a multipolar, multi-disciplinary, and multinational work team in a global society.

These shifts in educational paradigms, the advocacy of new philosophies and policies, and the expert suggestions for new strategies to meet the several challenges of change have been developed and expounded by Professor Dr. Srisa-an on many different occasions where he has been invited to be a speaker, mostly keynote speaker.

This collection of the speeches allows us to follow the evolution of Professor Dr. Srisa-an's ideas, ideals, and experiences. It is, however, inevitable that some portions of different speeches are similar as they were delivered at different times and to different audiences. He could not help but repeat at certain instances some of his ideas and concepts. This is, in fact, the aim of this collection:learning and sharing. This concept has been one of his favorite educational philosophies and was also one of his major contributions to AUAP where he made it a standing policy that there would be an academic forum for learning and sharing at every meeting of the AUAP Board.

In line with this policy, Suranaree University of Technology and the Association of Universities of Asia and the Pacific considered it opportune to bring out the publication of Professor Dr.Srisa-an's most recent speeches so that his ideas on Globalization of Education in the Borderless World can be shared and implemented by both his contemporaries and the generations to come.

Innovations of Teacher's Education in A Borderless World

INNOVATIONS OF TEACHER'S EDUCATION IN A BORDERLESS WORLD*

There are two important movements which are affecting our education today, that is, globalization and information technology. Globalization makes regional and international cooperation a must. The trend toward a global community has driven us to increase our relationships with other countries regionally and internationally. The movement toward an information society on the other hand facilitates regional and international cooperation as information technology helps accelerate communication and interaction.

With the ASEAN Summit in Bangkok, the ASEAN University Network (AUN) was established in December 1995, the Asian-European Summit Meeting (ASEM) was held in Bangkok in March 1996, and The APEC Meeting was convened in the Philippines from 20-25 November 1996. All these events assume the world is a global or regional village, i.e. a real borderless world.

In Southeast Asia, there are three important subgroupings: (1) the Greater Mekong Subregion (GMS) which comprises Cambodia, China (Yunnan Province), Lao PDR, Mynmar, Thailand and Vietnam; (2) the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT); (3) the East ASEAN Growth Area (EAGA) which covers Brunei Darussalm, Indonesia, Malaysia and the Philippines. An important feature of these subgroupings is the presence of university networks as part of their activities.

For the Greater Mekong Subregion, one such network is the UNESCO-RIHED UNITWIN on Economic Teaching and Training

(*Excerpts from The President's Desk, AUAP Gazette, Vol. 2 No.2 October

for Transitional Economies of the Greater Mekong Subregion. About 10 higher education institutions from 6 Mekong riparian countries have joined the network to promote collaboration for the improvement of teaching and training in economics.

For the development of Indonesia-Malaysia-Thailand Growth Training, the IMT-GT UNITWIN has been established. This network consists of eight universities: 2 from Thailand, 3 from Malaysia and 3 from Indonesia.

The East ASEAN Growth Area (EAGA) and SEAMEO RIHED in corporation with the University of Brunei has organized last October (1996) a regional seminar on human resource development in EAGA. Nine institutions for tertiary education joined the seminar: 1 from Brunei, 3 from Indonesia, 3 from Malaysia and 2 from the Philippines. The meeting agreed to form a network for subregional cooperation.

These trends have implications for innovations in teacher education. But before addressing the topic, let me first turn to the question of needs for human resource development in the borderless world.

Needs for Human Resource Development in the Borderless World

What skills do we need in human resource development for the borderless world? Graduates of schools and colleges must have global competence. They must posses (1) the ability to use international and/or regional language; (2) knowledge and understanding of others; (3) ability to use information technology/ computers; (4) knowledge and appreciation of global values.

The first ability is necessary in the borderless world. English becomes a must for international communication. Regional language

is also necessary for communication across the borders in a region. One language is not enough. A second or a third language is needed. One must be bilingual or trilingual in order to function in the borderless world.

The second ability is necessary for transactions across the border. We need to know our own strengths and weaknesses as well as of others. In the Thai words, the important quality is "RU KHAO, RU RAO" or "Know the others, know ourselves". Knowledge and understanding of others is necessary for our graduates because they live in an international and regional community.

The third ability, the competence to use information technology, is urgently needed. Students and more so faculty members need to use E-mail and Internet in pursuing their academic interests and careers. With this tool we can work across the border.

The fourth competence is global values. This is very important for sustainable development. Without them, there will be no human and social development. The necessary global values are human rights, democracy and sustainable development of environment. They have to be promoted and appreciated.

Needs for Graduates in Teacher Education

Is global competence needed for graduates of schools of education? I believe these qualities are urgently needed. Further questions could be asked: :Is global competence needed for faculty members of schools of education?" The answer could be a starting point for introducing innovations in teacher education.

Innovating the Process

The important process is teaching and learning in teacher education. But in many places, I believe we still use the old methods

of teaching and learning. Interactive video conference and Internet never have the chance to enter classrooms. Probably the priority is to innovate those who are teaching i.e. the professors and instructors in schools of education.

Innovating the Inputs

I believe many countries in our region face a similar problem of wrong attitude towards the teaching profession. "Those who can't do.....teach" seems a common motto. Those who cannot enter prestigious professions such as engineering, law or medicine turn to teaching as the last resort. We should change this trend. We should have attractive programs and incentives to recruit those with good ability to the school of education.

In the past, most of our inputs to colleges or faculties of education are high school graduates or lower. In the future, we should create more programs for graduates with bachelor's degrees or associate degrees. With these inputs, we will have mature students for teacher education.

Innovating In-Service Training

When I started the Open University in Thailand in 1979, admission to two schools were opened in 1980: the School of Management Science and the School of Educational Studies. The School of Educational Studies was a very popular provider of in-service courses for teachers. About 75,000 teachers were admitted as the first batch of students. The programs were popular because they were innovative. The University uses distance teaching-learning system consisting of correspondence media, radio and television broadcasts, as well as other methods that enable students to study on their own without having to enter an actual classroom. Now distance education has advanced to the fourth

generation. It could be effectively used to provide lifelong education to in-service teachers without interrupting their work.

Innovating the Structure

At present, we hear a lot about reengineering and restructuring of higher education, but it hardly comes to the School of Education. The question is finding the appropriate structure for the School. Traditionally, universities consist of schools and faculties which in turn are subdivided into departments. What we often hear is that departments become the big walls separating faculty members. Close collaboration could not be promoted among faculty members unless we demolish the wall. When we created the Sukhothai Thammathirat Open University (STOU), we decided to create a school without departments. So the School of Educational Studies had no departments, but it has been successful in offering many programs including Master's Degree in Education. STOU uses a course-team approach to create self-in-structional materials. The team approach can easily be promoted in an environment where there is no wall separating faculty members. This is one of the key factors contributing to the success of the Open University.

Innovating the National Policy

In the past, only government institutions could offer teacher education programs in Thailand. Now is this policy is relaxed with private universities being allowed and encouraged to offer programs in teacher education. In the future, there will be more competition between government and private institutions.

Another interesting policy is autonomous teacher training institutions. Could the school of education become autonomous and independent? It could be if it is a school under a public autonomous university like Suranaree University of Technology. Autonomous

institutions could be more effective and efficient in responding to the demands and needs in the borderless world.

Networking in Teacher Education

I would like to go back to what I said earlier about global competence. Innovating inputs, processes and structure is necessary but not sufficient to produce graduates with global competence. In the borderless world, we need a university network in teacher education.

Earlier I have also mentioned subregioanl university networks such as the IMT-GT UNINET and the EAGA UNINET. I believe these university networks have not addressed the needs for subregional or regional cooperation in teacher education. Global competence of our students and staff could be achieved through such regional networking.

The Network

The Network could consist of a small number of teacher education institutions in the region. Cooperation could be based on common issues, common needs and mutual benefits. Programs and activities of the network should include among others exchange of information, exchange of materials, exchange of students, exchange of staff, joint research program, joint training program, joint production of materials, workshops and seminars, etc.

Partnership

Nowadays it is difficult to find donors, but it is not so difficult to find appropriate partners. Multilateral cooperation in teacher education should be promoted. Partnership should also be sought from government, private sector, industry, schools, parents and NGOs.

The Center of Excellence in Teacher Education as Regional Training Center.

Mutual cooperation should lead to enhancing institutional capacity of teacher education institutions. Each member institution should be encouraged to establish a center of excellence in each particular area to avoid duplication.

Teacher training in the borderless world should be promoted at the regional level. Teachers in one country should have greater opportunities for training in one particular field in another country. The center of excellence in each institution could serve as a training center.

Use of Information Technology

Information Technology should be used for regional training and life-long education. Interaction video conference and Internet should be used for communication among network members. Through distance education, member institutions could offer joint degree programs in teacher education, particularly programs at the graduate level.

Conclusion

I have tried to highlight some of the ideas about innovations in teacher education in the borderless world. I hope some of them will become inputs for your thoughts and discussion. The challenge is to put the ideas into action. Your further deliberation and recommendations on this topic will be valuable for the improvement of teacher education in the borderless world. Our Organization, AUAP should play an important role in promoting such an activity.

CHALLENGES TO UNIVERSITY ADMINISTRATORS IN THE 21st CENTURY*

Types of Higher Education System

A cursory survey of the development of higher education around the world shows basically two systems; the private*-led system and the state-led system. In the former, private universities and colleges were established first, then public universities followed, i.e., private universities became the model for public universities. Higher education institutions under this system tend to have more autonomy and flexibility. The development of higher education in the United States is an example of this type of system.

In the state-led system, public universities were founded ahead of private colleges and universities. In this system, universities are departments of the government and therefore, a part of the bureaucracy, the system is centralized and controlled by the ministry or department responsibly for higher education. Universities are subject to rules and regulations similar to other government ministries. This kind of system is often criticized for its inefficiency, rigidity, and low degree of autonomy. Most of the higher education institutions in Asia and the Pacific belong to this system.

As we move towards the 21st century, there will be an increasing demand for higher education to play an important role in social and economic development. There will be demands for

(*Exerpt of a paper presented during the Workshop on University Management 21-30 August, 1995 Faculty of Education, Chulalongkorn University, Bangkok, Thailand, also appeared in AUAP Gazette, Vol.2 No.2 January-April 1996)

continuing education with working students comprising a regular part of the student body.

The private sector will come in and play a much greater role in providing higher education to the people. Reengineering in business will be introduced as a tool for reengineering higher education.

At present, there are a lot of efforts in our region towards reinventing and reforming higher education. For example, Thailand established a new type of public autonomous institution of higher learning five years ago, Malaysia has a new policy of corporatization of higher education while the Philippines has recently set up the Commission of Higher Education. Vietnam, on the other hand, has undertaken an extensive restructuring of the higher education system, including amalgamation of smaller colleges and single-disciplined universities into a large multi-campus university.

Development and Management Issues

Among the important problems and issues encountered during development are:

The Proper Balance between Institutional Autonomy and State Supervision:

There is a continuum between institutional autonomy and state control. In the past, there usually was a very tight control by the ministry concerned. The emphasis is now moving form control to supervision.

The state is concerned with three main functions: planning, coordinating, and providing financial support. A problem arises when the state fails to differentiate between these three functions on the

one hand, and the internal operational functions of an institution on the other.

Responsibility for educational policy relating to curriculum planning and teaching is the domain of the institutions themselves.

Institutional autonomy and academic freedom must be guaranteed and a proper balance must be worked out. This is a challenge for university administrators.

The Management of Efficiency:

University administrators face two types of efficiency issues of equal importance i.e. internal and external efficiencies.

Internal efficiency is concerned with the operation of a university such as staff, business, and student services management. The goal here is to maximize outputs with minimum inputs a financial and human resources are limited. University administrators have to find ways to mobilize community resources. Here, one finds challenging concepts such as privatization and corporatization. Private colleges and universities may be doing quite well on these principle, but government universities face structural problems..

External efficiency on the other hand, is the responsiveness of higher education institutions to the community and to society. It is also referred to as the concept of relevance of higher education. In the narrow sense, it is the matching of the skills of the graduates to the market demand. In the broader sense, it means present and future concern for the economic, political, social, environmental, and global problems. Colleges and universities general pay insufficient attention to these areas. It is the university administrator obligation to be more attentive to these issues.

The Management of Excellence:

This refers to the level of excellence in the products and services of colleges and universities. The graduates must have the necessary attitudes and skills for the world of work and at the same time they must be good citizens in society.

However, it is a common complaint that the professional, ethical and attitudinal qualities of graduates from many institutions are declining. Moral and ethical values cannot be taught unless the universities themselves are examples of high standards and values.

University excellence also means excellence of research and services. It is often mentioned that universities in the region have paid little attention to research and development that will make a country self-reliant in national development. Research studies are carried out in a fragmented way and are not contributing to the generation of new knowledge.

As we move into the twenty-first century, business and industry will need more research and development (R and D) in order to lift this region to a competitive position as the rest to the world. Management for excellence in research and development must therefore be a priority.

The Management of Internationalization:

The trend towards internationalization in higher education is a significant means by which countries of different social and economic backgrounds are being brought closer together. In this era of globalization, the advancement of communication technology has led to an increase in academic linkages among the nations.

Information Technology (IT) has also enabled understanding of the ways of life, the needs, and the feelings of peoples from every

corner of the world, and thus giving a true international perspective.

These technological advances have defined the path of development as well as common needs and problems to which all countries have to pay serious attention. With increased globalization trend, there will be more cooperation and competition among countries through common rules and regulations, and a stronger effort by every country in search of peace and better living.

The second trend is the movement towards creating an information-oriented society with the support of computer and telecommunication technology that has shrunk the world to fit inside electronic mails and fax machines. Computer and telecommuni cation technology not only enable one to reach out to each other more quickly and conveniently, but also turn the society into a borderless community. The information oriented society will certainly revolutionize the way of life and would lead to greater mutual understanding among peoples from different cultures.

With globalization movement affecting every aspect of ones' s life, there is a necessity for the preparation of a workforce with global competencies. To achieve this goal, the internationalization of education at all levels is essential.

Higher education in particular should be more responsive to the global trends and should provide prospective graduates with diversified academic and cultural surroundings so as to enrich and enhance their global awareness and competence.

In this regard, language and communication have become very important components of higher learning. Future citizens need to acquire proper skills in international languages as means of communication with foreigners in everyday life and in business. The unofficial world language is English. Years from now, all education will be conducted in bilingual systems so as to ensure future

generations' competency in communication.

Aside from internationalizing educational programmes, there is a need to look into ways of making educational systems more compatible, and thus enhancing cooperative activities among countries. During the past decades several measures have been undertaken to allow greater international academic exchange, especially among countries in the Asia Pacific region.One such mechanism is the Association of Universities of Asia and the Pacific (AUAP).

Such measures include: firstly, exchange of academic staff to familiarize one another with each country's educational structure, administrative system and academic endeavors. Exchange programs may also include students with longer durations of stay and more specific objectives.

Secondly, joint cooperative programmes for university administrators and lecturers to share expertise and resources on projects that reflect common needs and problems. Many of these can be undertaken at the institutional level with much emphasis on joint research projects which have significant contribution to the academic community in various disciplines and shadow trainings among administrators and faculty members.

Thirdly, institutional linkages in the form of partnerships to demonstrate the capability of academics to work with foreign counterparts. This modality has increasingly been accepted as an effective means for universities to assist one another on a reciprocal basis when participating institutions learn to accommodate their own needs as well as those of their counterparts for mutual benefit, starting from joint planning, implementation, as well as monitoring and evaluation.

Training for University Management

Most administrators are experts in a particular academic field, but rarely are they professional administrators. This is the reason, why training in university management is very essential.

There are two groups of administrators in a university setting. One is the academic administrators such as deans and departmental chairs, and the other is the career administrators group including such persons as office directors and unit heads. Both these groups need modern management tools and techniques for solving problems and issues of the 21st century. The challenge is to provide an appropriate preparation for the aspiring successors and to provide appropriate training for those who are already in these positions. Quality training should lead to effective management, and result in increased quality of higher education in our region.

These issues and problems are challenges to university administrators, to members of AUAP. The organization of these university management training programs will be one of the major activities to be carried out by AUAP. We should rally together our resources and meet the challenges squarely for better higher education in the Asia-Pacific Region—The goal of AUAP!

Global Education in Asia for The Twenty-First Century

GLOBAL EDUCATION IN ASIA FOR THE TWENTY-FIRST CENTURY*

1. Introduction: Rationale

The last decade of this century is marked by a number of significant social, political, economic and technological changes. Many formerly labeled developing countries in the Asia Pacific region have progressed to newly industrialized countries. They have become partners of developed countries rather than recipients of aids. Not considering the localized revolutions or unrest in some countries, there was an end of the cold war and minimization of threats of nuclear warfare with the signing of nuclear peace agreement by the world powers. The relative peace allowed the pursuit of more productive endeavors like increased agricultural production assuring food security in many countries, enhanced industrialization in developing countries permitting, more balanced trade relations and hence greater economic growth. Countries with formerly closed economies have adopted open market economy and have established new trade relations with other countries.

In addition, the great improvement in mass transportation specially those of air transport has permitted mass movement of people to seek new employment, new homes or just for tourism and pleasure.

Another important technological development is in communication and information technology. Developments is in fiber optics technology, cheaper television sets and personal computers as well as wide use of the Internet have allowed easy, fast

(*Excerpts from The President's Desk, AUAP Gazette, Vol. 2 No. 4 April-June 1997)

and to some extent cheaper means of communication and access to information. Thus, information has become a new form of capital and source of power.

All these developments have made the world smaller as any place is now more easily accessible. Both geographical and sociopolitical boundaries have diminished in importance. There is a free flow of information, manpower and capital in different countries. Instead of the state as the usual unit of polity, there is formation of larger groupings of different nations like the European Union, ASEAN, APEC, NAM and others.

The globalization movement which started this decade will even be greater, stronger and wider in scope in the coming decades of the next century. Globalization will mean more interaction and greater cooperation regionally and internationally. However, it could also mean greater competition for resources including qualified manpower, markets, information and technology.

However, in spite all the great technological advancements, the individual person, the human being, is still and should rightly be in the center both as the object and achiever of all these developments and progress. Therefore, everybody must be properly equipped with skills and knowledge as well with attitudes and perspectives as citizens of the worked to be able to adequately meet the challenges of the modern world which is multiple, complex and interdependent.

One of the most effective strategies to develop skills and to acquire knowledge as well as international ethos to meet the challenges of globalization is **EDUCATION, a continuing or lifelong education—higher education for all.**

2. Vision and Philosophy of Borderless Education

"Lifelong Education" and "Higher Education for All" are the major concepts of educational management in globalization era. In a democratic society, having equal opportunity of access to quality education is part of human rights. All genders, ages, nationalities, religions, cultural minorities should have the same educational opportunity if Education for All is to become a reality.

Education is a continuous process and must enable one to respond to social needs and improve one's quality of life. Education must be available both to the youths and adults, both formally and informally.

In the present fast changing learning society, high technology becomes a means for prodding the Lifelong Education required. Therefore, this is an era of matching needs and resources between learning society and technological society. To meet the Lifelong Education needs of present and future societies, new educational systems and management must be developed and utilized. Among such new concepts are Open Education, Distance Education and Borderless Education with Virtual Learning Technology as an instrument or means.

In the past, Borderless Education was only an ideal of long distance education. It however lacked concrete means for implementation because of the inefficient quality of telecommunication system which are the useful channels in knowledge and experience transfer between teachers and learners.

The traditional system or present educational system may be considered as "Limited Education". The system is limited in admission, limited in structure, limited in learning environment and limited in administrative autonomy.

Because of limited infrastructure (e.g. buildings, instructors, educational materials), the number of students must be controlled. Normally, a system of examination or grade entry requirement is used as means of selecting entrants. Learning must always take place in a classroom or at most with only supplementary field practice. The system of management is very restrictive and bureaucratic with most rules and policies promulgated by a ministry rather than the university itself.

On the contrary, Open Education, Distance Education and Borderless Education, are the forms of "Expanded Education" which give everybody fair opportunity. They decrease limitations to learning and teaching. Among the forms of distance education in developed countries are: External Studies, Extension Programs, Extra-Mural Studies, Open Education or Open Learning. With the use of high technology in Information Technology (IT), students do not have to attend courses in classrooms. The major factor is IT, no matter what level of education is being considered as "Educational Media".

In the past, experiments on Open Education with Educational Media involved both specific media and multimedia. The first prevailing medium was "Correspondence Teaching" using generally printed materials supplemented by tapes. Later, radio and television were also used. Now computer aided teaching-learning packages are also available. However, no single medium can meet all the educational needs of very varied clienteles. Each medium has its strengths and weaknesses, each complementing one another. Use of multimedia is therefore being recommended.

Today, IT as multimedia via computer network, and two-way communication media, help create the so called Virtual Learning which is a highly efficient educational technology. It allows the expansion

of education, i.e. it makes education borderless.

Thus, the new form of Distance Education can have audiences or students from many places where communication and IT networks are available. It is the Virtual Learning Environment.

3. Needs for Human Resources Development in a Borderless World

To meet the challenges of a borderless community, the graduates of schools and colleges must be able to work and live in an environment that is increasingly becoming global. Global citizens must have global competencies such as (1) ability to use international or regional language: (2) knowledge and understanding of others: (3) ability to use information technology/computer; (4) possession of learning and management skills and some degree of competence in various technical fields and (5) knowledge and appreciation of global values.

The first competence necessary in the borderless world is language and communication. English becomes a must for international communication. Regional language is also necessary for communication across the borders in a region. One language is not enough; a second or third language is needed. One must be multilingual to function in the borderless world. It is through language that one is able to share ideas, literature and culture, beliefs, aspirations and common tasks to be performed. With actual contacts with foreign students and professors, the practical applications of the language skill will also be enhanced. The cities will be inhabited by more cosmopolitan people and the members of work teams will be multinational, multidisciplinary and multilingual.

Another kind of language that has to be learned is the computer language. With the use of Internet as source of information

one must be knowledgable of the computer language. Language learning will be made easier through the use of multi-media instructional packages which can be conveniently accessed both at home and in school.

The knowledge and understanding of others are necessary for transactions across the borders. One needs to know one's own strengths and weaknesses as well as those of others. Knowledge and understanding of other cultures, values, and ways of life are necessary for the graduates to be able to live without biases and prejudices and to work harmoniously together with respect and consideration for others as well as tolerance for differences.

The competency to acquire, analyze and use information is urgently needed. With the geometric information explosion, it is no longer possible for a teacher to be the sole provider of information to students. Instead, the new teacher must guide the student in the collection, analysis and use of information. The whole world is now the source of information not anymore only the teacher or the university library. Students and more so faculty members need to use E-mail and Internet in pursuing their academic interests and careers. with these tools one can work across the border and have quick access to the latest information. The professors are now an education or learning facilitator rather than an instructor.

The fourth kind of competence is learning and managerial skills as well as specialization of certain technical field. As specialization in various profession grows, education is called upon to provide the workhorse with adequate technical training to serve the more diversified and complicated production and service sectors. There will be a need to balance the general education for life and the specialized education for work .

With information explosion, it is no longer possible to include everything in the curricula of specific degree programs. The student must be able to learn by himself. An important part of education would be learning how to learn. There will also be need to bring close cooperation between the university and the workplace so that the workforce can be continuously trained and up-graded throughout the professional life. This availability of opportunity to learn from joint programs between universities and industries is one form of lifelong education needed in a globalized world. This lifelong learning must be based on the appreciation of this philosophy and development of correct attitude of continuing search for new information and knowledge. A global citizen must therefore know how to learn - where to get information, how to get it, what information to get and how to use it. Education must endow the learners with an inquiring spirit that will help them find enjoyment in learning and thus make life-long learning a rewarding experience for all.

A university graduate must have managerial skills. Entrepreneurial spirit and management skills will give individuals more freedom and alternatives in their careers and make the world of work more challenging and enjoyable.

The last competence, i.e. knowledge and appreciation of global values, is very important for sustainable development. Without them, there will be no social development. Among the necessary global values are respect for human rights, democracy and concern for the environment. They have to be promoted and appreciated. Every person must have high moral values and must be ethical in everyday activities and work.

Appreciation of common values would reduce conflicts and differences and thus promote attainment of peace and prosperity. Equal rights, justice and freedom for all mankind should be the ideology as well as a basic requirement of a civilized world of

tomorrow. Global environmental degradation has become a global concern as one realizes that we are living in only one global ecosystem and the effects of environmental degradations cannot be confined within national boundaries.

These characteristics, whether technical knowledge, managerial or communication skills learning techniques or attitudes and values are the critical means of achieving peace and prosperity among mankind now and the future. All these competencies must be provided through global education.

4. Global Education Management System

To achieve Borderless or Global Education there would be a need to redesign educational provision to a dual-mode delivery system of face to face and distance mode utilizing in both cases high technology information and communication technologies, multi-media (printed, audio-visual, telecommunication) as well as computer aided teaching-learning packages. The University must have a Multimedia Production Center that would produce the teaching-learning materials required.

The borderless education management in terms of Virtual University must make learners and instructors develop a sense of belonging to the University; and be useful for enabling learner and instructor to interact as if in the same room. The training of the staff would also help inculcate the correct philosophy of global education and develop the appropriate attitudes towards the system. The provision of this continuous system of feedback and interaction between professor and learner and among learners make learning "real"

5. Success Factors for Borderless Education System

Lastly, allow me to consider at least three factors which I

consider important for successful implementation of a Borderless Education System. These factors include; (1) accessibility of the programs to learners; (2) quality knowledge base; and (3) provision of experiential education.

5.1 Accessibility to Learners

Being borderless means promoting equity and providing education opportunity to as many learners as possible. A higher education for all means accessibility of programs to those without previous degrees, those who want to obtain additional degrees, those who want to change their field of specialization, those who want to enhance experience without obtaining a degree or those who want to study just for pleasure.

It is borderless in the sense that there will be no boundaries for the venue of learning-it can be a classroom, the field, the place of work or even at home.

5.2 Quality Knowledge Base

The Borderless Education Management must provide suitable knowledge base, both under the "Real Environment" and the "Virtual Environment". Knowledge base is a kind of database which compiles knowledge in the form of information and experiences. Students of both face to face and distance modes could quickly reach, search, exchange, and compile information and knowledge of various forms. Thus, quality knowledge base is an important factor in the success of Borderless Education.

Accessibility to such knowledge base can be enhanced by development of appropriate delivery system as through interactive electronic media. This availability to a greater number of learners can also be achieved through establishment of a system of network or linkages between universities both nationally, regionally and interna-

tionally. Such networking would facilitate sharing or exchange of coursewares, mobility of professors and students and collaborative research in borderless education. That is why, I am looking forward to the discussion during this Conference of the proposal for such a network for distance and multimedia education in the Asia-Pacific region.

Such networking would also help breakdown the cultural barriers between regions as coursewares are produced by multi-disciplinary and multi-cultural teams.

5.3 Experiential Learning

Curriculum development must be based on experiences of members of society so that their actual needs could be served. The things learned must support not only basic knowledge, but must be relevant to the world of work. The use of resource persons or experts from the community like from the industries and government agencies would allow the transfer of knowledge, information and real experiences to the students.

This practice like in cooperative education would permit the use of theoretical knowledge obtained in the university in industries or environments of real situation. Students in Borderless Education system must therefore take courses in cooperative programs just like the regular students.

Similarly, staff from private sectors and industries as well as government agencies must be supported to study in Borderless Education programs for continuous up-dating of their knowledge skills or for new activities in the future, i.e. they should have access to life-long education.

6. Conclusion

In conclusion, I hope the ideas and thoughts presented on the philosophy, vision, goals and objectives as well as strategies for the implementation and management of Borderless Education System aimed to develop global competence of global citizens would be useful as starting points for further discussion during the working group sessions. I look forward to the fruitful exchange of ideas and experiences by the distinguished resource persons and participants of the Conference so that the present and future programs for Borderless Education in the region could be further improved and better serve the needs of our society.

The Roles of Academic Consortia and Associations for Better Graduate Studies

THE ROLES OF ACADEMIC CONSORTIA AND ASSOCIATIONS FOR BETTER GRADUATE STUDIES*

Distinguished participants
Ladies and gentlemen

It is my great pleasure to be invited here to talk on the "Roles of Academic Consortia and Associations for Better Graduate Studies". But before sharing my views on this topic with distinguished colleagues, allow me to congratulate the organizers of this International Symposium-Grad Blueprint'97 for organizing this very important event. It is very timely, pertinent, and relevant to the issues and problems facing higher education, particularly in this part of the world.

The topic of this keynote reminds me of the history of one important academic association. Permit me to quote this very important message to you.

However, three clear ideas emerged from the conference: the first, that scholarships should be established for the interchange of graduate students among Commonwealth universities (an idea which was not fully worked out until 1960) ; the second, that there ought to

(* Keynote Address Presented at The International Symposium-Grad Blueprint'97, Graduate School, Chiang Mai University, Chiang Mai, Thailand, 1997)

be an ' intimate relationship' between the universities of the Commonwealth 'which will lead to circulation of the teaching staff' ; and the third, that there should be an 'organization under which the universities of the British world could associate themselves for certain forms of joint action'.

This is the historical account of the British Commonwealth Universities from 1913 to 1963 written by Eric Ashby, Master of Clare College, Cambridge. It is quite clear from the quotation that the history of the academic association is associated with the need to improve graduate studies. The association and the consortium have therefore an important role in the betterment of graduate education. It is even more important today than yesterday given the fact that we are living in a borderless world.

Let me begin by discussing the present situation of academic consortia and associations first. Then I will talk about their roles in general, and finally their roles in the betterment of graduate studies.

The Present Situation

At present there are two very important movements which we know very well. The first is globalization and the second is information technology. Both have profound effects on us. Globalization makes regional and international cooperation a must. Associations and consortia have been established across the borders. The advances in information technology have helped accelerate our communications and interactions.

These movements become challenges to our schools and colleges. To prepare for the 21st century, our graduates must have global competence. Knowing just one's own language is not enough. A second or a third language is needed. One must be bilingual or

trilingual in order to function efficiently in the borderless world. In addition to language ability, our students need to use E-mail and Internet in order to pursue effectively and efficiently their academic interests and careers. This is why academic associations and consortia become an immediate necessity.

We can categorize academic associations and consortia in three different levels: national, regional and international. In the first level, interinstitutional collaboration is created within the border, i.e. the boundary of the state or the country is the boundary of university cooperation. In the second and the third levels, the region and the global village become the boundaries. Let us examine the following table.

Associations	**Consortia/Organizations/Networks**
International	
IAU	UNESCO
ICDE	UNITWIN
IAUP	PIM
IAUPL	PACIBER
Regional	
AAOU	ERASMUS
AUAP	SEAMEO RIHED
ASAIHL	SEAMEO SEARCA
	SEAMEO TROPMED
	UMAP
	AUN
National	
The Confernce of the Rectors	MUCIA (USA)
The Rectors	NUFIC (Netherlands)
	CIC (USA)

The Conference of the Deans	UDC	(Thailand)
	JDPBA	(Thailand)

This table represents only a small sample, not the total population of academic associations and consortia. Let me briefly describe it to you.

Associations

To know the associations and consortia, you have to know the acronym. In my university we have the office called CIA— the acronym for Center for International Affairs. This office coordinates international relation activities. Many universities nowadays see the need to establish the office like this to work with associations and consortia around the world.

At the international level, we have many associations such as the IAU (International Association of Universities), the ICDE (International Council of Distance Education), the IAUP (International Association of University Presidents), the IAUPL (International Association of University Professors and Lecturers).

At the regional level, there are many more acronyms to know. Every region of the world has established the regional academic association. Allow me to briefly tell you my experiences in creating two regional associations: the AAOU and the AUAP.

When I was the President of Sukhothai Thammathirat Open University, we realized that distance education was a very new and innovative idea. Many countries in Asia started the Open Universities. There was a great need to cooperate. So in 1987, STOU hosted the planning meeting to create the AAOU (Association of Asia Open Universities). Seven universities at that time joined the

association. They were open universities from India, Indonesia, Japan, Korea, Pakistan, Sri Lanka, and Thailand.

My second experience is with the AUAP. It is interesting to note that this association took about 17 years before it was finally established at Suranaree University of Technology, Thailand on 28 July 1995. We firmly believe that this association can enhance mutual cooperation among individual institutions to enrich their role in teaching, research, and service. This is clearly stated in the preamble. As the Founding President of this association, I have high hopes that this association will play a significant role in enhancing graduate studies in the region.

Consortia

Let me now move to discuss on the consortia. As presented on the table, there are many existing consortia. I have also included organizations and networks in this category because they play similar roles.

An academic consortium is a voluntary association with three or more member institutions with more definite purposes. Let me give you an example from SUT. SUT entered into agreement with four Canadian Universities to jointly launch four international undergraduate programmes, namely,

* Chemical Engineering with the Technical University of Nova Scotia,
* Electrical Engineering with Ryerson Polytecnic University
* Food Technology with University of Guelph and
* Mechanical Engineering with the University of Waterloo.

These universities jointly formed The Canadian Universities of Technology Consortium (CUTC)

So in this case these five universities and SUT have founded a consortium on undergraduate engineering programs.To form an effective consortium you must have three or more members and must have definite purposes or goals.

Similar to associations, I have classified consortia into 3 levels: international, regional and national, as shown on the table. It is not necessary to describe all of them to you. But allow me to mention briefly some of them particularly in this region.

I said earlier that in a borderless world our students need global competence: the ability to speak foreign language, to use computer, and to know and understand others. This type of e xperience could be promoted through student mobility. Students can learn better about other people and culture when they have direct experience. This is the reason for creating the ERASMUS (European Action Scheme for Mobility of European Students). A similar program was created in this region—UMAP (University Mobility in Asia and the Pacific).

In addition to consortium, there is a new type of interinstitutional cooperation across borders with intergovernmental support. I am now referring to the AUN (ASEAN University Network). In December 1995, there was an ASEAN SUMMIT meeting in Bangkok, the heads of seven ASEAN member countries: Brunei Darussalam, Indonesia, Malaysia,The Philippines, Singapore, Thailand, and Vietnam, signed an agreement to form this network. Two universities are designated by the member countries to join the network, for example, Thailand designated Chulalongkorn University and Burapha University and the Philippines assigned the University of the Philippines and De La Salle University as network members. It is still early to predict its direction and development, but I do believe that it will be one of the important venues for regional cooperation in

graduate education. Student and staff exchanges could be enhanced through this new network.

Roles of Academic Associations and Consortia

I will turn now to the discussion on roles of academic s and consortia which is a major part of this keynote. I see the following important roles.

Sharing Common Issues. This is the most common role played by academic associations and consortia. A great number of international, regional, and national workshops are organized for sharing experiences and ideas on common issues and problems. It is said that there are two things on earth which are so certain to people: one is death and the other is taxes. But for academic people like us there are also two things which are certain: one is teaching and the other is attending conferences. Conferences and seminars are important as a forum to share our common problems.

Sharing Information. This is also a popular role played by an academic association and a consortium. With the advancement of information technology and the pressing need for relevant and timely information, this role will be much more important. The IAU has published the *International Handbook of Universities and the World List of Universities, Other Institutions of Higher Education, University Organizations.* They are authoritative sources of our references for information about higher education. In our region ASAIHL (Southeast Asian Association of Institutions of Higher Learning) has compiled the *Handbook of Institutions of Higher Learning in Southeast Asia.* RIHED has published a *Directory of Selected Scholars and Researchers in ASEAN.* In the future, there will be more of electronic directories of institutions and scholars in higher education.

Sharing Resources. What I am referring to here is human resources: exchanges of students and staff. I have cited ERASMUS and UMAP as networks for exchanging students. Many associations and consortia are involved in exchange of staff members.

Sharing the Services. There are many examples of this collaboration. In 'Thailand public universities under the Ministry of University Affairs use the Joint Entrance Examination organized by the MUA to recruit new students from high schools. The other example is inter-library loan. I believe most of our graduate students are familiar with this service.

Sharing the Facilities. At my university, SUT, we centralize many facilities such as classroom buildings and laboratory facilities. SUT has six equipment buildings with student and research laboratories. No laboratory is assigned to an individual institute. Facilities are centrally arranged by the Center for Scientific and Technological Equipment. The benefit of this arrangement is the maximum use of the facilities.

The same principle should be applied to interinstitutional collaboration. Graduate schools could share facilities, particularly the expensive ones. For example, satellite facilities could be shared by graduate schools to provide distance education. Universities with graduate programmes in marine science could share facilities with a marine science center.

Sharing the specialization. What I mean here is a kind of arrangement that enables each member of a consortium to cooperate on the basis of their particular fields of specialization. It is a division of labour among consortium members. My earlier example of SUT cooperation with one university on Chemical Engineering, the other on Electrical Engineering, another on Food Engineering, and still

another on Mechanical Engineering could fit this category. Cooperation could be complementary and supplementary to one another rather competitive.

Forming a Joint Venture. This is the most difficult task of associations and consortia Universities could conduct joint research projects and offer joint-degree programmes. Some consortia are incorporated so that they can undertake legal transaction. For example, MUCIA (the Midwest Universities consortium for International Activities, Inc.) unites major research universities in the Midwest of USA for development project in Africa, Asia and Latin America. NUFIC (the Netherlands Universities Foundation for International Cooperation) coordinates the overseas activities of the thirteen Dutch universities.

I have briefly reviewed to you the role of an academic consortium and association as a place for sharing information, sharing resources, sharing services, sharing specialization and forming a joint venture. For graduate studies, I believe the principle is the same. Only the focus is different. I will now focus my discussion on graduate studies.

Enhancing Graduate Studies Through Academic Consortia and Associations.

USA

Let me begin by introducing to you the Council of Graduate Schools in the United States of America. The Council serves as a representative body through which graduate schools may counsel and act together. It works to improve and advance graduate education. It collects and disseminates information about graduate schools in USA. It assists graduate schools in working out new programs and in the revision of the process and procedures of graduate education.

Members of this council are accredited graduate schools that have conferred at least 30 Master of Arts Degrees or ten Doctoral Degrees or a combination thereof, in at least three distinct fields or disciplines. In addition, there is an Association of Graduate Schools in the Association of American Universities. Deans of graduate studies in the 56 universities comprising the Association of American Universities are members. This association considers matters of common interest relating to graduate study and research. It can be seen from what I have described here that the consortium and association are working for better graduate studies.

International Consortium

In the era of globalization, business schools have to prepare managers for the borderless world. So many business schools join a consortium for the conduct of international business education activities. Fifteen members of the Programs of International Management (PIM) cooperate with student exchanges. Some schools, including the University of Michigan, New York University, and Stockholm School of Economics, have joined this consortium. In addition to student exchanges, PIM provides for the exchange of faculty and collaboration in research, management development, and mutually agreeable joint ventures.

The other example of international consortium in graduate studies is the Pacific Asian Consortium of International Business Education and Research (PACIBER). It has about 20 members, including the University of Michigan, Columbia University and the University of Western Ontario in Canada. The consortium provides opportunities to link prominent North America business schools to Asian counterparts (Lin, 1993: 209).

Regional Consortium

The examples I just mentioned seem to be far away from us in this region. Let me now focus on Southeast Asia. I believe two consortia are quite interesting for us to know: One is SEAMEO SEARCA the other is TROPMED Network.

SEAMEO, Southeast Asian Ministers of Education Organizations, was established in 1965 with the mission to promote regional cooperation in education, science and culture. SEARCA is one of SEAMEO Centers located in Los Banos, the Philippines. It is SEAMEO Regional Center for Graduate Study and Research in Agriculture. The University Consortium, established in 1989, continues to be participated in by its seven members, namely: Institut Pertanian Bogor (IPB) and Universitas Gadjah Mada (UGM) in Indonesia,Universiti Pertanian Malaysia (UPM) in Malaysia, University of the Philippines at Los Banos (UPLB) in the Philippines, Kasetsart University (KU) in Thailand, University of Queensland (UQ) in Australia, and University of British Columbia (UBC) in Canada. It now has five components: student exchange, thesis grant, faculty exchange, research fellowship, and professorial chair. SEARCA serves as the coordinating body of the consortium. It provides scholarships to support graduate studies. From 1968 to 1996, SEARCA has awarded a total of 893 graduate scholarships to the nationals of all SEAMEO member countries. It is recognized as a successful center for promoting graduate study and research in agriculture.

On human resource development and health, the SEAMEO TROPMED Network is recognized as being successful. The Network consists of 4 regional centers: TROPMED/Indonesia, TROPMED/ Malaysia, TROPMED/Philippines, and TROPMED/ Thailand. The uniqueness of this network lies in the respective specialization of each member institution.

TROPMED/Indonesia specializes in community nutrition, TROPMED /Malaysia in microbiology, parasitology and entomology, TROPMED/Philippines in public health, and TROPMED/Thailand in tropical medicine. Each center offers graduate programs in their respective fields of specialization and except for TROPMED Malaysia is affiliated with a university, i.e. the University of Indonesia, the University of the Phillipines, and Mahidol University (Thailand).

TROPMED central office in Bangkok serves as a coordinator. This is a good example of specialization sharing.

During the time when I was the Chairperson of SEAMEO RIHED Governing Board, we tried to promote an international graduate programme in university administration for students from Southeast Asia. I have heard that much progress has been done at present. RIHED is working with the Faculty of Education of Chulalongkorn University to offer such programme in cooperation with some higher education institutions in SEAMEO member and associate member countries.

National Consortium

I have provided examples of international and regional consortia on graduate studies. Now let me turn to the national consortium and I will refer to Thailand as a context.

The first case is the Joint Doctoral Programme in Business Administration. This is a good case of sharing resources, services and facilities in Thailand. The program started in 1992, during the time when I was still the Permanent Secretary for University Affairs. Recognizing the importance of pulling together each institutional resources, three universities joined together to initiate the Joint

Doctoral Program: They are Chulalongkorn University, National Institute for Development Administration and Thammasat University. Students can register from each university. But member institutions take turn in offering courses. The programme is offered in English.

The second example is a doctoral programme in Nursing. Realizing the limited human resource we have in this area, the Ministry of University Affairs worked with Mahidol University to form a consortium. Mahidol University is designated as the key institution. The Ministry of University Affairs provides support for the programme. By this arrangement, the doctoral programme in Nursing is possible.

Some of us from Thailand may recall that in the past we have the UDC or the University Development Commission. This commission promoted interinstitutional cooperation in graduate studies. Many successful graduate programmes were launched through this type of cooperation.

Another example in Thailand is the Meeting of the Deans of Graduate Schools. This is necessary and important as a forum for sharing common issues and problems. It could be a springboard for further cooperation and collaboration.

I have presented to you many acronyms this afternoon just to answer the important question the organizers assigned to me: Do academic consortia and associations have a role to play in the betterment of graduate studies? You will see from the examples that the answer is affirmative.

For graduate education consortia and associations, I see the similar roles of:

* **sharing common issues**
* **sharing information**
* **sharing resources**
* **sharing services**
* **sharing facilities**
* **sharing specialization**
* **forming joint venture**

The question is: How should we do it? We can join the existing consortia and associations or create a new one. There are many possibilities. Consortia and associations could be formed at national, regional and international level, depending on the needs and support of member institutions.

Interinstitutional cooperation can lead to academic excellence, cost-efficiency and cost-effectiveness. But at the same time, there are many problems and constraints. For example, we tend to cooperate on easy matters such as exchanging information only. Difficult matters are postponed agenda. Human beings are limited and extended by their own experiences and visions. The successful experiences of academic consortium and association I presented to you and the globalized vision for the 21st century should be considered as a framework for laying out the Blueprint for Better Graduate Studies.

Thank you.

Borderless Learning Environment in Higher Education in the Asia-Pacific for The Twenty-First Century

BORDERLESS LEARNING ENVIRONMENT IN HIGHER EDUCATION IN THE ASIA - PACIFIC FOR THE TWENTY-FIRST CENTURY

Distinguished guests
Ladies and gentlemen

First of all, I would like to express my great appreciation and gratitude to the organizers of this **World Congress on Higher Education and Human Resources Development in the Asia-Pacific for the 21st Century,** specially the Commission on Higher Education of the Philippines for their kind invitation and very warm hospitality. It is always a joy to revisit the historic and scenic sites in Manila, savor again the delicious sinigang, adobo, bangus and lechon and most of all to renew cooperation with old friends and colleagues.

I have been assigned the topic **"Borderless Learning Environment in Higher Education in Asia-Pacific for the 21st Century".** I believe this issue is very timely, relevant and of great significance in meeting the challenges of providing innovative educational systems to students who will be the leaders, administrators, managers and workforce of the next millennium. My presentation today will be divided into six sub-sections: namely, (1) Globalization and Forces of Change, (2) Vision and Philosophy of Borderless Education, (3) Global Competences , (4) Borderless Education Environment, (5) Applications of Information Technology in Borderless Education, and (6) Success Factors in Borderless Education.

(*Paper presented at The World Congress on Higher Education and Human Resources Development in the Asia-Pacific for the Twenty-First Century, June 1997, Manila, The Philippines)

1. Globalization and the Forces of Change

The last decade of this century may be characterized by very rapid and at times drastic changes in socio-economic political, scientific and technological as well as philosophical, ethical and moral domains. Although the changes and their impacts are more pronounced in western and developed countries, the winds of change have been felt even in the developing countries of the Asia-Pacific region

The Asia-Pacific has experienced economic growth with at least four countries - South Korea, Taiwan, Hongkong and Singapore becoming "new dragons" in the business world. A number of the ASEAN countries like, Indonesia, Malaysia and Thailand have advanced from developing countries to newly industrialized countries (NICs) or " new tigers". Indochina countries which formerly have closed economic systems have started opting for more open and market oriented economies. New leaderships in some countries have emerged permitting greater democratic participation of the people. Both geographical and socio-political boundaries have diminished in importance or at least have become of equal importance as the national polity. with groupings of different nations like ASEAN, APEC, and NAM.

There are a number of factors or forces that made these changes possible. With relative peace and greater political stability in the region, more productive endeavors like increased agricultural production have assured food security in many countries. Enhanced industrialization allowed higher wages and more employment, better balance in trade relations and hence greater economic growth. Although enhanced poverty alleviation is still a main concern of many governments, it can be said that there is general improvement in public health and quality of life in the region.

In addition, the greater improvement in mass transportation specially those of air transport permitted freer transfer of capital and of resources as well as mass movement of people to seek new employment, new homes or travel just for tourism and pleasure.

But the most significant forces of change are the advances and development in **information and communication technologies** Application of fiber optics technology; communication satellites; availability and cheaper price of television sets, cellular telephones and personal computers as well as wider use of Internet have allowed easy, fast and to some extent cheaper means of communication and access to information. Not only goods, capital and manpower but also information are being exchanged between countries today. Thus, information has become a new form of capital and source of power. We are now living in a so called **information society.**

These developments in information, communication, and transportation technologies led to globalization movement which in itself is also a very strong force of change. Globalization means freer movement of people, physical resources, capital and information between nations. The whole world has shrunk into one borderless community-the global society with its global citizens. This movement which started this decade will even be greater, stronger and wider in scope in the coming decades of the next century. Globalization will mean more interaction and would require greater cooperation regionally and internationally. It could also however spell greater competition for resources including manpower, markets, information and technology.

However, in spite all the great technological advancements, the individual person, the human being, is still and should rightly be in the center of these developments and progress-both as the object of development and the achiever of development. The global citizen must be properly equipped with skills and knowledge as well with

attitudes, values and perspectives necessary to adequately meet the new challenges of the modern world which is multipolar, complex and interdependent.

As educators and educational administrators, it is therefore our present mandate to provide the students with the proper global competences as well as the appropriate environment and educational management system that would foster global education which is a borderless education.

2. Vision and Philosophy of Borderless Education

"Lifelong Education" and "Higher Education for All" are the major concepts of educational management in a globalization era. In a democratic society, having equal opportunity of access to quality education is part of human rights. People of all ages, genders, socio-economic status, nationalities or ethnic origins, religious beliefs, color or creed should have the same educational opportunity if Education for All is to become a reality in this region.

Education is also no longer confined during one stage of development of an individual. Neither is initial training sufficient to meet the requirements of the world of work. With geometric increase in available information and knowledge, it is no longer possible for a teacher to provide all of the skills and knowledge required in the classroom. In life-long education the responsibility is transferred from the teacher or school and the state to the individual learner. The student is taught how to learn and he must manage his own education.

Life-long education is more than just providing learning experience from infancy to old age. It also means education is not being confined to schools as it can now be available at the place of work or even at home. It also should embrace all aspects of life from work, leisure, the family, the environment, society and even external

or international relations. It requires that people should learn how to learn and how to become their own teachers in order to realize their full intellectual, emotional, artistic, political, social and economic potentials. Teachers will be educational facilitators rather than instructors in the traditional sense. Lifelong education must be available to all, at all places, at all times in all forms and from all sources and every individual must be assured of equal chance of success. Commitment to life-long education will ensure that skills remain up-to-date and tradable for better job or higher pay and richer quality of life.

To implement lifelong education and higher education for all, would require the transformation of present educational system management and administration-including planning, organization, delivery, content and access. It may ultimately presuppose a new model of society, which provides opportunities for everybody to be lifelong learners, namely to have. an educational utopia or what is sometimes referred to as EDUTOPIA.

Lifelong education seeks to expand learning experience to its uttermost limits in time, space and academic domains. Being open in all directions, the horizons of education that one can pursue become limitless or borderless.

Global Competences in a Borderless World

In a global society, one works in an environment where one is a member of a multi-disciplinary, interdisciplinary and multicultural team. Specialization in a certain field obtained from a traditional or open university will still be required but it will no longer be sufficient in coping with the world of work..

An educated citizen must be able to relate to nature, society and culture in a rational way. The student must be mature,

responsible, self-controlled and has the capacity for critical thinking and self-criticism.

The graduates of schools and universities must be able to work and live in an environment with challenges of a global community. A global citizen would require global competences and skills such as (1) communication skills, (2) computer literacy (3) knowledge and understanding of self and other people, (4) managerial and entrepreneurial skills (5) some degree of competence in science and technology and (6) knowledge and appreciation of global values.

(1) Communication Skills and Knowledge of Foreign Language

The first competence necessary in the borderless world is language and communication skills. English is a must for international communication and knowledge of at least another regional or international language would be a great advantage. One has to be multilingual to efficiently function in a borderless world. It is through communication skills that one is able to share ideas, literature, culture, beliefs, aspirations, philosophies and goals to be achieved or even just for performing common tasks.

(2) Computer Literacy and Use of Information Technology

Computer literacy or knowledge of computence is also a must. Computence is a contraction of two words - computer and competence. It means the ability of a computer to execute certain activities The learner must therefore have knowledge of computence. He should be able to choose and utilize computer programs in supporting the performance of tasks at a specific level

Related to computer literacy is competency to acquire, analyze and use information needed. The whole world is now the source of information through the Internet. Libraries, researchers,

scientists, experts, professional organizations could now be accessed generally for free except for the necessary connection to the Internet and the local telephone charges. An educator should help students learn how to access such information sources, analyze the information and use them in creative thinking or problem solving.

(3) Knowing and Understanding Self and Others

With population mobility and more liberal immigration rules, the demographic composition of populations will be more heterogeneous. People from various racial and ethnic groups would live and work together in most of the world's megapolis. An appreciation of various cultures and ways of life is required of global citizens. There must be respect and tolerance for diversity and differences if global citizens are to live harmoniously. However, one must start with the understanding of oneself—one's own needs, potentials, values and philosophies. It is only by knowing oneself that we can know others better.

(4) Knowledge of Science and Technology

Science and technology would be permeating every aspect of life. Everybody does not have to be a scientist or technocrat, but one must have some degree of understanding and appreciation of science and technology that is required for daily life and work. As specialization in various profession grows, general education must provide the workforce with adequate technical and scientific training needed for the diversified and complicated production and service sectors. There will be a need to balance the general education for life and the specialized education for work.

(5) Entrepreneurial and Management Skills

In a global production industry, there will also be global

sourcing of components and materials. A manufacturer of products will not necessarily be also the producer of the various components that goes into the product. For example, a car manufacturer can get tires from rubber producing countries, the body and other metal parts from steel producing countries and, the seat upholstery from countries producing leather or silk. Thus, even if the tendency of production industries would be towards merging into mega-company, small to medium scale industries will also still prevail as feeders to big companies or directly to consumers. For such activities one would need entrepreneurial skills Thus, entrepreneurial spirit and management skills will give individuals more freedom and alternatives in their careers as they may want to establish their own business and make the world of work more challenging and enjoyable.

(6) Global Ethos and Values

The last competence, but not the least is global ethos and values. Without global perspective, one's outlook will be very narrow and parochial. Without ethics and global values, there will be no social development. Among the necessary global values are respect for human rights and justice, democracy and concern for environment and true caring for others. They have to be promoted and practised. Every person must have high moral values and must be ethical in everyday activities and work.

Appreciation of common global values would reduce conflicts and differences and thus promote attainment of peace and prosperity. Equal rights, justice and freedom for all mankind should be the ideology as well as basic requirement of a civilized world of tomorrow. Global environment degradation has become a global issue and concern as one realizes that we are living in only one global ecosystem and the effects of environmental degradations cannot be confined within national boundaries.

These attributes, whether technical knowledge, managerial or communication skills, learning techniques or attitudes and values are critical in achieving peace, prosperity and harmony among mankind now and in the future. All these competences together with ones own area of specialization must therefore be provided through global education-a borderless education.

4. Providing Borderless Education Environment

4.1 Limited vs Expanded Education

The traditional system of present educational system may be considered as "Limited Education". The system is limited in admission, limited in structure, limited in learning environment or facilities and limited in administrative autonomy.

Because of limited infrastructure like buildings, instructors, instructional materials and other requirements, the number of students must be controlled. Normally, a system of examination or grade entry requirement is used as means of selecting entrants. Learning must always take place in a classroom or at most with only supplementary field work. Learning is scheduled—the months of academic year; the time of classes; the frequency as well as the length of each session; the professor who is going to teach together with the syllabi, textbook or references to be used and even the grades to get in order to pass the course are all prescribed. All of these in the name of administrative convenience and supposedly for efficiency and cost effectiveness. The system of management is very restrictive and bureaucratic with most rules and policies promulgated by a ministry rather than the university itself.

On the contrary, Open Education, Distance Education and Borderless Education are the forms of **"Expanded Education"** which give everybody fair opportunity. They decrease limitations or remove

obstructions to learning and teaching. The boundary of education management in a borderless education system is from the real University to Virtual Learning Systems in a Virtual University or Virtual Campus.

4.2 Megatrend: Combined face-to-face and distance mode of delivery through information and communication technologies

At present most universities are following the traditional methods of learning and teaching with some open universities running parallel distance modes of education. However, to achieve more efficiently Borderless or Global Education, there would be a need to redesign educational provision to a dual- mode of delivery system, namely combined face-to-face and distance modes. This combined system must utilize high technology information and communication technologies, like multimedia (printed, audio-visual, telecommunication modes) as well as computer aided teaching-learning packages.

The borderless education management in terms of Virtual University must make learners and instructors develop a sense of belonging to the University; and be useful for enabling learner and instructor to interact as if in the same room. The training of the university staff would also help inculcate the correct philosophy of global education and develop the appropriate attitudes towards the system. The provision of this continuous system of feedback and interaction between professor and learner and among learners make learning "real".

5. Information Technology in Borderless Education

Information technology is revolutionizing educational systems and methodologies making learning easier, more effective and more

enjoyable and highly customized or "learner-centered". The challenge to educators is to understand better how individuals learn, whether as youths or adults. Appropriate pedagogical or andragogical concepts must be applied in the design of appropriate learning experiences through information technology (IT). Thus, learning design should focus on the way people can and prefer to learn rather than on just the way learning content can be presented.

In computer-based learning there is an encounter between the learner and the designer of the computer program using the computer as substitute or proxy. The learning program reflects the designer's model of learning which is a certain model of reality. It is therefore critical that consideration of approprite models must be made in preparing coursewares.

5.1 Advantages of Technology-Based-Learning (TBL)

Technology based learning is an exciting alternative to traditional educational system. After providing the basic investment in hardware and software, it may prove an economical system as it can handle large number of students simultaneously. The same system can be used in several locations as in multi-campus universities or in consortia of universities. The system would require fewer number of teaching and administrative staff. Its location can be centralized and so access by both teachers and students would be easier and possibly at a reduced cost. Most importantly, the course design is usually better because it is prepared by a team of experts in contents, testing and evaluation , educational technologists and media specialists.

Systematic evaluation methods can be integrated in the course design. In many ways the evaluation is learner-controlled as one can undertake it depending on one's readiness or progress. The feedback of computers may be incorporated into the design which could enhance enjoyment and motivation in learning.

The system is more flexible as students can have lessons on individual basis. They can start at various levels and it can be anywhere - i.e. in a centralized campus, local learning center, at home or in the office. The system permits easy revision of content and thus can always be kept up to date.

Lastly, the system can offer unique features like easy access to experts and voluminous mass of information through Internet or video conferencing facilities which cannot be available in a traditional university set up.

5.2 New Role of Teachers

It is now agreed that in technology based learning environment, the teachers will become learning facilitators rather than instructors. They will become less and less as direct source of information. Instead, they will help students access information. As tutors and mentors, they will be more concerned with guiding students how to manage their learning in the face of the bewildering voluminous information available through the Internet. The teachers will still have to be specialists in certain fields and should have high degree of mastery of contents, if they are to guide the students in the applications of information in discovery, problem solving and other creative activities. As designers of new teaching-learning materials they become innovators and creators of new teaching-learning experiences.

Teachers will therefore have to be masters of contents and modern educational technologies.

5.3 A Technological Approach to Learning

Learning in a borderless educational system is also dependent on the quality of the learning model or design, the technology used and the environmental conditions .

Technology can be applied to provide opportunities for the learner to (1) practise a wide variety of skills, (2) obtain appropriate knowledge for comprehensive understanding and even mastery of a given subject content; (3) access, analyse, synthesize and use data and information; (4) develop creative thinking and problem solving skills; and, (5) to communicate effectively.

To maximize these advantages, there must be a good learning design using the relevant or appropriate technology. If the content is badly designed, even a sophisticated technology will not be of much help. Conversely, an inappropriate technology can make a good design ineffective.

The various approaches to the learner and the learning environment may be classified into two broad categories: programmed and experiential learning. Programs are either linear or branching, i.e the materials are presented to the learner in a format and order determined by the teacher. The presentation is sequential. In branching the incorrect replies can serve as turning points for remedial or side discussions. Examples of programmed learning are through tutorials, drill and practice, classroom lectures, etc.

In contrast, experiential learning emphasizes the actual experiences that the learner go through as the starting point of the learning process. The mental processes employed to analyze the experiences are also included. It combines experience, perception, cognition and behavior. It takes into account individual differences of learners like levels of knowledge, experience, personality, background, physical disabilities, etc. The experiential learning cycle consists of concrete experiences, reflective observation, abstract conceptualization and active experimentation. These processes can be related to technology. For example from concrete experiences, analysis could be made of the output utilizing other sources of information that could be obtained through the Internet. Then from the results of analysis one can use modelling software to create a

new model or modify an existing one. By running the new model one can validate the hypothesis or create new models. In this process the learner is no longer a passive receiver but an active player in the learning process .Experiential learning therefore exploits more the creativity and problem solving skills of the students as well as the potentials of computer as learning tools.

5.4.The Computer as a Teaching-Learning Tool

Personal computers have now become part of the daily life and will become more so in the future. More and more information that we receive and upon which we base our actions or make decisions are now provided by machines. Data are accessed, processed and converted to information through computers. We also communicate decisions based on such information through computers.

By 1995, most computers are equipped with CD-ROM drive which can store vast amounts of information in audio, image and video format. In 1996 the important additional feature was an Internet connection which permitted global networking.

Computers can be used to combine various media- print, visual, audio - to create whole new virtual worlds and real experiences. Students would be looking at computer screens to receive information. They can study both macro- and microevents. For example, a lesson in geography dealing with changes in land use pattern in the world or pollution of the oceans can be done through digitalized remote sensing data obtained by satellites In small scale,. a biology student can dissect a virtual frog or make genetic mating experiments with virtual fruitflies . A medical student can study parts of the human body with CAT Scanner and therefore perform non-invasive diagnosis and preparation for surgery. A chemist can see three dimensionally the structure of a molecule and alter it by adding or subtracting some elements or radicals.

Processes are also being piloted through computers as simulations and models can be built. The whole production line and processes can be modeled and changes made. Conditions in a simulated condition can be altered and consequences observed directly. Simulation also allows access to hazardous or difficult environment without actual risks.

Communication between professors and students and between students or between experts and students can be done by email or video conferencing. Internet replies can now be obtained at almost any part of the world.

Thus, through computers, it is possible to integrate media, people, content and communication in an unprecedented way. Through global networking millions of people have access to a wealth of information which would have been inaccessible before. In the future all public information can be obtained through the Internet. An online course from America or Europe can be available at home in Asia rather than from a classroom. A video conferencing instead of a tutorial or traveling thousands of miles to attend a conference, a truly global education in deed.

5.5 The Internet: an Integrated Technology

Through the Internet millions of people all over the world could communicate and share information and ideas in the fastest, cheapest and most uncensored way. It has the power to revolutionize learning specially distance learning through the computer, in terms of both the quality and quantity of services that could be made available.

The Internet is presently the greatest source of information, millions of pages of text and graphics, sounds, videos, animation, simulations and computer programs can be downloaded on to learner's

computer with the click of a mouse. The learner can either browse through it or study them it in detail. No real university library specially in our region can ever hope to have such mass of reference materials.

The Internet is also the most reliable postal service delivery in the world and provide limitless opportunities to meet and know people as well discuss limitless topics, share views, exchange help and support or even look for friends or partners around the world.

Ravet and Layte (1997) have placed in a three-dimensional representation many of the activities that are possible with the Internet. The three axes are information, cooperation and real time. The various activities are located in the diagram according to the importance of each of the three factors. For example, a lecture, unlike a conference, has high informational content but does not require much cooperation nor does it have to be executed in real time.

With the Internet, learners can become true discoverers, not only by navigating or surfing through the information highway, but actually producing new information through the Internet publishing tools. They can also interpret the navigated world and share their interpretations with limitless other users of Internet.

5.6 Learning Space in Borderless Education

Teaching and learning in a borderless education can be anywhere - in a real classroom or laboratory, in a computer laboratory or cyberlab, in a community learning center, at home, in the office or in virtual campuses and universities.

Since the learner is a self-directing individual with own knowledge, skills, experience and learning style, then the program or system must promote learner autonomy and should be able to

motivate the learner to the greatest extent possible. It is also necessary for the learners to be able to monitor and evaluate their progress at every stage of the learning program. The program should therefore provide constant and meaningful feedback.

Some computer programs may have built-in control system over the learner. A better approach however is for the program to integrate tools which the learner manipulates and controls. The training program must allow some degree of flexibility so that the learners may able to choose their own paths and speeds through the materials.

The program should be able to respond to the demands from learners like the desire for further explanations, examples, demonstrations, solved problems, actual applications or be able to simply answer learner's question just like in a classroom. This approach to learning design produces more enjoyable and productive learning environment compared to the traditional lecturing, taking an examination and at times receiving feedback from the teacher.

Feedback to learners may be of two types:intrinsic and extrinsic. Intrinsic feedback is the result of the behavior of the objects manipulated during a learning activity. For example in a chemistry experiment, the change in color may be the result of the correct reaction. But, if the teacher or computer confirms the correct results then it is an extrinsic feedback. Yes/No or Right/Wrong , multiple choice questions or even sound of applause or remarks like "Well Done" as feedback have limited value. Intrinsic feedback from problem solving, case-studies or simulations where students actually use information or concepts they have learned are more rewarding.

5.7 Virtual Worlds: Real Experiences

Virtual reality (VR) has great potential for extending the learning

environment and experience both in breadth and space Virtual reality is a medium where a virtual world (a synthetic 3-D environment in color and with stereo sound) can be explored and examined continuously from any perspective in real time.

Simulations can be made such that it gives the learner the sense of being in the real place and touching or experiencing real objects. There are VR software wherein the user is not only an spectator but is an actor participating and influencing the events in the virtual world. VR can bring the learner to limitless types of environment and situations, even into imaginary future worlds or literally any environment of choice-the depths of the ocean, on top of a volcano, inside a living cell or another planet. At the same time, it is being used to reproduce traditional environments like "virtual classroom", "virtual hospital", " virtual department store", or "virtual campus" of a university.

6. Facilitating or Success Factors in Borderless Education

Lastly, allow me to briefly consider some factors that would facilitate or ensure success of borderless education programs in the region.

6.1 Wider use of English as Medium of Instruction

English is the only international language that could be commonly used in the region. Many of the softwares are written in English. Foreign universities with which linkage and cooperation could be established for the production of multimedia coursewares also use English. Thus, the competence of the students and teachers in the English language must be strengthened in some countries for a more successful implementation of borderless education.

6.2 Quality of Content or Knowledge Base

As previously mentioned, even good technology will be useless if the course design or presentation of course content material is not of high quality. As much as possible, the materials must be value free and not culture bound so that it can be utilized freely in many countries. This is easier attained with materials for science and technology, but not for social sciences and the humanities. However, specific aspects of knowledge which are particular to a given society or people may also be included to promote awareness and tolerance for differences and diversity. This should lead to better understanding among nations and minimization if not complete irradication of racial biases and prejudices.

6.3 Moral and Ethical Considerations

There has been an apprehension that because of the cost of the hardware and software for multimedia technology, there could be a widening of gap even in educational opportunities between the haves and the haves-not. Attempts through networking and cooperation must be made to help the disadvantaged or marginalized society in attaining equal opportunities for borderless education.

However, in the teaching of morals and ethics per se, multimedia technologies must be considered were appropriate and feasible. For example, use of simulations or experiential situations in virtual reality can be a powerful tool for learning and teaching values and ethics.

Closer interaction between students and teachers as well as students and the rest of society can be promoted utilizing modern communication facilities.

6.4 Use of Experiential Learning as Learning Paradigm

As previously discussed, experiential learning instead of programmed learning must be utilized together with appropriate technologies.

6.5 Utilization of Modern Information and Communication Technologies

I purposely mentioned this last, not because it is the least important. On the contrary, I think this is the most important factor. Borderless education can be best attained by utilizing modern information and communication technologies that are interactive. Multimedia technologies must be used for both face-to-face and distance mode of education delivery if education must be accessible to all, at all times, at all places and in all varied ways. Education opportunities must never be too far from anybody.

Conclusion

In conclusion, the ideas and strategies for borderless education presented can be implemented only if there is the corresponding management and leadership support by the university administration.and the state or government. The required hardware and software must be available together with the critical mass of manpower required of an efficient and effective development teams.

For regional implementation, the only feasible strategy would be through networking or cooperation. There is a need for networking of universities or centers of excellence for sharing of cost of infrastructure and operation as well as the limited number of content experts and educational technologists that may be available in the country or region.

Networking of universities would also promote enhancement of quality of higher education. Because of student mobility and easy comparison of learning materials produced, presence of international or global quality standards or benchmarks would be required. Only materials from universities that would have such quality standards will be used and only such centers of excellence could join networks. Examples of such networks are AUAP networks for Continuing Engineering Education and also the Network for Distance and Multimedia Education .

Most importantly, there must be a networking not only of computers as in Internet or Intranet, but there must be a networking of people. It is through this personal contact and sharing of intelligence, knowledge, creativity, development aspirations, friendships and common goals that sustainability and quality of borderless education can be maintained.

I therefore hope that the participants of this Conference would support the efforts of the Association of Universities of Asia and the Pacific or AUAP in the formation of the Asia-Pacific Distance and Multimedia Education Network (APDMEN). The Network aims to promote borderless education through production of quality multimedia teaching-learning materials which can be used both in traditional and distance mode of education delivery. I am equally looking forward to the discussion and sharing of ideas on this important and relevant issue of globalization of higher education.

Thank you

Challenges to Universities Towards Global Education and Networking : The Thai Perspective

CHALLENGES TO UNIVERSITIES TOWARDS GLOBAL EDUCATION AND NETWORKING: THE THAI PERSPECTIVE*

Distinguished guests
Participants
Ladies and gentlemen

Firstly, I would like to congratulate Dr. Emmanuel Y. Angeles and his staff for being able to efficiently organize this Second AUAP Learning and Sharing Forum in a very short period of time.

Secondly, on behalf of the officers and members of the Board of AUAP and on my own behalf, I also would like to extend our warmest greetings and best wishes to the administrators, faculty members and students of Angeles University Foundation on the 35th Founding Anniversary of the University.

Thirdly, I would like to commend very highly the move of the Angeles University Foundation to establish a Global Education Center and pioneer such relevant programs in this field. I am almost certain that it is the first of its kind in the Philippiines and perhaps even in the ASEAN

Last but not least again on behalf of the AUAP officers, members of the Board and member universities, I would like to express the heartfelt appreciation and gratitude for the very warm welcome and hospitality extended to me and the group.

Challenges to Universities towards Global Education and Networking, but, with emphasis on Thailand perspective. This issue

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is of great personal interest to me as Suranaree University is in the planning and early implementation stages of Global Education Program for the university and the country. I would like therefore to share some of our plans and early experiences. In intend to discuss the topic under six sub-headings, name (1) From Internationalization to Globalization, (2) Vision and Philosophy of Global Education, (3) Providing a Global Education Environment, (4) Information and Communication Technologies in Global Education, (5) SUT Strategies on Borderless Education Management, and (6) Networking as an Operational Strategy.

1. From Internationalization to Globalization

During the last decade of this century, internationalization of higher education is one of the most important trends. In the present Five Year Plan of the Ministry of University Affairs, internationalization of tertiary education in Thailand is one of its aims.

Internationalization of higher education could mean different things to different university administrators. Internationalization could be an economic driving force. It could also be a philosophical framework or a strategy for meeting global changes or societal transformation or a means of fostering cooperation. It could be one of these to some or a combination to others.

For Suranaree University of Technology, internationalization means the integration of international dimensions into the missions and functions of the university. It is therefore a combination of several aims and goals.

1.1 Fostering Cooperation and Partnership

With increasing cost of providing quality tertiary education and the always limited financial, human, infrastructural and other

resources, sharing or collaboration may be an alternative mode of university operation This can be accomplished through linkages and networking with centers of excellence, recognized universities, and research institutions as well as industries outside the country.

This linkage is not a form of aid but a partnership based on mutual benefit, respect, interest and pursuit of high quality academic programs, research and community service.

A good example of this in Suranaree University of Technology is our partnership with the Canadian Universities of Technology Consortium(CUTC). This partnership allowed SUT to offer international undergraduate programs in some fields of engineering and food science with four Canadian universities - the University of Waterloo, the University of Guelp, Ryerson Polytechnic University and the Technical University of Nova Scotia which is now amalgamated with Dalhousie University.. The students from SUT could transfer to the partner universities after one or two years at SUT as there is a common curriculum for these agreed courses. With this parternership it is thus possible to have international standards in the curricular programs of the university. The linkage also allowed faculty exchange, collaborative research, cooperative education programs and organization of seminars and conferences in Thailand with Canadian resource persons.

1.2 Enhancing Competitiveness

Paradoxically, it is through synergistic effects of partnership and linkages that the competitive advantage of the university can be enhanced. The student exposure to quality programs of international standards taught by combined and local and foreign faculty provide the graduates and university personnel with technical, social and economic competitive edge in being able to function effectively and efficiently in a work environment characterized more and more by

teamwork, multi-disciplinarity, inter-disciplinarity and multiculturalism.

1.3 Promoting Societal Transformation

We have now come to realize that many of the social issues or problems facing humankind at present and more so in the future are complex and usually transcending political or geographical boundaries. Their alleviation, if not elimination or prevention can be best accomplished by having a holistic approach requiring an integrated action produced by a multidisciplinary and multinational team. The programs of the university must therefore instill this international ethos or perspective as well as concern for social change through enhanced awareness, appropriate attitude formation and constructive action formulation towards solution of global problems.

Among the problems in Thailand with international or global dimensions are environmental pollution, population growth, pandemic spread of AIDS, unequal access to primary health care, drug trafficking, labor exploitation of women and children, illiteracy, poverty alleviation, imbalanced technology develoipment, erosion of family values, moral strandards and professional ethics, just to mention a few.

For these problems to be tackled and solved, an international ethos or perspective must be present among the citizens of the country. Such change would require international partnerships. Such international philosophies and values like respect for human rights, justice, democracy, concern for the environment must be reflected in the curricula and contents of courses offered in the university.

Thus in pursuance of its commitment to the promotion of internationalization of tertiary education in Thailand, Suranaree University of Technology fosters the cultivation and promotion of an international ethos or perspective among the students, alumni,

academic and administrative staff in the performance of the primary functions of teaching/training, research innovation and dissemination of technology, community service and preserving as well as promoting the Thai culture.

For this purpose, SUT has established the Center for International Affairs to explore, initiate, enhance, support, encourage, promote and facilitate the appropriate and needed international programs and activities supportive of the University's missions and fundamental functions.

1.4 From internationalization to globalization

During the last five years, the impacts of advances in information and communication technologies on everyday life but most specially in technical and economic developments have been very pervasive and ubiquitous. Application of fiber optics technology, communication satellites, availability and cheaper price of television sets, cellular telephones and personal computers as well as wider use of Internet have allowed easy, fast and to some extent cheaper means of communication and access to information. Not only goods, capital and manpower but also information are being exchange between Thailand and other countries. Thus, just like in western countries and other ASEAN countries, information has become a new form of capital and source of power in Thailand. Thailand is now beginning to live in an information society.

In addition, the great improvement in transportation by air, sea and land permitted freer transfer of goods and capital and of resources as well as mass movement of people to seek new employment, new homes or travel just for pleasure.

These developments in information, communication and transportation technologies lead to globalization movement, the

breaking down of geographical social, political , economic, and eductional boundaries. Globalization in itself is also a very strong force of change. Globalization means freer movement of people, physical resources, capital and information between nations. The world has shrunk into one borderless community and Thailand is fast becoming part of that global community. Thus, the trend is no longer just internationalization but globalization.

Globalization will mean more interaction and would require greater cooperation regionally and internationally. It could also bring about greater competition for resources including manpower, markets, information and technology.

However, the individual person, the human being, is still and should be in the center of these developments. and progress ± both as the object of development and the achiever of development.

For a Thai to be part of the global community and to be able to function as a global citizen, one must be properly equipped with skills and knowledge as well as with attitudes, values and perspectives necessary to adequately meet the new challenges of the modern world which is multipolar, complex and interdependent.

As educators and educational administrators, it is therefore our present mandate to provide the students with proper global competences as well as the appropriate environment and educational management system that would foster such global education which is a borderless education.

2. Vision and Philosophy of Borderless Education

"Lifelong Education" and "Higher Education for All" are the major concepts of educational management in a globalization era. In

a democratic society as in Thailand, having equal opportunity of access to quality education is considered as part of human rights and is therefore the obligation and responsibility of the state. People of all ages, genders, socio-economic status, ethnic origins, religious beliefs should have the same educational opportunity if Education for All is to become a reality in the country.

More and more people are also realizing that education is no longer confined during one stage of development of an individual. Neither is initial training or what is known as first degree sufficient to meet the requirements of the modern world of work.

Aside from the mastery of a given academic field, a graduate must have other global competences and skills such as (1) communication skills including knowledge of English and preferably an additional foreign language; (2) computer literacy, (3) knowledge and understanding of self and other people, (4) managerial and entrepreneurial skills, (5) some degree of competence in science and technology and (6) knowledge and appreciation of global values.

The educational system must provide learning experiences from infancy to old age. It also means education not being confined to schools as education can now be at the place of work or even at home. It also should embrace all aspects of life from work, leisure, the family, the environment, society, and even international relationships.

The teacher will no longer be the sole source of information. Teachers will have the new role of educational facilitators instead of instructors in the traditional sense. Lifelong education must be available to all, at all places, at all times in all forms and from all sources and every individual must be assured of equal chance of success. Commitment to life-long education will ensure that skills

remain up-to-date and tradable for better job or higher pay and richer quality of life.

To implement lifelong education and higher education for all, would require the transformation of present educational system management and administration including planning, organization, delivery, content, access and evaluation It presupposes a new model of society, which provides opportunities for everybody to be lifelong learners functioning or working in a learning organization or society.

3. Providing a Global Education Environment

The traditional educational system may be considered as "limited education". The system is limited in admission, limited in structure, limited in learning environment of facilities, limited in modes of delivery of learning materials and limited in administrative autonomy.

On the contrary, Open Education, Distance Education and Borderless Education are the forms of **"expanded education"** which give everybody fair opportunity. They decrease limitations or remove obstructions to learning and teaching. The boundary of education management in a borderless education system is from the real University to Virtual Learning Systems in a Virtual University or Virtual campus.

At present most universities in Thailand follow the traditional methods of face-to-face teaching learning with some open universities like the Sukhothai Thammatirat University and Ramkhamhaeng University running parallel distance modes of education delivery. However, to achieve more efficiently borderless or global education, there would be a need to redesign education provision to a dual mode of delivery system, namely, a combined

face-to-face and distance, but in both cases using high technology information and communication technologies.

4. Information and Communication Technologies in Global Education

Information technology is revolutionizing educational systems and methodologies making learning easier, more effective and more enjoyable and highly customized or "learner-centered".

Technology based learning is an exciting alternative to traditional educational system. Technology can be applied to provide opportunities for the learner to (1) practise a wide variety of skills, (2) obtain appropriate knowledge for comprehensive understanding and even mastery of a given subject content, (4) access, analyse, synthesize and use data and information; (4) develop creative thinking and problem solving skills through modelling and simulations, and (5) to communicate effectively.

All these learning activities can be done through computers especially through networked computer system like the Internet. The learning designs available can utilize interactive multimedia systems.

Computers can be used to combine various media - print, visual, audio- to create new virtual worlds and real experiences. For example, through the Internet millions of people all over the world could communicate and share information and ideas in the fastest, cheapest and most uncensored way. Through the Internet, the learner can either browse through the limitless information or study them in detail. No real university library specially in our region can ever hope to have such mass of reference materials.

The Internet is also the most reliable postal service delivery in the world and provide limitless opportunities to meet and know people as well as discuss limiteless topics, share views, contact experts and seek support or help.

Students can submit their homework to tutors through email and get quick feedback the same way. They can contact other experts for additional information and their colleagues for comparison of ideas through email.

With the Internet, learners can become true discoverers, not only by navigating or surfing through the information highway, but actually producing new information through Internet publishing tools. They can also put together hypothesis and information in a model and make simulation runs of such models. These enable the students to develop creative and innovative ways of problem solving and developing creative thinking, which are very important traits necessary for efficient functioning in a global society.

5. SUT Strategies on Borderless Education Management

In order for SUT to be able to implement borderless education programs aimed to provide greater distribution of opportunities for quality tertiary education specially in science and technology in Thailand and in the region, SUT has initiated an educational support system both for normal classroom or face-to-face delivery method and by distance mode.

Having completed the foundations of a two-way satellite communication system in 1994, SUT has adopted the following strategies on Borderless Education Management:

(1) Development of learning and teaching media system and the university communication by establishing the components, directions, procedures and infrastructure for borderless education management.
(2) Development of multimedia for learning and teaching to be used both on campus and off-campus.

(3) Development of knowledge and experience transfer system useful for self-study via multimedia - e.g. remote communication media, computer assisted instruction, printed media, audiovisual media and telecommunication media.
(4) Development of Multimedia Production House and learning-teaching materials for communication and computer media.
(5) Institution of borderless education management in terms of Virtual University to make learners and instructors have a sense of belonging to the university and be useful in enabling learner and instructor to interact as in a normal classroom.
(6) Training of teacher and staff in multimedia technologies using content materials in their own fields of specialization.

6. Networking as an Operational Strategy

The ideas and strategies for borderless education presented can be implemented only if there is the corresponding management and leadership support by the university administrtion and the government. The required hardware and software must be available together with the critical mass of manpower required in a development team.

For its operationalization, one of the feasible strategies would be through networking or cooperation. There is a need for networking of universities or centers of excellence for sharing of cost of infrastructure and operation as well as the limited number of content experts and educational technologists availalbe in the university or the country.

Networking of universities would also promote enhancement of quality of higher education. Because of student mobility and easy

comparison of learning materials produced in a borderless system, presence of international standards or benchmarks would be required. Only materials from universities that would have such quality standards will be used and only such centers of excellence could join networks.

Most importantly, there must be a networking not only computers as in Internet or Intranet, but also a networking of people. It is still through personal contact and sharing of intelligence, knowledge, creativity, development aspirations, friendships and common goals that sustainability and quality of borderless education can be maintained.

Conclusion

In conclusion, I hope, the above mentioned ideas and strategies for the SUT Borderless Education System aimed to meet scientific and technological manpower needed by the country, would serve as the starting point of discussion and exchange of ideas in this forum so that it could be improved. I am therefore looking forward to the open discussion that would follow after the paper presentations.

In addition, I hope the presidents of universities planning to implement global education programs would consider participating in the AUAP sponsored - Asia Pacific Distance and Multimedia Education Network which is aimed at collaborative activities in producing teaching-learning modules using modern information and communication technologies for both face-to-face and distance mode of education delivery.

Thank you.

Institutional Strategies for Reengineering Higher Education

INSTITUTIONAL STRATEGIES FOR REENGINEERING HIGHER EDUCATION *

Distinguished guests
Participants
Ladies and gentlemen

It is a great pleasure and honor to be invited to present a keynote address on "On Institutional Strategies for Reengineering of Higher Education" at this Regional Forum. But before proceeding to talk on this topic, allow me to congratulate the Ministry of Education, Malaysia, UNESCO PROAP, SEAMES and SEAMEO RIHED for organizing this very important event in our region. I believe the topic is very timely, relevant and significant in our preparation for the 21st century.

Let me begin by discussing forces of change and some critical issues in higher education first. Then I will talk about institutional strategies necessary for reenigneering of Higher Education.

1. Forces of Change

Change is driven by many factors. We know very well these driving forces. They are mentioned in most of the conferences and seminars. These are information explosion, the globalization of the world economy, the advancement of information technology, the emergence of regionalism such as APEC, ASEAN, AFTA, and the spread of a free-market economy. All of these factors have great impact on our academic community.

(* Keynote Address Presented at the First SEAMEO-UNESCO Rorum on Higher Education, Penang, Malaysia, 1997)

I suggest that these forces of change can be considered at four levels: individual , organizational, national , and international .

If we look at higher education in this region we will see changes at all levels. Let me begin at the individual level. Our students need new skills. They need skills in international communication and computer literacy. This is required global competence.

At the second level, we witness a lot of changes and innovations in our university. New management paradigms of reinventing, restructuring, and reengineering are being introduced in our universities.

At the third level, there are a lot of initiatives in various countries of Southeast Asia A few examples can be mentioned here. Lao PDR has recently set up a national university, merging colleges from different ministries. Cambodia is now in the process of reinventing higher education. Vietnam has reorganized higher education system by merging higher education institutions into national and regional multi-campus universities. Philippines has created the Commission of Higher Education to supervise all institutions of higher education. Malaysia has gone very far to corporatize all public universities. Thailand has experimented with the concept of public autonomous universities and is now launching the IT campuses. These are responses to external forces at the national level.

At the fourth level, the international level, many activities are going on. The UMAP programme is created to promote university mobility in Asia and the Pacific. The UNESCO UNITWIN is intended to promote cooperation and collaboration among colleges and universities. A year ago, on 28 July 1995, at Suranaree University of Technology, The Association of Universities of Asia and the Pacific

or AUAP was formed to promote cooperation and collaboration among universities in the region. Last December (1996), at the ASEAN Summit in Bangkok, ASEAN University Network or AUN was created by the heads of ASEAN member countries. All of these movements, I believe, are to promote the internationalization of higher education.

2. Critical Issues in Higher Education

What are the critical issues in the development of higher education? I believe there are three of them. The first is internal efficiency, the second is external efficiency, and the third is quality and standard. Internal efficiency is concerned with the internal operation of a university such as staff management, business management, and other similar functions. Corporate management will be incorporated into university management in order to ensure greater efficiency. The second issue is concerned with external efficiency. This is the responsiveness of higher education institutions to the community and society. It is also referred to as the concept of relevance of higher education. In the narrow sense it is the matching of the skills of the graduates to the market demand—to the demand of global competence as I mentioned earlier. In the broader sense it means concern for global problems that have become so evident nowadays. The third issue is very important as it becomes the concern of both national and international bodies. Nationally people will question whether their societies are getting high value in investment in higher education. Internationally, students will be questioned when credit transfer is requested.

What I am saying here is that institutional strategies must be explored for the purpose of solving these problems.

3. Institutional Strategies and National Policy

In this region, there are many models of reorganizing higher education. The first is to reorganize the higher education system by transferring universities and colleges from concerned ministries to ministries of education or coordinating agencies. Many countries have completed this process but some countries are still starting to experiment with this model. This is what is happening in countries in Indochina.

The second model is privatization. Many countries in this region have adopted this policy. The Philippines, Japan, South Korea, and Indonesia have a great number of private higher education institutions. Thailand promulgated a Higher Education Act 27 years ago. Now there are more private higher education institutions in the country. Thailand has recognized the important value of private higher education institutions as permanent partners in sharing the government burden in providing higher educational opportunities to the people. Thailand has gone very far now to initiate a new policy of granting permission to the private sector to establish open colleges or universities. During my term as a Permanent Secretary of the Ministry of University Affairs, we had worked very hard to set up guidelines for the establishment of a private open institution. I believe the private sector will respond to this new policy.

The third model is public autonomous university. In the Western world, public universities enjoy institutional autonomy. This is guaranteed by the institutional charter granted by the state. In USA, public universities are authorized by state constitutions. This makes a public university the fourth branch of the government, in addition to the administration, the congress and the court. Public universities thus enjoy greater autonomy than state colleges or state universities. In Thailand, the concept of a public autonomous university has been

initiated. An attempt has been made to move state universities form the status of state-controlled institutions to state-supervised institutions. Only new universities are successful. Suranaree University of Technology was the first institution to be granted this status by the new charter, followed by Valailak University; a third university is being considered under this model.

The fourth model is pioneered by Malaysia. The underlying concept is corporatization. As far as I know, the Malaysian government has passed a law on corporatization of universities and research institutes. I understand the principle of corporate management will be the new management paradigm of these institutions.

The last model is the internationalization of higher education institutions. With the spread of the market economy and the globalization movement, many countries open the doors for foreign partners to set up private or state international universities and colleges on their lands. This is happening in Malaysia, Thailand and other countries.

Different models have different impact on institutional strategies. For public universities, reengineering higher education means adoption of the third or the fourth models. I believe in such models, new strategies can be effectively implemented.

4. Institutional Strategies for Further Universities

As presented on the following table, many strategies could be adopted for future universities. I will discuss some of the key strategies here.

PRESENT AND FUTURE INSTITUTIONAL STRATEGIES

Dimensions	Present	Future
National Level	Control by national agencies	Supervision and coordination by national agencies
governing board	More power at the national bureaucracies	More power at the institutional
Institutional Level		
* Mission	Based on basic functions	Based on strategic planning
* Governing Board	Limited participation Rubber stamp	Broad participation Exercising full
* Senate	Limited power	More power in academic decisions
*	Concerned with staff welfare	Concerned with institutional performance
* Academic Units	Faculty with walls	Faculty without walls
	Election of academic leaders	Selection of academic leaders based on their abilities
* Support Units	Fragmented coordination of common facilities	Centralization of common facilities
Curriculum and Teaching-Learning	School learning	Life-long learning
	Emphasis on technical skills	Emphasis on technical skills with global competence
	Value-free education	Value-based education
	Supply-driven programme	Demand-driven programmes
	Emphasis on local and national programmes	Emphasis on regional and international programmes
	Limited use of IT	Extensive use of IT, e g. Internet
	Traditional and open universities use different instructional technologies	Traditional and open universities use more of similar instructional technologies
Finance	Rely heavily on the government support	Rely on many sources of funds
	Limited income-generating activities	More income-generating activities
Management	Limited linkages with outside agencies	More linkages with the private sector
	Universities provide all service	Universities buy available services from outsiders
	Use collegial and bureaucratic models	Use corporate management model
Institutional Evaluation	Minimal use of self-evaluation	Systematic use of self-evaluation
	Minimal use of external assessors	Extensive use of external assessors
	Staff enjoys status	Periodic evaluation of staff performance

(a) Redefining the Mission

We have to define and redefine our mission. Each institution has a specific mission. We have to look for the niche of our business. When I started the Sukhothai Thammathirat Open University in Thailand in 1978, we stated clearly the mission of the new institution. It is stated in the mission statement that Sukhothai Thammathirat Open University holds to the principle of life-long education. The University uses the distance teaching-learning system which consists of correspondence media, radio, broadcasts, television programmes, and other methods that enable students to study on their own without having to enter an actual classroom. This mission statement becomes the guiding principle in institutional building. There is no classroom at STOU campus.

My second experience is with Suranaree University of Technology which we started six years ago. Suranaree University is a technological university. It has specific missions to perform. Let me cite two important missions:

* The training and production of highly qualified scientific and technological personnel in response to national development needs.

* Adapting and disseminating suitable technologies for increased national scientific and technological self-reliance.

By defining the mission we have the guiding principle to follow. At SUT, we have a Technopolis or Science Park. This is built under the mission of adapting and disseminating suitable technologies. The Technopolis a SUT is now institutionalized as part of the university serving as a hub of both government and private organizations to conduct research and develop new products and processes as part of new technology.

Distinguished colleagues, the mission is like the star guiding the navigator. You will never get lost when you know you are in the right direction. So decide first what kind of institution you would like to build.

(b) Redesigning the Governing Structure

Our universities are run by governing bodies which are known in different names such as the Board of Regents, the Board of Trustees, the University Council. At SUT, our Council is a kind of bipartite: the Council consists of distinguished outsiders and faculty members elected at large. The ex-officio members consist of the President of the University, the President of the Council for Industries of Thailand, and the President of the Thai Chamber of Commerce. As a technological university, we need representatives form industries and commerce who will help guide the development in these two areas. Broad representation in line with the mission of the university is most desirable.

But the point I would like to make here is the balance between institutional autonomy and state control. In the past, as experienced by many countries in our region, there used to be very tight control by the ministry concerned. The emphasis is now moving from control to supervision. Institutional autonomy and efficiency will be reduced if the state has control over internal functions of an institution. To find the proper balance, we need to transfer the power and authority to the University Council. This could not be done if a university is still functioning as a branch of a ministry or bureaucracy.

Next to the University Council is the Academic Senate which is a body responsible for making academic decisions. In many countries, the academic senate exists in a university, serving as a body to oversee the academic undertaking of the university. In Thailand,

we have a faculty senate which is mostly concerned with the welfare of faculty members. At SUT we have created the Academic Senate to be the second highest governing body. It has the mandate to oversee overall academic matters having to do with teaching, research, services, and safeguarding standards and quality of the university. With broader and active participation of the academic senate, I believe it can contribute to the higher performance of the university.

(c) Restructuring Academic Units

Traditionally universities consist of schools and faculties. Schools and faculties are subdivided into departments. What we have often heard is that faculties and departments become the walls separating faculty members from close collaboration. One way to promote close cooperation is to demolish the wall. I have two experience in dealing with this problem. When we created the open university, STOU, we decided to create a school without departments. The University used the course team approach to create self-instructional materials. The course team can easily be promoted in schools or faculties without walls. It is recognized that this approach had contributed to the higher performance of the University.

My second example is with SUT. We decided to create a cluster of schools. Instead of having many schools we decided to have four clusters or institutes at the beginning. They are the Institute of Social Technology, Institute of Agricultural Technology, Institute of Industrial Technology, and Institute of Resources Technology. We have now added the Institute of Medicine. Each institute is organized into schools. For example, in the Institute of Social Technology, there are 4 schools: School of General Education, School of English, School of Information Technology, and School of Management Technology, and a Research Department. The school is the smallest academic unit. There are no departments within a school. The underlying concept is to promote close collaboration among faculty members in

multidisciplinary and institutes in the same building—the academic building which is especially designed with 564 faculty office rooms. I have high hopes that this new arrangement will promote greater cooperation among faculty members and hence higher performance for the University.

(d) Rearrangement of Supports Units

Performance could be increased if we could increase efficiency. Inefficiency occurs when facilities are not utilized up to their maximum capacity.

At SUT we approach this problem by pooling resources together and distributing resources according to the needs. Two examples are illustrated here: one is classroom utilization and the other is laboratory utilization.

As I mentioned earlier, faculty members stay together at the Academic Building. For students, they study together in four classroom buildings. No classroom is assigned to a particular institute or school. All classes are scheduled centrally by the Center of Educational Services. By this arrangement, classrooms can be used to maximum capacity.

The second example is our laboratory utilization. The same principle is applied: no laboratory is assigned to an individual institute or a school. Students and faculty members use laboratory facilities together. SUT has six equipment buildings with student la boratories and research laboratories. Faculties are centrally arranged by the Center for Scientific and Technological Equipment. The benefit of this arrangement is the maximum use of facilities.

Ladies and gentlemen,

Centralization increases efficiency but at the same times it

decreases satisfaction among faculties and students. But appropriately arranged and managed, you can have both.

(e) Redesigning the Processes

We have talked about a new paradigm in teaching and learning. With the principle of life-long learning, we can have the new clientele in higher education. With the use of IT, we can organize learning activities any where and anytime. University administrators have to think more of demand-driven strategies. But we must also find the proper balance between market-driven education and value education.

Concerning program design, we have to change our curriculum in line with the changing needs. Earlier, I mentioned about global competence. International communication, international or regional language, computer literacy, and global understanding have to be incorporated into university programs.

Flexible learning is more available now. I have heard that the Internet university offers about 700 courses and the Global Academy about 6000 courses through Internet. Distance education is now said to be in the fourth generation. Distance learners are using more interactive media. I believe in the future, traditional and open universities will move in the same direction in using more information technology to enhance their teaching-learning activities

In terms of university finance, we have to mobilize funds from different sources. Tuition is one important source. This year the Thai Government launched a massive Student Loan Programme. It leaves room for tuition fee adjustment. Income-generating activities should also be be undertaken by universities. Units responsible for these

activities such as a seminar center and a print shop should be run similar to private enterprises.

Universities have to establish linkages with the private sector, industry and the government. They are sources of funds as well as sources for enhancing experiences and education of students and faculties.

One way to down-size an institution is to buy available services form outsiders. Janitorial work, cleaning, gardening, security service can be contracted out. In this way we can have good services as well as efficient operation.

The last process is quality assurance. It is going to be a major concern at institutional level, national level, and international level. The university must be concerned with its own internal mechanism for quality assurance. It must have a regular program review with the aim for program improvement. Outside academic contributors must be used to assess the programs.

I have shared with you my experiences and ideas about institutional strategies. I hope some of the ideas presented this morning will become the inputs to your further discussions.

Thank you.

Making Distance Education Borderless

MAKING DISTANCE EDUCATION BORDERLESS *

Distinguished guests
Participants
Ladies and gentlemen

1. Introduction: Sharing Vision with Dr. Reddy

Firstly, I would like to congratulate the Indira Gandhi National Open University for initiating this Memorial Lecture Series in tribute to and recognition of the pioneering work and vision of its founder Prof. G. Ram Reddy. I therefore, consider it a great honour and pleasure to be invited as a speaker on this occasion. For this invitation, I graciously thank Prof. Dr. Takwale, the present Vice Chancellor of the Indira Gandhi National Open University.

It was equally a great pleasure and privilege for me to have known and worked with Prof. G. Ram Reddy during the early formative years of Open Universities in Asia - specially the Sukhothai Thammathirat Open University in Thailand and the Indira Gandhi National Open University in India. Both Prof. Reddy and I shared the enthusiasm in fullfilling the mission and vision of providing higher education to greater number of people regardless of age, sex, religion, socio-economic status and previous educational attainment through a distance mode provided by Open Universities.

I recall with great nostalgic pleasure our long conversations and discussions on various aspects of Open Universities during his visit to Sukhothai Thammathirat Open University. Even then we have

(* Prof.G. Ram Reddy Memorial Lecture Delivered at the Indira Gandhi

established immediate friendship, mutual respect and admiration and sharing of visions and dreams for the realization of higher education for all, through the then innovative scheme of distance education.

Now after more than two decades that distance education and open universities were established in many countries of Asia, we can look back with some degree of accomplishment and satisfaction that indeed the institutions that we have founded truly helped thousands of people. The early growing administrative pains are now routine activities, many programmes and courses have been institutionalized and thousands if not millions of graduates have acquired their much needed training and degrees and have become fruitful and productive members of the workforce contributing to the socio-economic development of their countries.

However, we can never remain complacent as there are always new areas of endeavours, new challenges in improving the administration and delivery systems of distance education programmes, new generations requiring different skills and knowledge to meet the internationalized or global society. The pursuit of excellence in distance education must be continued specially now that there are new types of graduates required, new global competences that must be acquired and new means of attaining the desired higher education for all.

Although there is no single model or paradigm of distance education and open university management that can be adopted across cultural and linguistic boundaries and replicated in its entirety, it is through the sharing of experiences specially of the pioneers, through conferences and seminars as in the case of this Memorial Lecture Series, that we could learn from the valuable lessons of those who have embarked on a similar path and thus avoid making the same mistakes.

The mixed media so far used in open universities must be supplemented or changed to real multimedia using recent advances in telecommunication and information technologies. We must provide both the youths and the adults the new global competences through modern multimedia education technologies so that they can effectively be part of a multi-disciplinary, inter-disciplinary and multi-cultural work team in a global society which is a borderless community. This is the theme that I would lilke to develop in this paper and share with you my experiences and thoughts.

I intend to divide this presentation into four sub-themes or sections - (1) a revisit of Distance Education and Open Universities the philosophy, visions and missions; (2) requirements for efficient delivery and administration of open universities; (3) role of new telecommunication and information technologies in improving distance education delivery systems; and lastly (4) the megatrend in education for all or borderless education i.e. - the dual mode or integration of face-to-face delivery system and the distance mode through multimedia in both real and virtual university campus.

2. Revisit of Distance Education and Open Universities

2.1 The Need for Distance Education and Open Universities

In pursuance of the Jomtien Declaration of Education for All, many countries if not all, have now compulsory or fully state-supported primary and secondary education of 9 to 12 years. Although the attainment of the goal is not yet complete, there has been a great improvement in the accessibility of basic education in most countries. Some degree of gender or socio-economic inequity still exists but is decreasing in gravity. However, when it comes to higher education or post-secondary education, there is still much disparity in its accessibility by the general population.

Although almost all countries in Asia now have public and in some many private universities and colleges that provide quality tertiary education, accessibility is still limited because (1) present institutional infrastructures can accomodate only limited number; (2) inflexible bureaucratic requirements of school programmes which generally exclude working students; (3) high cost which could not be afforded by many; and (4) inflexible working hours or requirements of employers so that young working high school leavers could not study. In the meantime, the desire of the people even from the provincial and rural areas, to have access to educational opportunities have greatly increased. Parents are more willing to sacrifice a lot for the education of their children with the belief and hope that through better education, they could obtain better jobs and have better quality of life.

One strategy to provide the higher education needs of a greater number of people is by distance learning as a continuing education opportunity for the masses; as part of "to learn and to earn and live better" concept under the adult education programme. Such inequality in opportunities can be reduced if not eliminated by efforts to democratize education. Thus, various models and methods must be explored to make higher education also truly an education for the masses. But it is essential that these approaches be economical and efficient so as not to further deplete the limited available community and governmental educational resources.

Many countries in Asia have opted to extend the range of educational opportunities by adopting the open education system and established for this purpose, higher educational institutions of distance teaching and learning. There are now national Open Universities aimed to serve the needs of adults and high school leavers seeking to upgrade their professional qualifications and/or to acquire a real understanding and mastery of their subject of specialization.

2.2 Philosophy and Vision

Although it is true that many factors, including socio-economic forces, as well as scientific and technological advances may influence educational changes, perhaps an equally important factor is a change in conceptual or educational philosophy. The need for better educational qualification may be dictated by the work market. For example, there is a need for more engineers by industries, for business managers and accountants by banks, hotels and other business enterprises, need for more nurses, therapists and doctors by hospitals. There is therefore a shift from the humanities and social sciences to technical and business education. With internationalization of the workforce , aside from the field of specialization, a worker must have other global competences if one is to effectively and efficiently be part of an international workteam.

From the conceptual and philosophical aspect, one of the concepts that has influenced and has fostered this greater desire for education of the masses is *lifelong education* and **higher education for all.**

It is generally accepted that with the information explosion and with the improvement of telecommunication and information technologies, today's society can be characterized as a learning society. Education is no longer one part of the development of an individual, but is now realized as being life-long, from infancy to old age. Education also affects all aspectes of life including work, family life, community relations, interpersonal relations, leisure and personal satisfaction. With great increase in available information new technological developments, professionals have to be up-dated if they want to continue being on the competitive edge of their career. The first degree is never sufficient, even knowledge and training from graduate schools have shorter value half-life in the present world of work. With present constant changes in society, the individual must

be able to adapt to them. The individual may need new educational tools, skills and knowledge in order to cope with societal and environmental changes. Education will be needed for this adaptation to change. Also, more and more people are reaching old age with still good health, thanks to advances in medicine and public health. The retired and the elderly may have to retool themselves or learn new skills just for pleasure and to remain useful citizens. All of these new groups are new clients of distance education and open universities. Open universities are no longer just to obtain a first degree but to provide educaition for youths and adults in various fields, and in various forms, at anytime and anywhere.

The other important concept is education for all—educational oppotunity must be available to all sectors of society regardless of age, sex, religion, ethnic group, and socio-economic status. In general, the education we are familiar with may be characterized as "closed education" or "limited education". It is limited in its admission of student enrolment by the size of the school, the number of teachers and facilities available, the age of the applicant, sometimes the sex or religion and many times by the socio-economic status. This is because the students must come to study in a specifically designated place and time under one specific professor as the university is forced to have admission criteria which limits accessibility to educational opportunities.

Open education featuring distance teaching and learning could be considered as "expanded education" in that it seeks to increase educational opportunities to the greatest number possible. This alleviates the problem of limitations regarding the process, structute and learning environment. Instead of using a conventional classroom with a teacher as the center of teaching and learning, open education emphasizes various types of educational media, which result from the application of advanced knowledge or technology of education. The intention is to have the students study to the fullest extent on

their own without having to enter a conventional classroom. An important factor in open education at whatever level is the instructional media, which is one component of educational technology.

In the past, there have been different experimental approaches to open education featuring various types of instructional media—both single media and mixed media. The first well-known approach was correspondence education in which teaching materials were sent by mail directly to the student's address. It was believed that printed materials were the most efficient instructional medium. If the materials were well written and organized using appropriate methods, the student should theoretically be able to study alone with very limited direct assistance from a teacher. Correspondence education has thus been an important educational medium for expanding learning opportunities and removing barriers to learning, thereby making open education available to ever greater number of students.

With greater electrification of provincial areas and greater availability of radio receiver sets, another medium was applied to the field of education. Radio broadcasts were used not only to supplement conventional classroom instruction, but also as a medium in open education as well. Schools or educational institutions of the air were established which broadcast radio lessons directly to the home. In some instances, radio broadcasts were used in conjunction with correspondence education; in other cases the broascasts were used as a single medium of instruction. An important additional development now is the use of television. Telecasts specially with satellite facilities can be considered highly effective instructional medium for it combines both visual and audio mechanisms. Needless to say, with the radio and television broadcasts, the student must pay particular attention and must be available during the broadcasts. Of course, the programs can be taped for further referrals and review, but this may

be expensive for many. The latest addition to technology which has greatly revolutionized distance and open university education is the computer technology. With the application of new telecommunication and information technologies real multimedia systems which can even be interactive, have greatly revolutionized distance and open university education—making it truly without boundaries.

3. Distance Teaching System

Since in the traditional distance mode of teaching, teacher and students have very little opportunity for face-to-face contact, the use of appropriate educational media must ensure some joint educational activities of student and module designer. Nevertheless, the bulk of the learning arises from self-study, at times and location convenient for the student. Distance teaching thus involves the communication of knowledge, attitudes and skills to learners in such ways as to enable them to acquire and extract them into the conduct of their daily lives. In general, the criteria for determining the efficiency and effectiveness of distance teaching involves analyzing the extent to which learners have achieved the learning objectives set by the curriculum or by themselves. Ideally, an effective distance teaching system should ensure that the students find the learning experiences stimulating, interesting, enjoyable, and relevant or useful to their aspirations and lifestyles. Thus, the effectiveness of distance education depends to a large extent on the quality of the learning experience provided by the instructional media and delivery systems.

Among the factors to be considered in media selection are: (1) availability of adequately developed technology; (2) accessibility of the media to both teaching institution and the learners; (3) accepta bility to both teachers and students; (4) validity or appropriateness of the media in achieving th objectives of the learning materials; and (5) cost-effectiveness -, the price must be commensurate to its values

and quality.

There are basically two approaches to media selection: (1) Uni-medium or single medium system - this is the exclusive use of a single meduim such as printed material, radio or television broadcast. The Extramural Studies Programs of various universities in Australia which use printed materials exclusively are a good example of the Single Medium System. (2) Mixed Media System - in this system one medium serves as a core medium and the others as supplements. Printed materials are generally used as the core medium, with electronic media such as radio, TV, audiocassettes, videotapes, etc, serving as supplementary media. Most Open Universities employ this system.

Modern real interactive multimedia systems are now available and their use will be discussed in subsequent section.

The Distance Teaching System used at Sukhothai Thammathirat Open University (STOU) is an example of a mixed media system. From my experience, among the successful features of the system are:

1. Efficient System of Student Needs Assessment

The programmes, training courses. materials and media to be developed must be relevant to the needs of the intended students or clienteles. The educational needs of the intended target groups must therefore be properly identified through preleminary surveys and research.

2. Team Approach to Curriculum or Material Development

The academic structure in STOU is based on the principle of course integration. i.e. it integrates different academic areas into

specific groupings or categories which will facilitate the student's ability to synthesize and apply the knowledge acquired and which will be easy for self-study. Course integration is thus primarily of an interdisciplinary nature. The establishment of the different schools has been carried out along the lines of career and professional development rather than being discipline-oriented in order to conform to the principle of course integration. The curriculum is thus divided into "course blocks" which are produced by a course production team consisting of a content specialist, educational technologist and an evaluation specialist. Academic standards are thus the responsibility of a group of academics rather than of an individual instructor. Supplementary media such as radio, TV and special tutorial sessions are also prepared based on the course block which is usually a printed material.

3. Qualified Local Study Center Staff

Since direct assistance must be given by the staff or an identified local study center, their qualifications must also be strictly considered. They must also be subject specialists and familiar with the use of the various media and technologies utilized in the delivery system. Tutors from the main university can now be available through the modern telecommunication technologies of mobile phones and computer internets.

4. Constant Monitoring and Evaluation

The materials and media should be constantly evaluated by the staff of the local centers, the students and the production teams. Necessary modifications are made based on critical evaluation and suggestions.

5. Continuous Training of the Staff

The administration itself believes in continuing education and so the staff and production team undergo continuous training to up-date themselves of new content materials, new education technologies and systems of evaluation. This is required in the revision of the various teaching blocks and the creation of new ones.

4. Providing Borderless Education Environment

4.1 Information Technology as a Force of Change

One of the important forces of change during the last decade of this century and whose influence will even be greater in the next milliennium is the development in telecommunication and information technologies. Application of fiber optics technology, communication satellites, availability and cheaper price of radio and television sets, cellular telephones and personal computers as well as wider use of Internet have allowed easy, fast and to some extent cheaper means of communication and access to information. Not only goods, capital and manpower but also information are being exchanged between countries today. Thus, information has become a new form of capital and source of power. We are now living in a so called information society.

These developments in information, communication and transportation technologies lead to globalization movement, which in itself is also a very strong force of change. Globalization means freer movement of people, physical resources, capital and information between nations. The whole world has shrunk into one borderless community - the global society with its global citizens. Globalization will mean more interaction and would require greater cooperation regionally and internationally. However it could also spell greater competition for resources including humanpower, markets, information and technology.

Nevertheless, in spite all the great technological advancements, the individual person, the human being, is still and should rightly be in the center of these developments and progress - both as the object of development and achiever of development. The global citizen must be properly equipped with global competences like knowledge of foreign languages, communication skills and scientific knowledge, technological knowhow, computer literacy, appreciation of the arts and culture, understanding of self and tolerance of differences as well as possession of appropriate attitudes, and respect for universal values like human rights, democracy and concern for the environment. They are necessary to adequately meet the new challenges of the modern world which is multipolar, complex and interdependent.

As educators and educational administrators, it is therefore our present mandate to provide the students with the proper global competences as well as the appropriate environment and educational delivery system that would foster global education which is a borderless education - borderless in number and kinds of students, borderless in subject matter covered, borderless in venue, borderless in method of delivery.

4.2 Use of Information Technology in Borderless Education

Information technology is revolutionizing educational systems and methodologies - making learning easier, more effective and more enjoyable and highly customized or "learner-centered". The challenge to educators is to understand better how individuals best learn, wheather as youths or adults. Corresponding pedagogical and andragogical concepts must be applied in the design of appropriate learning experiences through information technology (IT). Thus, learning design should focus on the way people can and prefer to learn rather than on just the way learning content be presented and passed on to students.

Technology based learning, like computer-based learning is an exciting alternative to traditional educational system. It is an encounter between the learner and the designer of the computer programme using the computer as a substitute or proxy. The learning program reflects the designer's model of learning which is a certain model of reality. It is therefore critical that consideration of appropriate models be made in preparing coursewares.

a: Advantages of the System

Technology can be applied to provide opportunities for the learner to (1) practise a wide variety of skills, (2) obtain appropriate knowledge for comprehensive understanding and even mastery of a given subject content; (3) access, analyse, synthesize and use data and information; (4) develop creative thinking and problem solving skills; and (5) to communicate effectively.

Technology based learning may prove an economical system, after the basic investment for hardware and software has been met. The same system can be used in several locations as in multi-campus universities or in consortia of universities. The system would require fewer number of permanent teaching and administrative staff. Its location can be centralized and so access by both teachers and students would be easier and possibly at a reduced cost. Most importantly, the course design is usually better because it is prepared by a team of experts in contents, educational technology and in education evaluation.

Systematic evaluation methods can be integrated in the course design. In many ways the evaluation is learner-controlled as one can undertake it depending on one's readiness or progress. The feedback of computers may be incorporated into the design which could enhance enjoyment and motivation in learning.

The system is more flexible as students can have lessons on individual basis. They can start at various levels and it can be anywhere - i.e. in centralized campus, local learning centers, at home or in the office. The system permits easy revision of content and thus can always be kept up to date.

Lastly the system can offer unique features like easy access to experts and voluminous mass of information through Internet or video conferencing facilities which cannot be available in traditional university environment.

b. New Roles of Teachers

In technology based learning environment, the teachers will become learning facilitators rather than instructors. They will become less and less the direct source of information. Instead, they will help students access information. As tutors and mentors, they will be more concerned with guiding students how to manage their learning in the face of bewildering voluminous information available through the Internet. The teachers will still have to be specialists in certain fields and should have high degree of mastery of contents, if they are to guide the students in the applications of information in discovery, problem solving and other creative learning activities. They should also be knowledgeable in informaiton technology if they are to be designers of new teaching-learning materials and experiences. It is through these processes that they become innovators and creators of new teaching-learning experiences. Teachers will therefore have to be masters of contents and of educational technologies.

c. Technology Based-Learning in Context of Global or Borderless Education

The learning of global competences and subject matter or content will be dependent on learning model used which could be

programmed or experiential, the technology which could consist of Internet, Simulation, Virtual Reality and Multimedia and the environment provided which must be conducive to lifelong learning or a learning society.

The various approaches to the learner and the learning environment may be classified into two broad categories: programmed and experiential learning. Programmes are either linear or branching, i.e. the materials are presented to the learner in a format and order determmined by the teacher. The presentation is sequential. In branching, the incorrect replies can serve as turning points for remedial or side discussions. Examples of programmed learning are through tutorials, drill and practice, classroom lectures, etc.

In contrast, experiential leraning emphasizes the actual experiences that the learners go through as the starting point of the learning process. The mental processes employed to analyze the experiences are also included. It combines experience, perception, cognition, and behavior. It takes into account individual differences of learners like levels of knowledge, experience, personality, background physical disabilities, etc. The experiential learning cycle, according to Kolb, consists of concrete experiences, reflective observation, abstract conceptualization and active experimentation . These processes can be related to technology like in computer technology. For example, from concrete experiences, analysis could be made of the output utilizing other sources of information that could be obtained through the Internet. Then, from the results of analysis, one can use modelling software to create a new model to modify an existing one. By running the new model one can validate the hypothesis or create new models . In this process, the learner is no long a passive receiver, but an active player in the learning process. Experiential learning therefore exploits more the creativity and problem solving skills of the students as well as the potential of computer as a learning tool.

d. The Computer as Learning Tool: Applications of Internet

Personal computers have now become part of daily life and will become more so in the next century. More and more information that we receive and upon which decisions or actions and based are now provided by machines. Data are accessed, processed and converted to information through computers. The decisions based on such information are also communicated through computers.

By 1995, most computers are equipped with CD-ROM drive which can store vast amounts of information in audio, image and video format. In 1996, the important additional feature was an Internet connection which permitted global networking.

The Internet is considered as a convergence of technologies. It can be used to combine various media-print, visual, audio to create whole new virtual worlds and real experiences. Students can have access to information from all parts of the world, from various experts on any subject and various forms. Processes are also being piloted through computers and simulations as well as models can be built. The whole production line and processes can be modeled and changes made. Factors in a simulated condition can be altered and consequences observed directly. Simulation allow access to hazardous or difficult environments without actual risks.

Communication between processors and students and between students and experts and students by email or video conferencing can be efficiently done. Internet replies can now be obtained at almost any part of the world instantly.

Thus through computers, it is possible to integrate media, people and content and communication in an unprecedented way. Through global networking, millions of people have access to a wealth

of information which would have been inaccessible before. In the future all public information can be obtained through Internet. An online course from America or Europe can be available at home or in a classroom in Asia. A video Conferencing instead of a tutorial or traveling thousands of miles to attend a conference would be possible, it is indeed a true global education system.

Ravet and Layte (1997) have placed in a three dimensional representation many of the activities that are possible with the Internet. The three axes are **information, cooperation** and **real time.** The various activities are located in the diagram according to the importance of each of the three factors. For example, a lecture , unlike a conference, has high information content, but does not require much cooperation nor does it have to be executed in real time.

Through the Internet, learners can become true discoverers, not only by navigating or surfing through the information highway, but actually producing new information through the Internet publishing tools. They can also interpret the navigated world and share their interpretations with limitless other users of Internet.

e. Learning Space in Borderless Education: Virtual Worlds

Since the learner is a self-directing individual with his own knowledge, skills, experience and learning style, then the programme or system must promote learner autonomy and should be able to motivate the learner to the greatest extent possible. It is also necessary for the learners to be able to monitor and evaluate their progress at every stage of the learning programme. The programme would therefore provide constant and meaningful feedback.

Some computer programmes may have built-in control system over the learner. A better approach however, is for the programme to integrate tools which the learner manipulates and con-

trols. The training programme must allow some degree of flexibility so that the learners may be able to choose their own paths and speeds through the materials.

The programme should be able to respond to the demands from learners like the desire for further explanations, examples, demonstration, solved problems, actual applications or be able to simply answer learner's question just like in a classroom. This approach to learning design produces more enjoyable and productive learning environment compared to the traditional lecturing, note taking, examination and at times receiving feedback from the teacher.

Another form of environment which the computer can provide is the virtual environment. Virtual reality is a medium where a virtual world (a synthetic 3-D environment in color and with stereo sound) can be explored and examined continuously from any perspective in real time. Virtual Reality (VR) has great potential for extending the learning environment and experience both in breadth and space.

Simulations can be made such that it gives the learner the sense of being in the real place and touching or experiencing real objects. There are VR solfwares wherein the user is not only a spectator but is an actor participating and influencing the events in the virtual world. VR can bring the learner to limitless types of environment and situations, even into imaginary future worlds or literally to any environment of choice like the depth of the ocean, on top of a volcano, inside a living cell or on another planet. A biology student can dissect a virtual frog or make genetic mating experiments with virtual fruitflies. A medical student can study parts of the human body with CAT Scanner and therefore perform noninvasive diagnosis and preparatory surgery. A chemist can see three dimensionally the structure of a molecule and alter it by adding or deleting some elements or radicals. At the same time, it is able to reproduce

traditional environments like "virtual classroom", "virtual hospital", "virtual campus" or a "virtual university".

f. The Megatrend: The Merging of the Two Delivery Systems

In the past, the traditional face-to-face of education delivery is the mode of most traditional universities. Distance mode of delivery is the usual system for Open Universities. In the near future, the two delivery systems will be merged and will be used in one university-, a university offering face-to-face mode of delivery system and distance mode using in both instances modern telecommunication and information technologies in a university with real and virtual campuses. There will be on-campus students and there will be students who visit the real campus only occasionally or remaining in the virtual campus. There will be both young and adult students. Multimedia technologies which will soon be truly interactive will be accessible to all, at all times, at all places and in all varied ways. Educational opportunities will never be too far from anybody and it will be from real to virtual campuses. It will be truly borderless system of education.

5. Networking as an Operational Strategy

The ideas and strategies for borderless education presented can be implemented only if there is the corresponding management and leadership support by the university administration and the government. The required hardware and software which are expensive must be made available together with the critical mass of humanpower required in a development team and for administration.

For its operationalization, one of the feasible strategies would be through networking or cooperation of universities or centers of excellence. Sharing of cost of infrastructure and operation as well as

the limited number of content experts and educational technologists available in the university or the country will be the only viable modus operandi. There could be sharing not only of expenses but also of sales and benefits from the coursewares which are produced and adopted regionally or internationally.

Networking of universities would also promote enhancement of quality of higher education. Because of student mobility and easy comparison of learning materials produced in a borderless system, presence of international standards or benchmarks would be required. Only materials from universities that would have such quality standards will be used and only such centers of excellence could join networks.

Most importantly, there must be a networking not only of computers as in Internet or Intranet, but also a networking of people. It is still through personal contact and sharing of intelligence, knowledge, creativity, aspirations, friendships and common goals that sustainability and quality of borderless education can be maintained.

One such network which was recently formed is the Asia-Pacific Distance and Multimedia Education Network (APDMEN) under the umbrella of the Association of Universities of Asia and the Pacific (AUAP), of which I am the President and my University, Suranaree University of Technology (SUT) is the Secretariat. The Network aims to promote quality borderless education through production and use of quality multimedia teaching learning materials in both traditional and distance mode of education delivery. Universities that would like to join the Network could obtain further information from the Secretary General of AUAP at SUT.

In conclusion, I hope the ideas and strategies presented for enhancing the role of open universities in providing borderless

distance education can be further discussed during the open forum or informal discussions and that continued greater cooperation between Thailand and India in this field could be further achieved.

Thank you.

Universities and The International Knowledge Enterprise : Southeast Asia Perspective

UNIVERSITIES AND THE INTERNATIONAL KNOWLEDGE ENTERPRISE: SOUTHEAST ASIA PERSPECTIVE*

Distinguished guests
Participants
Ladies and gentlemen

1. Introduction

It is indeed a great honor and pleasure for me to be invited as a keynote paper presenter on **UNIVERSITIES AND INTERNATIONAL KNOWLEDGE ENTERPRISE** at this prestigious Mid-Year Conference of the International Association of Universities. As President of the young but strong Association of Universities of Asia and the Pacific (AUAP) which was founded at Suranaree University of Technology, Thailand on 28 July 1995, I am delighted to report our active participation in the activities of IAU as Associate Member. We hope to further strengthen this collaboration between our two Associations.

Higher education as an enterprise has experienced during the last decades great and fast changes which are expected to be even more pronounced, extensive and significant in the coming 21st century. The changes could involve several aspects including direction, size and kind of students, diversity in courses and programs offered, teaching-learning delivery methods, providers of education, staffing pattern and budget, system of governance, infrastructure and even the actual missions or goals of universities.

(*Keynote Paper Presented at IAU Mid-Year Conference, Chulalongkorn University Bangkok Thailand 12-14 November 1997)

Universities will no longer be the sole provider of higher education. There will be the entry of other industries and business enterprises in the information service or knowledge acquisition markets Knowledge and information will be crucial resources for innovations and development and would be forms of capital and power.

Many educators consider these changes either as part of the evolution of the educational system from industrialized society to information society while others consider the changes so different and without previous precedence and so are really great paradigm shifts or revolutions. It is believed that many of the jobs by 2020 do not even exist yet today so that universities may not even know how to prepare for this future .

This topic of knowledge enterprise is therefore a pressing concern to most educators and I eagerly look forward to the discussion during this plenary session and the following group meeting.

With your permission, I intend to discuss the topic of **UNIVERSITIES AND INTERNATIONAL KNOWLEDGE ENTERPRISE** with focus on a Southeast Asian perspective. I am sure my colleague, Dr.Donald R. Gerth, the President of the International Association of University Presidents (IAUP) would present a more western or northern perspective. I will therefore divide my presentation into four major sections: (1) a short review of the past and present university paradigms, (2) the forces of change and some related paradigms and (3) networking as an operational strategy. and (4) summary and conclusion.

2. The Past: a Brief Historical Review

Southeast Asia (SEA) is characterized by great cultural

diversity and the evolution of its educational system is no exception. To a great extent provision of higher education is a government function or a kind of social service although in some countries this responsibility is shared in varying degrees by private institutions.

The early universities in Southeast Asia were greatly influenced by western specially European systems of higher education either because of colonization of the region by Britain,, France, the Netherlands, Portugal or Spain or by a deliberate choice of adopting western paradigms in the process of modernization as in Thailand, which was never colonized.

Institutions of higher learning were originally established as training centers for local administrators or civil servants with foreigners as faculty members. Higher education was available only to a very small segment of the population defined by wealth or adherence to religion and hence was very elitist It was theosophical in content, taught in a foreign language and generally supported by endowments and patronage.

The education of some native elites went hand in hand with the nationalism movements. One of the major changes asked was educational reform - i.e. provision of education to the greater masses. Some of the inteligentia of the country were even educated abroad bringing with them more liberal and democratic ideas when they returned. This brought about the slow shift of the educational paradigm by the beginning of this century to the Industrial Period where science and technology including engineering were introduced in addition to philosophy, law, medicine and education. They were also aimed to train the natives to help provide social services to the country.

With the success of the nationalism movement and the attainment of independence by the different countries after the

Second World War, more state universities were established in the region. As part of the foreign assistance scholarships to obtain postgraduate degrees in Europe, Canada, the United States and Australia were made available The foreign professors were gradually replaced by native lecturers and more subjects were added including economics and other social sciences, foreign languages, the humanities and national studies.

Since the universities are now supported by taxes, more liberal systems of admission were instituted. There was also a move to decentralize higher education and so some regional or provincial universities were established in addition to those in the national capitals. With the increased demand for higher education as a university degree has become a passport to better jobs and government positions, more private universities were established in a number of countries like Indonesia, the Philippines and Thailand. The Philippines is a special case in that 85% of its tertiary education is provided by private institutions. Again, this could be traced to the early establishment of colleges and universities by religious orders and by private enterprise.

3. The Present

It is therefore understandable that because of historical reasons, most universities in Southeast Asia follow the traditional western paradigm of knowledge acquisition and transfer.

Almost all universities have the same three basic missions - (1) teaching or provision of academic degrees, (2) undertaking research - basic or applied with more emphasis on the latter, and (3) providing community services. Many also include preservation or promotion of national culture and in the case of Suranaree University of Technology, the fifth mission is promoting technology transfer.

All universities are with undergraduate student population of 18 - 24 years old, studying on commuter or residential campuses to gain a Bachelor's degree as the beginning of their academic or work career. Knowledge to be transmitted to them is produced in the campus by a very hierarchical top-down academic staff from professors to lecturers in clearly demarcated areas of specialization. It is transmitted to students in accredited courses where they are required to attend time- and venue-specific organized lectures, seminars, laboratory periods, field trips or tutorials and to pass an examination so that they can accumulate the required total credits to obtain the degree in 4 to 6 years. Most traditional universities consider this traditional learning by traditional students to be functioning well with most students and something most universities in the region are considered to do well. Many university administrators therefore adopt a status quo policy and resist change to this established tradition or paradigm.

In addition, except for some lead universities, minimal research for new knowledge is being done. This may be due to lack of critical mass of experts in specialized fields, but more commonly because of lack of facilities or limited grants and heavy teaching or administrative loads of the faculty members. Thus, the traditional role of universities of generating new information or new knowledge is minimal. Knowledge of recent developments is usually obtained from foreign journals, international conferences and seminars or post-doctoral fellowships in some foreign universities and more recently through the Internet. Knowledge transmitted to students specially in science and technology is therefore mostly from secondary sources and from developed countries.

4. Forces of Change and New Paradigms of the University

There are a number of socio-political and environmental factors as well as technological developments which could be local,

national, regional or international affecting the present modes of knowledge production, processing and acquisition as well as transfer in most universities. These forces either act singly or synergistically causing present stresses in university management and administration. Fast and even sometimes drastic reforms are therefore required of universities to be able to adapt to present and future requirements in the world of work and if they are to remain, relevant, effective and useful to society.

Some of these forces of change and corresponding learning paradigms which will be discussed shortly are: (1) growing dissatisfaction of employers with graduates and introduction of cooperative education or work integrated learning, (2) felt need for lifelong or continuing education and creation of new education business enterprises; (3) regionalization, internationalization and globalization and institution of global or borderless education; (4) advances in telecommunication and information technologies as well as the application of Internet and establishment of Virtual Universities.

4.1 Growing Dissatisfaction with Graduates by Employers

With the increase in number of universities, the government sometimes could not monitor well the quality of education offered by some of them. More and more employers specially private industries consider the knowledge acquired by graduates to be too abstract, non-pragmatic and is often labeled as too "scholastic", "theoretical" or "academic". There is limited exposure of students to the realities of the world of work. Thus, companies must retrain them before they can be useful to the organization. This may involve additional investment of both money and time on the part of employers.

To meet these training needs, some big companies specially

the multinational ones established their own Training Centers or Academies which serve not only their own trainees but also the general public for a fee. A good example in SEA is the Ericsson Academy in Malaysia.

Many universities respond to this complaint by introducing cooperative or work integrated learning activities in the curriculum of every degree course. This allows the students to spend at least 4 to 6 months in industries or organizations relevant to the course they are pursuing. Such activities bring universities closer to industries and the private business sectors. Usually other offshoots result like revision of academic curricula as suggested by industries, collaborative research between universities and industries, facilitation of exchange or transfer of technologies and provide extra source or remuneration for the faculty and students. The industries then become partners of universities in the knowledge enterprise.

4.2 Felt Need for Continuing or Lifelong Education

With the very fast changes in business and technological environments and with geometric increase in available information, many professionals and managers find their basic training and even their graduate degrees insufficient if they would like to retain their competitive advantage. There is thus a need to continuously acquire new skills, or to update or retool themselves to prevent intellectual or professional obsolescence. Some may also decide a change of career. Lifelong education permeates not only employment and personal development, but also the social life as in the use of leisure time. Some educators prefer to call this type of learning as "perpetual learning".

Unfortunately, many universities are not serving community needs for "lifelong learning" of nontraditional students, i.e. older

students in workforce. At most some universities have Continuing Education or Extramural Studies Programs. Universities that try to provide these services utilizing already existing facilities and manpower find it very difficult to succeed as the staff do not have extra time to meet such demands and feel it is not part of their regular responsibilities. There has to be an independent unit with their own administrative and academic staff as well as financial support for it to be successful. Some universities may provide such services if they prove to be income generating or at least self-financing.

Thus, with universities generally unable to respond to this societal needs, private businesses have seized the opportunity and is going on full speed to realize profit from providing the need for intellectual products consumed outside of traditional university setting. These private businesses may include specialized training centers or research laboratories, professional organizations, multinational companies, NGOs or even individual entrepreneurs.

These knowledge businesses are run by consultancy groups, think tanks, government agencies, professional organizations, industrial companies, researchers, or NGOs. Some may even be attached to universities as in science or technology parks. Their sites of operations are linked by modern telecommunication facilities like faxes, emails, mobile phones or Internet. Work teams are usually ad hoc depending upon the specific topic or area of training and length of demand. Delivery is usually multimodal.

Such businesses are generating information and knowledge as well as producing performative products which can be packaged and sold directly to paying consumers. They produce "just in time" assemblages or continuously improved products in order to remain competitive. They are very much consumer or user-oriented and demand-driven. Quality control is determined by the degree of success or failure of the marketability of the courses or knowledge sold, effectiveness of results or solutions proposed and satisfaction

of the clients. This flexibility or ability to change and respond to demands is usually not possible in over-institutionalized, change-resistant traditional universities. Although the university sometimes does not look positively at such training, it is the marketability of these courses and knowledge sources that legitimize the existence and prosperity of such knowledge enterprises.

An alternative to providing such short-term lifelong-type of education is through virtual classes or cyberschools either in real universities or virtual campuses. Universities can collaborate with "knowledge businesses" as the latter cannot exist without the use of traditional university elements like trained personnel, accumulated body of knowledge and information, results of researches and professional network. The knowledge jointly produced would have both theoretical and practical strengths and with the marketing abilities of business, the goal of serving societal needs and profit would be better attained with this cooperation or partnership.

4.3 Regionalization, Internationalization and Globalization: Borderless Education

4.3.1 Regionalization, Internationalization and Globalization

The last decades of this century may be characterized by very rapid and at times drastic changes in the socio-economic, political, scientific and technological as well as philosophical, ethical and moral domains. Although the changes and their impacts are more pronounced in western and developed countries, the winds of change have been felt in the Asia-Pacific region specially Southeast Asia.

One such socio-political phenomenon is regionalization, internationalization and globalization. Many countries have formed alliances because of economic and political reasons .This includes

the EU, ASEAN, NAFTA, APEC, G-7, just to mention a few. With improved systems of transportation and telecommunications there is breakdown of geographical and time barriers. The world is being transformed into one global village with freer movement of people, capital and information.

These movements have also affected other aspects of life like education, morals, values and culture. Internationalization has fostered greater student mobility and faculty exchanges as well as sharing of information and knowledge. Students can have culturally different learning experiences.

Multinational companies also contribute to international flow of information and knowledge. There is transfer of research results from mother R and D laboratories to branch factories. There is in turn transfer of results of market and socio-political research from branch offices in different countries to the main office for development of marketing strategies. However, such technological developments are usually not available to the general public or the universities On the other hand developing countries are now more reluctant to share their indigenous information with multinational companies.

For university graduates to function well in the transdisciplinary and multicultural international world of work and business, they must have not only knowledge and skills of their area of specialization but also other global competencies. Such competencies may include (1) communication skills preferably in several languages, (2) computer literacy (3) knowledge and understanding of self and other people or enhanced cultural diversity awareness and appreciation, (4) managerial and entrepreneurial skills, (5) some degree of knowledge in natural sciences and technology even for people in social sciences and humanities and (6) knowledge and appreciation of global values like democracy, respect for human rights and concern for the environment.

All these global competencies together with one's own area of specialization must therefore be provided through an equally global or borderless education. There must be equitable opportunities for every citizen to have access to such education irrespective of age, gender, socio-economic status and former training. It must also be available anywhere, either in universities, training centers, government offices, at work or even at home. It must also be available anytime convenient for the learners.

4.3.2 Borderless Education

The traditional system of present educational system may be considered as "Limited Education". The system is limited in admission, limited in structure, limited in learning environment and methodologies, limited in administrative autonomy.

In this system, the number of students is controlled by results of admission examinations or grade requirements. Learning must always take place in a scheduled venue or time following prescribed syllabi and materials under a specific professor. All of these are carried out in the name of administrative convenience and supposedly for efficiency and cost effectiveness.

On the contrary, Open Learning, Distance Education and Borderless Education are the forms of **"Expanded Education"** which give everybody fair opportunity for knowledge acquisition. They decrease limitations or remove obstructions to learning and teaching. In a borderless education, the students will be able to decide what and which knowledge, skills or information they want or need, as well as where, when and how they want it delivered.

Such borderless education is now possible with the advances in telecommunication and information technologies applied to knowledge acquisition, processing, dissemination and utilization.

4.4 Advances in Telecommunication and Information Technologies : Internet and Virtual Universities

4.4.1 Advances in Telecommunication and Information Technologies

The convergence of computer and telecommunication technologies into infrastructures of information technologies is revolutionizing educational systems and methodologies. They make learning easier, more effective and enjoyable as well as highly customized or **"learner centered".** The challenge to educators is to understand better how individuals learn, whether as youths or adults. Appropriate pedagogical and/or andragogical concepts must be applied in the design of appropriate learning experiences through information technology (IT). Thus, learning design should focus on the way people can best and prefer to learn rather than on just the way learning content can be presented.

The various approaches to the learner and the learning environment may be classified into two broad categories: programmed and experiential learning. Programs are either linear or branching, i.e. the materials are presented to the learner in a format and order determined by the teacher. The presentation is sequential. This is how traditional teaching is done , i.e. classroom lectures, tutorials, drills and practice and programmed laboratory work.

Early applications of information technologies were actually repackaging of programmed learning media and teaching methods. Instead of reading a book, the text is read on the computer screen and instead of turning a page, there is the clicking of a mouse. Field trips and laboratory experiments were substituted with video presentations. Computer-Assisted Instruction is really not much different from tutorials. Their only advantage is availability anytime and anywhere, but not on learning experience suitable to the need of the learner.

In contrast, experiential learning emphasizes the actual experiences that the learners go through as the starting point of the learning process. The mental processes employed to analyze the experiences are also included. It combines experience, perception, cognition and behavior. It takes into account individual differences of learners like levels of knowledge, experience, personality background, physical disabilities and others. The experiential learning cycle consists of concrete experiences, reflective observations, abstract conceptualization and active experimentation. With modern interactive multimedia courseware a real new learning experience can be obtained.

These processes can be related to technology . For example, from concrete experiences, analysis could be made of the output utilizing other sources of information that could be obtained through the Internet. Then from the results of analysis, one can use modeling software to create a new model or modify an existing one. By running the new model, one can validate the hypothesis or create new models. In this process the learner is no longer a passive receiver but an active player in the learning process. Experiential learning therefore exploits more the creativity and problem solving skills of the students as well as the potentials of computers as learning tools .

4.4.2 Technology-Based Learning

Learning in a borderless educational system is dependent on the quality of the learning model or design, the technology used and the environmental conditions under which technology is used

Technology can be applied to provide opportunities for the learner to (1) practice a wide variety of skills, (2) obtain appropriate knowledge for comprehensive understanding and even mastery of a given subject content; (3) access, analyze, synthesize and use data and information; (4) develop creative thinking and problem solving

skills; and (5) communicate effectively; (6) evaluate progress at own pace.

To maximize these advantages, there must be a good learning design using the relevant or appropriate technology and interactive multimedia. If the content is badly designed, even a sophisticated technology will not be of much help. Conversely, an inappropriate technology can make a good design ineffective.

Computers can be used to combine various media - print, visual, audio to create whole new virtual worlds and real experiences. Processes can also be piloted through computers as simulations and models can be built and tested. Communication between professors and students and between students or between students and experts through the Internet, email or video conferencing is now possible.

4.4.3 New Roles of Teachers

It is now agreed that in technology based learning environment, the teachers will become learning facilitators rather than instructors. They will become less and less as direct source of information. Instead, they will help students access information. As tutors or mentors, they will be more concerned with guiding students how to manage their learning in the face of bewildering voluminous information available through Internet. The teachers will still have to be specialists in certain fields and should have high degree of mastery of contents, if they are to guide the students in the analysis and applications of information in discovery, problem solving and other creative activities.

As designers of new teaching-learning materials teachers become innovators and creators of new teaching-learning experiences. They can also be part of the team producing courseware which is

going to be sold and hence they will become actors in the learning businesses or knowledge enterprises.

4.4.4 The Internet: The Convergence of Technologies

Through the Internet, millions of people all over the world could communicate and share information and ideas in the fastest, cheapest and most uncensored way. It has the power to revolutionize learning specially distance learning through the computer, in terms of both the quality and quantity of services that could be made available.

The Internet is presently the greatest source of information - millions of pages of text and graphics, sounds, videos, animation, simulations and computer programs can be downloaded on to a learner's computer with the click of a mouse. The learner can either browse through it or study them in detail for mastery. No real university specially in our region can ever hope to have such mass of reference materials.

The Internet is also the most reliable postal service delivery in the world and provide limitless opportunities to "meet" and know people as well discuss limitless topics, share views, exchange help and support or even look for friends around the world.

Ravet and Layte (1997) have placed in a three-dimensional representation many of the activities that are possible with Internet The three axes are **information, cooperation** and **real time.** The various activities are located in the diagram according to the importance of each of the three factors. For example, a lecture, unlike a conference, has high informational content but does not require much cooperation nor does it have to be executed in real time.

With the Internet learners can become true discoverers, not only by navigating or surfing through the information highway, but actually producing new information through the Internet publishing tools. They can also interpret the navigated world and share their interpretations with limitless other users of Internet.

All these activities can be done in cyberspaces of real universities or they can be done in offices or the comfort of the home. This minimizes the need for students to spend time in real campuses. Since the learner is a self-directing individual with one's own knowledge, skills, experience and learning style, then the program or system must promote learner autonomy and should be able to motivate the learner to the greatest extent possible. It is also necessary for the learners to be able to monitor and evaluate their progress at every stage of the learning program. The program therefore should provide constant and meaningful feedback and be able to respond to the demands from learners like the desire for further explanations, examples, demonstrations, solved problems, actual applications or be able to simply answer questions just like in a classroom.

4.4.5 Virtual Worlds: Real Experiences

Virtual Reality (VR) has great potential for extending the learning environment and experience both in breadth and space. VR is a medium where a virtual world (a synthetic 3-D environment in color and with stereo sound) can be explored and examined continuously from any perspective in real time.

Simulations can be made such that they give the learner a sense of being in the real place and touching or experiencing real objects. There is VR software wherein the user is not only a spectator but is an actor participating and influencing the events in the virtual

world. VR can bring the learner to limitless types of environments and situations, even into imaginary future worlds or literally any environment of choice like the depths of the ocean, on top of a volcano, inside a living cell or another planet. At the same time, it is able to reproduce traditional environments like "virtual classroom", "virtual hospital", " virtual department store" or "virtual campus".

4.4.6 Dual Learning Modes: Virtual Universities and Face to Face

With digitization of educational resources and the availability of telecommunication facilities information technology campuses (IT Campuses) are becoming more and more possible in many countries. "Virtual" education is now being undertaken by distance teaching-learning modes. Socialization or "in-between classes learning", sports and some subjects are best learned in face to face. Thus, modern technologies must be used in both modes of learning. mode.

In this tandem arrangement, students physically present in real classes can meet with virtual students or teachers who are physically present in other universities in other campuses or universities or countries. Telecommunication technologies have made possible teleconferencing where lectures from a different campus can be participated by students in other places and where interaction is possible. The World Wide Web has permitted contact among learners, learners and tutors, tutors and experts, and experts and students.

5. Networking as an Operational Strategy

In Southeast Asia, such facilities are still limited to more economically progressive countries like Singapore, Malaysia and to some extent in Thailand and Indonesia. There are still few faculty members with sufficient training to produce multimedia courseware

and use the new technologies. The high cost of initial investments in the system also prohibits many universities from availing of the new methodologies.

Thus, there is a growing apprehension that there could be a widening of gap even in educational opportunities between the have and the have-not. Attempts through networking and regional cooperation must be made to help the disadvantaged or marginalized society in attaining equal opportunities for use of new technologies. It is hoped that technology-based education will not lead to situations wherein the ability to learn is not based on intelligence, initiative, performance and preference, but who can afford to buy the latest hardware and software.

A good example of such network is the Asia-Pacific Distance and Multimedia Education Network or APDMEN under the umbrella of AUAP . Ten universities from 10 countries have formed a network where there is cooperation in the production of courseware and linkage of the campuses into IT campuses with the possibility of holding virtual classes. Linkages by these universities with telecommunication and information technology industries are also being sought. Equally important is the personal partnership and cooperation of the various experts of content and technology as well as the support of the administration resulting from the network.

6. Summary and Conclusion

The traditional university no longer has the monopoly of knowledge creation or acquisition and transmission or dissemination. New educational needs cannot be satisfied by universities alone. Alliances and partnerships are being formed between universities, between private sectors and industries with universities, as well as telecommunication and media industries and universities. There are also new developments specially in telecommunications and

English Language Teaching
A Look into The Future

ENGLISH LANGUAGE TEACHING: A LOOK INTO THE FUTURE*

1. Introduction

Honored guests,
Fellow educators,
Ladies and gentlemen,

It is indeed my great pleasure to be with you at the 18th Annual Thailand TESOL Conference. I am specially happy to join you here in Hat Yai, as we are in the process of establishing the new Walailak University in Nakhon Sri Thammarat which is quite close to here.

I would like to congratulate the organizers of the Conference for choosing the very relevant educational theme of MAXIMIZING LEARNING POTENTIALS . This is the very foundation of every educational activity, namely, to bring out the full potentials of our students in learning and applying what they have learned and to apply our full potential as educators or teachers in facilitating these processes. Specifically, we must maximize the potentials of students in learning a second language, specially English. Equally, we must maximize our potentials as teachers and facilitators of learning.

In this presentation, I intend to divide my paper into four sections: (1) the importance of English now and in the future, (2) English Education in Thailand, (3) the Use of Technology in Learning English and (4) Networking- as strategy for helping each other.

(*Keynote Paper Delivered at The 18th Annual Thailand TESOL International Conference on "Maximizing Learning Potentials" 22-24 January 1998 Tabuana Ballroom, J.B. Hotel Hat Yai, Songkhla, Thailand)

2. Importance of English: Now and Future

English is becoming the universal language of the world There is no more question regarding the immense importance these days of knowledge of the English language to all educational pursuits in all parts of the world. Even the French who guarded zealously the purity of the French language and promoted strongly the use of French language not only in Francophone countries, are now learning English if they are to function in the European Union. The millions of Chinese and Japanese are presently eagerly learning English.

The days when a Thai could excel in the world of business, education, politics and any other undertaking without the knowledge of English are long past. Educated Thais now need a firm and confident grasp of the English language through which they could express themselves and access the huge amount of information that becomes more necessary for daily life.

One of the major forces of change now and will be more so in the next century is globalization. We do not need to look further for a good example. The economic crisis that started in Thailand last July had at first regional repercussions, but later has become a global concern because of the intricate interrelationships of world economy.

Thus, given the increasing trend to global communities of knowledge, global use of technology and global directives to problem solving, we need a common language, and that language has, by sheer force of number of users, become English.

The *1997 World Almanac* published by the University of Washington in Seattle gave the figure of 487 million English speaking people with 330 million as native speakers or 157 million of English-speaking people who are non-native speakers. Evidently, the numbers of English users suggest that much of the world's scien-

tific, trade and socio-political information is being published, broadcast, and electronically disseminated in English. In his book, *Global Paradox* (1994, p.26), Naisbitt mentions, " 60 percent of the world's radio broadcasts are in English, 70 percent of the world's mail is addressed in English, 85 percent of all international telephone conversations are in English, and 80 percent of all the data in the several 100 million computers in the world are in English."

Thus, we have to admit that English language competency is a strategic asset in the global marketplace. It is not only the medium of global communication, but also the language of academic thought, scientific research, technological development and the language of international trade and negotiations as well as recreation and entertainment.

With this volume of information, it will not be possible to translate them all in our national language. The only practical alternative is to provide the people with skills to directly access information in its original form. We must therefore acquire the various skills necessary for learning and using English language - namely, reading, writing, speaking. and creative thinking.

Without the ability to read, understand and judge the value of information as well as use them, all the information will be of no value. We have to educate our learners, at all age levels, to gain the most from their education and from their jobs and ultimately for the improvement of the quality of life and stage of development and growth of the country.

This advocacy of mastering a second language does not mean we are replacing or diminishing the importance of our national language. The national language will always have a place in our daily life, in our national culture and heritage. However, bilingualism if not multi-lingualism is a global competency that would be required

of a global citizen who will have to work as member of a multi-disciplinary and multinational team. It means mastering two or more languages, not replacing our national language. Or to put it another way, ***as English becomes everyone's second language, their first language, their mother tongue, becomes more important and more passionately held.***

3. English Language Education in Thailand

The Thai educational system has a major role to play in the development of the country. Its place is well earned as a respected institution, a source of providence and guidance that Thai students carry with them throughout their lives. The teachers and the schools act as a generator of the future; they take on the responsibility to ensure that the children learn and that our young adults will mature and help improve national development.

The parents and employers of the country trust that the teachers are devolving their duties with care and diligence and they generally leave the formation of the children in their hands. In order to keep this trust, teachers must look to the future and foresee the needs that our students will have to face- the future tasks and challenges. With this, strategic planning and visioning will be required. We must know what we want and what is good for our students. As educators and administrators we must develop the present and future educational goals and directions appropriate for our citizens and country. The educational institutions must provide the guidance and assistance needed by the students in preparing themselves for their roles as Thai citizens, as ASEAN and as global citizens. This is the only way that their potentials can be tapped and maximized.

Students will need to study more and learn more, simply because there will be much more to learn .However, it will no longer

be possible for the teacher to teach everything that the student must learn. The teacher will now have a new role. The teacher will have to teach the students how to learn, how to look for information, analyze and criticize, reason logically and how to use the information based on one's level of maturity and needs.

In the process they will have to maximize their own potentials. They will be active learners for life- after school, at work and even at retirement. Technology is changing life-styles and specially work styles and performance so quickly that we have to recognize the work place and home as extensions of schooling.

Thus, our vision as educators has to be one of sustainable development, one in which education continually anticipates the needs of the learners of the future, dedicates its finest efforts to meeting those needs and properly evaluates its policies and procedures along the way. In doing so, it will also allow us to maximally utilize our own potentials.

Specifically for English language education, specially at the tertiary level, our programs must enable students to use English for academic and professional purposes. The English courses must enable students to make use of all academic materials available in the various media in their own fields of specialization. They must be able to use the language in the further pursuit of their areas of specialization.

The programs should also enable the students to use English for international communication. It would be required of the students to be able to communicate effectively under all social conditions and in various work situations. They must not only familiarize themselves but actually utilize communication and information technologies that would facilitate learning and self-development.

As educators, administrators and teachers, how are we going to meet these challenges? A lot will depend upon ourselves- with the resolve to actually consider what we do when we teach language, how we instill learning skills, what kind of message we send when we try to help students learn. Do we challenge them? Do we encourage them to ask question to be inquisitive ? Do we give them the tools they need in order to accomplish their tasks independently? Do we show understanding and compassion and care? Do we insist on excellence? I hope some of these questions could be considered during your deliberations at this conference.

4.What Has Technology to Offer?

One of the features of the last decade of this century and it will be more in the next century is the great developments in telecommunications and information technologies and their applications in education. The technologies allow access to information never been as easily available before. The teachers and students can use the information to enhance presentation or support claims.

The convergence of computer and telecommunication technologies into infrastructures of information technologies is revolutionizing educational systems and methodologies. They make learning easier, more effective and enjoyable as well as highly customized or "learner centered". The challenge to educators is to understand better how individuals learn. Thus, learning design should focus on the way people can best and prefer to learn rather than on just the way learning content can be presented.

Learning through use of technology depends on the quality of the learning model or design, the technology used and the environmental conditions under which technology is utilized. To maximize these advantages, there must be a good learning design

using the relevant or appropriate technology and interactive multimedia. The learning model must be experiential and participatory rather than programmed or higly structured and passive.

Thus, in the preparation of a multimedia courseware for the teaching of English language, specially for the teaching of English to students of science and technology, there must be in the cross-functional team not only an English language expert, but also a science and technology content expert, an educational technologist, and an educational psychologist.and a computer expert as well. They must work as an integrated team and not separately as members of a work group.

Computers can be used to combine various media - print, visual, audio to create whole new virtual worlds and real experiences. Language skills needed for various social situations and the world of work can be acquired through simulations of real conditions. The learning of language through participation in a virtual environment is possible through computers. Thus various learning models and simulations can be created and tested. Practice of the various skills of reading, listening and analyzing can equally be facilitated with appropriate courseares.

Communication between professors and students and between students or between students and experts through the Internet, email or video conferencing is now possible. Computers that can print dictation are now being tested and developed.

Through the Internet millions of people all over the world could communicate and share information and ideas in the fastest, cheapest and most uncensored way. It has the power to revolutionize learning specially distance learning through the computer in terms of both the quality and quantity of services that could be made

available. Thus the Internet is not only a tool for the students but more importantly for the professors and teachers for their continuous development- for lifelong education.

The Internet is also the most reliable postal service delivery in the world and provide limitless opportunities to "meet" and know people virtually and to undertake virtual discussion on limitless topics, share views, exchange help and support or even look for friends around the world. Writing skills could thus also be developed through its use.

With the Internet, learners can become true discoverers, not only by navigating or surfing through the information highway, but actually producing new information through the Internet publishing tools. They can also interpret the navigated world and share their interpretations with limitless other users of Internet- namely their students and fellow professors.

All these activities can be done in cyberspaces of real universities or they can be done in offices or the comfort of the home. This minimizes the need for students to spend time in real campuses. Education and learning opportunities are therefore available to everybody, anytime, anywhere and on anything. Learning English language would thus become borderless.

Multimedia courseware allow multiple paths through the course content, multiple task types for practicing the skills and mastering theories, presentations and formats and self control of time and place for learning.

The Computer Assisted Instruction or CAI materials in English language courses would permit language learning in a variety of ways. The reading skills could be developed by self-timed reading exercises, practice in skimming and scanning and even

reading for details. The computer can be used for multimedia presentation of vocabulary words. Testing of the mastery of grammar could be easily accomplished through self-run examinations and evaluations through computers.

So, we can see that making information technology an integral part of the learning experience provides a number of benefits. Teachers sometimes express fear that technology will replace teachers. I can say emphatically and unequivocally, ***it won't. Personal computers will not replace or devalue any of the human talent we need for the educational challenges ahead. We still need committed teachers, creative administrators, involved parents, and of course, diligent students.*** Students of all ages and levels will still need personal interaction with each other and with adults to learn social and interpersonal skills, such as how to work and live cooperatively. CAI will therefore be used in tandem with face-to-face learning and with distance mode of teaching-learning delivery.

Great educators have always known that learning goes on everywhere, not just in the classrooms and not only under the supervision of a teacher. The drive to learn by exploration and discovery is deeply rooted in all of us.

Now I would like to move on to the last topic

5. Networking as a Strategy for Helping Each Other.

In Southeast Asia, facilities for telecommunication and information technologies are still limited to more economically progressive countries like Singapore, Malaysia and to some extent in Thailand. However, with the recent economic crisis, there will be limited funds available for the further purchase of new equipment and the provision of the infrastructures needed specially for more

remote provincial areas of the country. The high cost of initial investments in the system also prohibits many universities from still developing countries of the region from availing of the new technologies.

Thus, there is a growing apprehension that there could be a widening of gap even in educational opportunities between the have and the have-not. Attempts through networking and regional cooperation must be made to help the disadvantaged or marginalized society in maintaining equal opportunities for use of new technologies. It is hoped that technology- based education including English language education will not lead to situations wherein the ability to learn is not based on intelligence, initiative, performance and preference, but who can afford to buy the latest hardware and software.

A good example of such network is the Asia Pacific Distance and Multimedia Education Network or APDMEN which is under the umbrella of the Association of Universities of Asia and the Pacific or AUAP for short. At least fourteen universities from 10 countries have formed a network where there is cooperation in the production of courseware, the professional and technical training of staff in courseware production as well as the linkage of the campuses into IT campuses with the possibility of holding virtual classes. The teaching and learning of English is one of the major areas of their concern together with science, mathematics and technology. Linkages by these universities with telecommunications and information technology industries are also being sought. Equally important is the personal partnership and cooperation of the various experts of content , technology, educational psychology and management as well as the support of the administration. Suranaree University of Technology serves as the Secretariat of the Network, and interested parties may contact the Center for International Affairs of the University or better

still join AUAP to avail of the services and programs more conveniently.

6. Summary and Conclusion

In conclusion, I would like to re-emphasize that widening of our view on how teaching of English language that cuts across the curriculum will engender a stronger base from which we can build better courses, design appropriate instruction materials and use technology to deliver the instruction or learning modules.

Globalization occurs at all levels, and the English classroom can be the ideal center for students to become aware of the wide world and all that it has to offer for them. The better understanding of the student's needs will enhance the courses being taught and this enhancement will surely be felt as learners find that communication is a two-way process, that thinking and questioning are valid ways to learn, and that skills they derive are necessary for them to meet challenges in all areas of life. A global viewpoint in classrooms can be provided by ensuring that learning is logically based, creatively presented and systematically assessed. Various technologies specially those of telecommunication and information technologies must be maximally and effectively as well as efficiently utilized in the learning process and acquisition of knowledge. As teachers and educators, we have the obligations to our students and we must equip ourselves with expertise if we hope to sustain active learning by our students. Maximizing our potential is the first step in attaining this goal.

I therefore hope that this Thailand TESOL Conference would provide the opportunity and forum for administrators, professors, teachers and students to exchange ideas and experiences in the development and delivery of effective English language programs and to find time to assess critically what is needed for better English lan-

guage education in the country. It is only with better success in our educational efforts that we can hope for a better nation.

I hope you enjoy maximizing your teaching potentials and the learning process that will maximize your students' learning potentials. Finally, I wish the Conference great success

Thank you.

In Pursuit of Excellence in Higher Education

IN PURSUIT OF EXCELLENCE IN HIGHER EDUCATION

Asst. Prof. Pruett Siribannapitak,
Dean of the Faculty of
Education, Chulalongkorn University
Distinguished speakers and participants
Colleagues and friends
Ladies and gentlemen

Firstly, I would like to thank the Organizing Committee of this prestigious International Conference on " In Pursuit of Excellence in Higher Education" which is being jointly organized by the Faculty of Education of Chulalongkorn University and SEAMEO RIHED. It is indeed an honor and pleasure for me to join the other speakers and share with fellow educators and university administrators the concern for achieving excellence in higher education not only in the Thailand but also in the entire ASEAN region. I would like to join the other speakers and participants in congratulating the Conference organizers for choosing such an important and timely concern as theme and objective of this Conference.

1. Excellence in Higher Education: A Concern and Tool for Competition

There is a universal acceptance of the extremely important role of higher education in the organization and functioning of a modern society. With socio-economic, political and technological

(*Keynote paper delivered at The International Conference on "In Pursuit of Excellence in Higher Education", 17 March 1998, Chulalongkorn University, Bangkok)

development becoming more and more knowledge intensive and relying increasingly on professional and managerial skills and knowledge, higher education acquires even a key role in any sustainable development program and for efficient and effective functioning of a modern society. Thus, aside from the basic university missions of teaching, research and community service, other roles and responsibilities are being expected of universities in the present and future information society.

Before the July 1997 economic crisis, most universities in the ASEAN region are experiencing a great increase in the number of students applying for admission. There was also a big number of regional students studying abroad. This is in contrast to many universities in developed countries which have experienced zero growth rate or even reduction in number of indigenous students. This is partly the reason for the very strong marketing programs foreign universities have mounted to attract students from the then economic tigers to study abroad. Indonesia used to send about 65,000 students abroad, with Malaysia about 40,000.

It is not only the upward quantitative expansion of student number that is the only trend observed in higher education during this decade. There was also a strong concern for the seemingly declining level of quality of education in some sectors because many universities could not afford the increasing cost of providing quality manpower and facilities. A number of employers are complaining of the unpreparedness of many graduates for the world of work. It was therefore felt that there is a need to examine the relevance, quality, effectiveness and efficiency of the tertiary educational system. This becomes even more imperative when there is budgetary cut from the government and reduced paying capacity of private sectors because of regional financial crunch.

One of the major driving forces of change during the last decade of this century and it will be more so during the next decade of the coming 21st century is internationalization. With the breakdown of geographical, political and ideological boundaries, there is a freer flow of people, capital and other resources as well as of information. Recent advances in telecommunication, transportation and information technologies have made all these developments possible. The individual state polity became less important as nations work together and their economies, politics and other aspects of life become interwoven into a complex international or global culture.

With internationalization, there is interdependence of nations in economy, technological development and societal transformations as evidenced for example by what we are presently experiencing in the regional economic crunch. Paradoxically, side by side with this closer cooperation, linkages and networking among nations is also greater competition. Resources, both financial and infrastructure as well as quality human power are limited and there is competition for their acquisition. With freer mobility, personal allegiance can easily transfer from one company to another or even to another country. That is why, it is only by having adequate number of qualified personnel that such pirating of qualified personnel and brain drain can be minimized. On the other hand, quality or excellent manpower can be achieved only through quality or excellent higher education and training. Thus, the new dimensions of economic and technological competition at the regional and global levels have imposed new demands and roles to institutions of higher learning in the areas of teaching, research and service.

Just as the production of goods and services have been globalized, the production of knowledge and the academic enterprises are increasingly being internationalized and are becoming highly competitive. Consequently, universities have the responsibility of

anticipating changes and finding ways to strengthen their institutional capacity for creativity and innovation. This of course would call for excellence in all aspects of the university's organization, management and performance.

Excellence in education has therefore become the concern not only of the educators, but also the employers of graduates of institutions of higher learning, of parents, politicians and government administrators and of course the students. Parents are willing to sacrifice and pay large of sums of money for their children to be able to enter such centers of excellence- institutions with highly qualified teaching staff and administrators, excellent facilities, producing graduates with distinguished skills and knowledge or highly sought after by employers, with high moral values and ethics, and the right attitudes required for success in the world of work and as model citizens of the community.

The excellent universities also have track records of research achievements. They have contributed to the advancement of knowledge and in providing solutions to many complex problems of the community and the nation. They have produced leaders who have contributed to societal transformation and improvement in the quality of life of the people as well as the promotion of universal values like democracy, human rights, peace and concern for the environment.

However, how many of our universities can claim to have most of the above mentioned features. With the ever increasing cost of running and managing a university, the government finds it more and more difficult to provide sufficient funds for their proper development into such centers of excellence. What strategies can therefore be proposed to help attain these goals?

In this paper, I will endeavor to discuss at least four such strategies, namely: (1) excellence through reengineering and reinventing; (2)excellence through quality assurance; (3) excellence through internationalization; and (4) excellence through borderless education using modern telecommunication and information technologies.

2. Strategies for Attaining Excellence in Higher Education

2.1 Excellence through Reengineering and Reinventing

Reengineering is the fundamental rethinking and the radical redesigning of an institution's organization and processes to achieve dramatic improvement in critical, contemporary measures of performance, such as cost, quality, service and speed. While reengineering is applied to an already existing institution, reinventing means the total systematic creation of a new organization through careful planning and efficient implementation with the high degree of flexibility. Thus, already existing universities can be reengineered, while new universities can be a reinvention of institutions of higher learning.

To achieve excellence in higher education, there is a need to reengineer and to reinvent key aspects that involve educational processes and products like: (1) teaching-learning methodologies; (2) the inputs to education; (3) the in-service training of the staff; (4) the structure or organization and (5) the national policies.

Learning must be student-centered and experiential rather than programmed and following rigid syllabi, venue and time schedule and methodologies of delivery. It must meet the unique needs of the student and hence must be flexible and adapted to the best means by which a particular student learns. Use of computers and modern

telecommunication as well as information technologies allow learning to take place at a pace or speed, time, location and level suitable for the learner. With the use of Internet, can access information independently and so the teacher assumes a new role of facilitator rather than of teacher in the classical sense. The professor guides, mentors and facilitates the learning process through helping the student have access to information, critically analyze the information, creatively use them in solving problems and organizing knowledge into a useful and integrated system.

It is unfortunate that in most countries in the region, there is now similar attitudes to the teaching profession , namely, "Those who can't....teach". This means that those who do not qualify for the more prestigious professions of medicine, law, engineering, business management... become teachers. This trend and attitude must be changed. The former dignity given to teaching profession must be regained. The Ministries of Education and University Affairs could provide challenging programs and incentives to attract once more dedicated men and women with brilliant minds to the teaching profession.

Teachers must be the first one to realize the importance of life-long and continuing education. With the geometric increase in the volume of information and knowledge in all academic fields, the teachers themselves must have a means of continuously up-dating knowledge and learning new skills. It is only through this continuous learning that they can retain their competitive advantage and be able to cope with their best students.

At present, there is a lot of effort in our region towards reinventing and reforming the structure of institutions of higher learning. Thailand has established a new type of state or public university which is completely autonomous as in the case of Suranaree

University of Technology. The autonomy allows the university to be more flexible and permits it to be more efficient and effective in responding to the demands and needs of the community and the students. Malaysia has a new policy of corporatization of higher education, namely running universities like private corpoprations. The Philippines has recently set up the Commission on Higher Education responsible for administration of all institutions for tertiary education.The Commission has given equal autonomy as the state universities to excellent private universities in recognition of their great contribution in upgrading the quality of higher education in the country. On the other hand, Vietnam and Lao PDR have undertaken extensive restructuring of their higher education system by amal gamating specialized colleges and single-field universities into one comprehensive national university.

At the Sukhothai Thammatirat Open University, the schools have no departments. For example, the School of Educational Studies has no departments, but it has been successful in offering many programs including Master's Degree in Education. STOU uses a course-team approach to create self-instructional materials. The team approach can easily be promoted in an environment where there is no wall separating faculty members. This is one of the key factors contributing to the success of the Open University. Thus, excellence can be achieved through up-dating of government policies governing higher education.

2.2 Excellence through Quality Assurance

One of the government polices concerning higher education that must be modified is that of quality control into quality assurance Quality control signifies the presence of an authority or ability to regulate, direct and dominate. The control is usually done by the government ministry and strategies such as inspections and

statistical process evaluation are used to maintain the quality of the services or products at a predetermined minimum level.

Quality assurance on the other hand covers the total integration and control of all elements within a particular area of operation so that none is subservient to the other, i.e. it involves total quality management. It is quality function which plays an important role in the maintenance of quality of tolerances acceptable to the customers. This system is in line with both strategic and operational quality planning and management. Thus, quality assurance uses such techniques as internal audits and surveillance to ensure that the organization is following the procedures and standards as stated in the quality manual and that the procedures when followed are effective and producing the desired results.

With increase in global competition, good quality management techniques have become more critical to the survival of all institutions and organizations including universities. International benchmarks are used for classifying universities and determining their quality standards. Competitive benchmarking would allow the measurement of the quality of the products, services and processes against the toughest-preferably world class or leading-edge universities. The ranking may be done by peer groups or private organizations based on agreed criteria like curricula, quality of students and faculty members, library and laboratory facilities, research output, budget allocation, types of programs and others as used in the recent ranking of Asian Universities by the Asiaweek magazine. The quality of graduates in terms of their employability and passing of state examinations is also one of the parameters used in the evaluation of quality of a university. Such quality assurance practices can also be the basis for accreditation of courses and the whole university. It can also catalyze internal changes in the or ganization.

2.3 Excellence through Internationalization

Internationalization of higher education could mean many things to different universities. Internationalization can be viewed in at least three perspectives: as a philosophy, as a process or practice and as a strategy. Internationalization of higher education as a philosophy means the inculcation of international values and ethos to the university students and staff. This involves promotion of universal values like democracy, respect for human rights, peace and concern for the environment. Values and ethics must be part of the education of the students and must serve as guide in their behavior and actions.

Internationalization as a process or practice means the internationalization of the curricula, namely, the inclusion of international or global issues and concerns in the curricula may it be in science, arts and the humanities. This could be done by using comparative approaches in teaching. Internationalization as a process would also include the recruitment of international students and faculty members. It also meant the promotion of at least bilingualism if not multi-lingualism in the offering of courses and in the everyday activities of the university including teaching, meetings and even social events. This permits the student's acquisition of an international ethos or perspective ("Weltanschauung")

Internationalization as a strategy for increasing competitive edge and for economic reasons. This involves sharing of resources and joint offering of international programs, exchange of faculty and students, collaborative research, sharing of facilities and other forms of joint activities.

At Suranaree University of Technology, internationalization means the integration of international dimensions and ethos in all the

missions of the universities-namely, internationalization of both undergraduate and graduate curricular offerings, promotion of faculty and student exchanges, collaborative research with foreign universities, promotion of other activities like cooperative education, university-industry linkages and cultural exchange as well as hiring of foreign faculty members and bilingualism. It is hoped that the University would be able to attract foreign students soon.. As already mentioned, such internationalization permits the international quality assurance of the programs and products of the university.

For internationalization to be successful, it would need administrative support for finances, moral and human resources, an active Center for International Relations, commitment of critical mass if not the majority of faculty members and varied international programs that the students can actively participate in.

2.4 Excellence through Borderless Education

As educators and educational administrators, it is our present mandate to provide the students with the proper global competencies-like communication skills, computer literacy, entrepreneurial and management skills, appreciation if not knowledge of science and technology and universal values and ethos. The universities must also provide graduates with specialized skills and knowledge in the various areas of their choice. Lastly, the university must provide everybody access to quality education as part of human rights. People of all ages, genders, socio-economic status, nationalities or ethnic origins, religious beliefs, color or creed should have the same educational opportunity, if **"Education for All"** is to become a reality in the region. Such global education must be a borderless education. **"Life-long Education"** and **"Higher Education for All"** are the major concepts of educational management in a globalization era.

Borderless or life-long education also means education not being confined to schools as education can now be at the place of work or even at home. It requires that people should learn how to learn and to become their own teachers in order to realize their full intellectual, emotional, artistic, political, social, and economic potentials. Life-long education must be available to all, at all places, at all times in all forms and from all sources and every individual must be assured of equal chance of success.

To implement life-long education and higher education for all would require the transformation of present educational system management and administration including planning, organization, delivery, content, assessment and accessibility

Telecommunication and information technologies are revolutionizing educational systems and making learning easier, more effective enjoyable as well as highly customized or "learner-centered". The challenge to educators is to understand better how individuals learn, whether as youths or adults. Appropriate pedagogical or andragogical concepts must be applied in the design of the required learning experiences through information technology. Thus, learning design should focus on the way people can and prefer to learn rather than on just the way learning content can be presented as in the traditional method of teaching.

In computer-based learning there is an encounter between the learner and the designer of the computer program using the computer as substitute or proxy. The learning program reflects the designer's model of learning which is a certain model of reality. It is therefore critical that consideration of appropriate models must be made in preparing coursewares.

Technology based learning is an exciting alternative to traditional educational system. The technology can be used to

provide opportunities for the learner to (1) practise a wide variety of skills, (2) obtain appropriate knowledge for comprehensive understanding and even mastery of a given subject content, (3) access, analyze, synthesize and use data and information, (4) develop creative thinking and problem solving skills, and (5) communicate effectively.

After providing the basic investment in hardware and software, it may prove an economical system as it can handle large number of students simultaneously. The same system can be used in several locations as in multi-campus universities or in consortia of universities. Fewer number of teaching and administrative staff would also be required. Its location can be centralized for easy access by both teachers and students.

Its greatest advantage is that the courseware is prepared by a team or experts in contents, educational technology and evaluation methods. Systematic evaluation methods can be integrated in the course design. In many ways the evaluation is learner controlled as one can undertake it depending on one's readiness or progress. The feedback of computer to be incorporaed into the design could enhance enjoyment and motivation in learning. The system is more flexible as students can have lessons on individual basis and they can start at various levels. The system also permits easy revision of contents and thus can always be kept up-to-date.

Lastly, the system can offer unique features like easy access to experts and voluminous mass of information through Internet or video conferencing facilities which cannot be available in traditional university set up. What would be challenging is how to choose which information is relevant in the problem solving, creative thinking or reality simulation that the student may be engaged in.

For certain social skills as well as attitudes and values acquisition, face-to-face contact with professors and other students may be preferable. Thus a dual mode of delivery system may be adopted by universities, namely, a combination of face-to-face and distance modes of education delivery systems.

The borderless education management in terms of Virtual University, must make learners and instructors develop a sense of belonging to the University, and must be useful for both students and learners to interact as if in the same classroom. The provision of this continuous system of feedback and interaction between professors and learners as well as among learners make learning "real".

There are other strategies that may be utilized for attaining academic excellence, like excellence through research, excellence through community service and linkage with the world of work as in cooperative education. However, time does not allow me to dwell on them. I am sure that in the remaining days of the Conference these would be considered also by other speakers and discussants.

3. Conclusion

I would like to conclude my presentation by making some observations and remarks on the implementation of some or all of the strategies. With limited financial and human resources as well as infrastructure available to most universities, it would be difficult to implement all the previously mentioned strategies for attaining excellence. One feasible solution is through networking or linkages. One university may have one or two strengths while another may be excellent in another aspect. It is by joining together that the synergism of linkage could be maximized.

As Founding President of the Association of Universities of Asia and the Pacific or AUAP, I can confidently say that from among the more than 170 member universities of the Association from more

than 20 countries in the region, are universities which are centers of excellence in certain fields or activities. By joining together of selected member universities with excellent international programs, Thai and other ASEAN students need not go to Europe, the Americas or Australia. They can get equally high quality international education from the consortia of national and regional universities. This would be a more cost-effective way of getting quality education among students of participating countries. In addition, one gets to know better the region and so even foster closer ties among nations of the region. The Asean University Network is an example of such a grouping.

Under the umbrella of AUAP is the APDMEN or the Asia Pacific Distance and Multimedia Education Network. It is a consortium of about 14 universities from 10 countries in the region with established or developing capabilities in distance and multimedia education delivery. Thus, through the more active use of distance education delivery mode through multimedia and interactive courseware, computer network and satellites, consortium of multi-campus virtual universities can be formed in the region for delivery of quality tertiary education. APDMEN is in the process of forming such virtual university network.

With quality assurance, accreditation and credit transfer can be possible and so mobility of students and professors can be facilitated. This is a workable solution to the problem of providing quality tertiary education specially during this time of economic crisis and at the same time promoting regional cooperation among centers of excellence.

I hope that one of the outcomes of this Conference is a dialogue among educators and university presidents from the region so that regional cooperation in higher education can be further

strengthened and we could attain excellent tertiary education for all even during times of financial difficulties.

Thank you.

The Role of Distance Open Learning (DOL) in Building Life-Long Education and Learning Society for The 21st Century

THE ROLE OF DISTANCE OPEN LEARNING (DOL) IN BUILDING LIFE-LONG EDUCATION AND LEARNING SOCIETY FOR THE 21ST CENTURY

Honorable and distinguished guests
Colleagues and friends
Ladies and gentlemen

Introduction

Firstly, I would like to express my heartfelt appreciation and gratitude to Professor Huan Qingyun, President of Shanghai TV University for the very kind invitation for me to be a speaker in this plenary session. I would also like to thank the other co-organizers specially UNESCO PROAP, the International Council for Open and Distance Education (ICDE) and the Shanghai Higher Distance Education Council (SHDEC) for their warm hospitality.

Ladies and Gentlemen:

If we are to give one major feature of the last decades of this century, one of them would be the dramatic and rapid changes in all aspects of life:political, social, economic and technological. Some of them are for the betterment of humanity, while others unfortunately have some negative impacts. For example, we witnessed the end of the cold war which gave some political stability to the world, there was unification of formerly divided countries, the independence of many states formerly under a monolithic organization, the grouping of countries into regional organizations,

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the change from centralized to market economy, the greater participation of women in socio-political affairs., extension of life expectancy, increased agricultural and industrial productivy, better means of transportation and communication, availability of cellular phones and computers and many others.

On the other hand, there was an increase in international terrorism, the weakening of the family, formation and bursting of bubble economies, upsurge in the use of drugs and the pandemic occurrence of AIDS or HIV, continued exploitation of women and children, depletion of the ozone layers, increased problem of pollution and environmental degradation, the resurgence of some communicable diseases like TB, just to mention a few.

The rate of change is expected to increase even at a faster rate in the next millennium. Humankind must therefore learn how to meet and survive the challenges brought about by these changes. One strategy is through education, an education throughout the life of the person that would equip oneself with skills, knowledge, information that could be utilized for lifelong improvement and the ability to influence the forces of change to one's advantages.

Among the important present forces of change are the results of technological advances in transportation, specially air transportation facilities, as well as the telecommunication and information technologies. As a result, people and resources can easily be moved around the globe. There is a breakdown in geographical, political and socio-economic boundaries. This freer flow or movement of people and resources has fostered internationalization and globalization. There is no longer an isolated country as all countries can be reached within minutes if not seconds by modern telecommunication facilities through fiber optic network or satellite transmission. Information can be instantaneously

transferred through electronic means . Information has therefore become a new form of capital and power. The countries that have control of information will lead the world. An information society has therefore begun and would continue to intensify in the 21st century, or even after.

The establishment of an information society will have im portant implications in the educational system of any country. In the traditional and formal school- or university-based educational system, the teacher or professor is the source of information. It is a teacher- or professor-centered form of education.

However, with the geometric increase in information, the professor or the school can no longer be the only source of information. The student must learn how to search the information himself. As expressed in many new educational paradigms, the student must learn to learn independently throughout his life.

Most of the past and to a great extent even the present school-based education is still passive. The teacher teaches and the student, are expected to learn. Although learning could be highly motivated with some students, success in examination and competition is usually the major motivational force. Getting more A's does not necessarily mean brighter students, but just being exam smart.

This type of culture and attitude will not be appropriate and useful in a learning and information society. An information society must also be a learning society. Such society with a learning culture would place high values on education and training and would also provide a favorable environment for the acceptance of the philosophy of a lifelong education and learning.

These are some of the ideas I would like to pursue further in this paper. Therefore, I intend to divide my presentation into five major parts: namely, (1) the role of lifelong education and learning in an information and learning society of the 21st century; (2) some strategies for attaining and providing lifelong education and learning, specially (3) the role of open and distance learning in lifelong education, (4) the application of modern technologies in providing such mode of education delivery and finally (5) some strategies for attaining some modalities in the Asia-Pacific region, specially in Southeast Asia.

2. Lifelong Education and Learning

2.1 Definitions

Lifelong education has been defined as a set of organizational administrative and methodogical and procedural measures (Knapper and Cropley, 1986), while lieflong learning is considered as the habit of continuously learning throughout life, as a mode of behaviour (Ironside,1989). Lifelong education is therefore a set of extrinsic, supply-oriented factors which identifies the needs and provide means; while lifelong learning is intrinsic, demand oriented and dependent upon learner motivation and ability. In this paper, however, there will be less distinction between lifelong education and lifelong learning and thus the two will be used loosely as interchangeable concepts.

With the very high rate of attainment of the goals of the Jomtien Conference on Education for all in almost all countries of the world, the majority of the youths can receive compulsory basic education of 6 to 12 years which is preparatory for either vocational or professional education. This may be obtained whether through school-based formal schemes or community-based non-formal modes. Many countries now have also provisions for adult literacy education and education for the handicapped and other marginalized groups.

However, most of the education for all programs are still the traditional formal or school-based education which as mentioned earlier is very teacher-centered. The teacher confers knowledge and the students absorb what is taught. Unfortunately, teaching does not always lead to learning. The system is usually bureaucratic, rigid or fixed and is therefore inert and resistant to change. Students have access to this type of education at prescribed age or stage of their development, delivered in a definite location and at a definite time, following specific curricula mandated by a ministry of education, all done in the name of administrative efficiency, if not expediency. I usually refer to this type of education as limited education

However, in a learning and information society, education can no longer be limited to a certain stage or development, nor to a single mode of delivery. As described by Jarvis (1995), in a learning society, education is learner-based, with no access barrier and providing multi-faceted lifelong opportunities. It is a society organized in such a manner that all learning opportunities are available to everyone on a full- or part-time basis. Thus, a true learning society is one where the right to learn is protected and everyone can continue learning for whatever reasons they choose, by various means, with abundant resources and complete flexibility.

In a learning society therefore, education must be open. It must be accessible to all individuals of any age, gender, religion, socio-economic status and previous training. It must be available at all times in their lives so that new learning needs could be met whenever and wherever they arise.

In a learning society, there will be an integration of education for youths and adults, forming a single continuum. There will also be blurring between boundaries of differences between formal, non-formal and informal education specially with the application of

multimedia and interactive coursewares in face-to-face and distance mode of education deliveries or in virtual campuses.

In a learning society, teachers would have a new role as facilitator, helping individuals identify their learning needs and give advice on sources of information and how information can be best utilized in meeting the learner's needs. Such learning must be flexible, creative and responsive. This type of education is an open education and is the appropriate means for attaining lifelong education and learning.

2.2 Values of Lifelong Education and Learning

With the fast changes in the various aspects of human life in the present society, there is need for lifelong education that would be required for both professional and vocational growth as well as personal satisfaction. Lifelong education and learning in a learning society is pursued for self-improvement and fulfillment of one's potential. The improvement in the quality of the workforce would in turn lead to better quality products and services that would enhance competitive advantage in a global economy. In a better informed society, prejudices and intolerances would be less and therefore social quality of life in a community would also be greatly enriched..

a. Enhancement of competitive advantage in global economy

In a globalized economy, there is need for inter-disciplinary and multi-disciplinary as well as multi-cultural workteam. Graduates of universities are therefore expected to have global competencies, values and attitudes. The graduates must have sufficient fundamental knowledge in the chosen specialized field. He or she must also have acquired some degree of multi-disciplinary skills and a proactive mindset like the ability to seek, process and apply information. The

graduate must therefore be computer and information technology literate. A global worker must also have some high lvel of generic skills like that of communication abilities, namely the ability to listen, speak and write in preferably two or more languages; to work as member of a team and thus have good interpersnal and networking skills. The person must be innovative, critical and must possess leadership and managerial skills. At the same time, the graduate must have a strong sense of social responsibility and of high moral integrity. The global citizen must foster international values and ethos like democracy, human rights, peace and concern for environment. The person must also be tolerant and appreciative of cultural diversity. These multiple competencies cannot all be acquired during the formal education years, but at different levels throughout life. The goal of lifelong learning and education is therefore of fulfillment, the actualization of ones full potentials.

In an information society and globalized economy that is characterized by advances in research as well as application of new technologies and transfer of information in the world of work, there is great competitive advantage with a workplace that incorporates a vision, strategy as well as structure of continuous learning. The workplace culture or environment must promote the acquisition of new knowledge through both formal and informal exposure to new information, ideas and experiences. Workers would require recurrent education and learning for maintenance of quality of work and for adjusting to new demands. These improvements in workforce would in turn lead to better quality products and services that would provide impetus to greater economic development of the whole society.

b. For personal development and enrichment

With the great improvement in medical services and general quality of life, the average human life span has greatly increased. Workers who retire at 60 or 65 are still healthy and could still contribute ac-

tively to the society's economy and development. They may, however, require some retraining in order to have a new occupation. Some of the retired workers also have more time to satisfy their own personal needs for education just for leisure. Whether for a new job or just for pleasure, the aging population would require opportunities for adult or continuing education.

At a certain stage of a woman's life, preference may be given to establishing a family and raising children. However, when the children can be more independent, many women would like to return to work. There is therefore a felt need for more women to enter into continuing education programs in order for up-dating or gaining new skills. They must therefore have access to lifelong learning opportunities.

c. For resolving social and cultural issues

Lifelong and continuing education could also be a tool for resolving social and cultural issues. In a better informed society, prejudices and intolerances would be less. There would therefore be better understanding and peace in such a community. Lifelong education thus promotes solution of social and psychological problems resulting from a multicultural society or from stresses due to change. Lifelong education can therefore promote harmony, peace and happiness in a community life.

2.3 Requirements for Lifelong Education and Learning

The implementation of a successful lifelong education and learning would require effective planning, efficient organizational structure, trained humanpower and mobilization of resources. Some of these and other requirements of a successful lifelong education and learning will be discussed in this sub-section.

a. Recognition and application of andragogical concepts and practices.

Most clients of continuing and lifelong education are adults. Their wealth of experience must be considered in planning lifelong education programs. Adults would participate more intently in the learning process as they are self-motivated and goal oriented. Consideration of constraints like time and place for study must be given enough attention in the preparation of lifelong education programs. As adults, they may have work or family commitments which must be considered. Thus, a certain degree of flexibility in the programming must be provided.

The process must not only provide the needed knowledge and skills but, must motivate and empower the learner and nurture self-direction so that the process of learning is autonomous and continuous. Learning is not only receiving information but, making sense of it and thus being able to use and own it. The learner has to be an active participant and not a mere recipient or spectator. The students must take responsibility for their own learning. Higher order process skills would be required of learners to enable them to synthesize, evaluate, adapt and apply the information or knowledge and skills acquired in the constantly changing world.

b. Synergistic interaction between all stakeholders and participants

For lifelong learning to occur, there must be the synergistic interaction between the learner, the educational institutions and other providers of knowledge, the government, the private sectors and industries that serve as employers and the members of the community at large.

Lifelong learning would require a well-designed infrastructure supportive of the growth of a strong learning society. This is usually the responsibility of the public sector or the government, both local and national. The government aside from providing funds must also promulgate policies supportive of quality lifelong education and learning. The private sector, i.e. the business and industrial enterprises that serve as employers, the NGOs and the whole community should also contribute to the provision of lifelong learning facilities and opportunities. They could help in providing funds as well as in motivating their workers and providing the necessary opportunities and support. The enhancement of learning culture in an information society would therefore need collaboration by all stakeholders and participants in the learning enterprise not only nationally but internationally.

c. Provision of appropriate hardware, software and humanware

. One modern feature of lifelong education and learning would be the use of modern telecommunication and information technologies. The educational institutions would thus have new roles and responsibilities in a learning and information society They should lead in the acquisition of the needed hardware and the provision of the complementary software and humanware. The hardware consists of the facilities and technologies that would be required in the innovative delivery systems. The educational institutions must also be responsible for the production of the needed interactive multimedia coursewares which must be learner-centered and must therefore be adapted to different cognitive processes and levels of learners.

Highly qualified and trained humanware is also an important requirement of successful lifelong training. No matter how advanced the technology is, it will still be a human being who will design the inter- and multidisciplinary as well as cross-cultural instructional

packages. Since the goal of lifelong learning modules is no longer information transfer, it is not necessary to pack the curriculum with as much content as possible, but, rather it must allow opportunity for reflective thinking and in-depth learning.

As previously mentioned, in lifelong learning situations, the teachers are more of facilitators, giving support and encouragement, listening to learners, providing access to certain tools and resources as well as maintaining a conducive learning environment. The teacher has still to be a content specialist in order to be able to help in the analysis of information and facilitate their utilization in critical thinking or problem solving activities of the students.

2.4 Quality, Relevance, Accessibility and Affordability

The learning modules for lifelong education must be of equal quality if not better than the instructional materials received in the traditional delivery systems. The modules must be work-based and competence-based. The knowledge and skills acquired must be applicable to problem solving and critical thinking or to the improvement of performance in the workplace.

As previously mentioned, there must be no barriers to the access of educational opportunities. It must be available to everybody, any time and anywhere. There must be flexible training schedules and venues.

The fees for the courses must be financially affordable by all or a scheme of scholarship or support must be made available through the government or the employer. This is specially true for the marginalized groups.

2.5 Strategies for Lifelong Learning

a. Revision of education institution roles and responsibilities

In a lifelong learning society, the universities would require revision of roles and responsibilities. Aside from the traditional missions of providing formal degree courses and undertaking research, the universities must enhance their community service and include other stakeholders in their mission. They must embrace the lifelong education paradigm and provide services to both youths and adults through both formal and informal mode of education delivery of face-to-face and or distance mode.

b. Optimization of use of technologies

Technology based learning is an exciting alternative to traditional educational system. Technology can be applied to provide opportunities for the learner to (1) practise a wide variety of skills, (2) obtain appropriate knowledge for comprehensive understanding and even mastery of a given subject content, (3) access, analyze, synthesize and use data and information, (4) develop creative thinking and problem solving skills through modelling and simulations, and (5) to communicate effectively.

Recent developments in digital technologies have greatly improved the speed, the volume and quality of information or data that can be transmitted through satellite communications and fiber optics. The continued reduction in cost of personal computers permits learners to link directly to data sources. The Internet has brought to the reach of learners databases that far exceed what any single library can provide such mass of reference materials.. It also permits direct contact with experts all over the world and with co-learners as well.

Interactive multimedia coursewares can now be produced by teachers at lower cost and shorter period of time after some training. Their use has made learning more interesting, meaningful and enjoyable. These technologies would permit on-line synchronous distance education. Basic, multiple station computer sites would permit networking among the various members of the learning society. Thus, lifelong education programs can be easily adaptable to the learners' needs, flexible and economically available to all.

c. Operationalization of articulation and credit transfer

Academic diplomas and certificates are still very much valued in all societies in a workplace. Thus, the provisions of credit for experiential learning in workplaces like industries and the recognition of non-credit programs in formal classrooms as in extramural courses would provide additional incentives for adults to enroll in continuing or lifelong education courses. Such articulation and credit transfers would allow translation into a degree or certificate credit of professional upgrading documented at any point in life. Such recognition by governments and universities of the various learning programs would have motivational effects on the learners. A computerized academic credit banking for every person can be established in a lifelong learning center. It is this learning or educational portfolio that could be evaluated in job placement and promotion.

d. Use of alternative sources of information and education

In an electronically-based information society, educational institutions are no longer the sole providers of information and education. The private sector, then will crowd the marketplace on a broader, regional and perhaps even global scale, winning clients from government-run educational institutions.

The private businesses may include specialized training centers or research laboratories, professional organizations, multinational companies, NGOs or even individual entrepreneurs. They may be run by consultancy groups or think tanks from government institutions or universities. Their sites of operations are linked by modern telecommunication facilities like faxes, emails, mobile phones or Internet. Work teams are usually ad hoc depending upon specific topic or area of training and length of demand. They are therefore more flexible and can adopt multimodal delivery systems.

Such businesses are generating information and knowledge as well as producing performative products which can be packaged and sold directly to paying customers. They produce just in time assemblages or continuously improve products in order to remain competitive. They are very much consumer or user-oriented and demand-driven. Quality control is determined by the degree of success or failure of the marketability of the courses or knowledge sold, effectiveness of results or solutions proposed and satisfaction of the clients.

e. Distance and open learning

One strategy to provide lifelong education needs of a greater number of people at reasonable cost is by distance and open learning. Open learning is a borderless form of education in that there are no limitations regarding admission to its programs.. All citizens of a learning society can access distance and open modes of education. Open universities are no longer just to obtain a first degree, but to provide education for all in various fields and in various forms, at any time and anywhere.

Distance education is teaching and learning process in which a significant proportion of the teaching is conducted by someone remote or removed in space and time from the learner. It usually involves the use of mixed media reinforced by print materials and some two-way communication between the tutor and learner. It overcomes the constraints of specified location and timing of study which characterize face-to-face teaching.

Distance education can be considered as an industrialized form of teaching based on objetivized, rationalized technologically produced interaction between the institution and the learner. There is a more or less an industry-like system of material production, stocking, and distribution as well as monitoring and evaluation.

As previously mentioned, the traditional institution-based education is a limited type of education. The institution limits or control who can have access, when, where and how the education will be delivered and assessed. On the other hand, distance and open learning are expanded education modes as they seek to increase educational opportunities in the greatest number possible. They are learner-centered and there are no barriers to access, and with more flexible scheduling of time and venue of learning .

Distance education need not be limited to formal or degree education but could extend to non-formal education. It can also cover all levels from basic to professional education and adult or continuing education.

Thus, with lifelong education in a learning and information society, education is considered as an integrated process of learning throughout the lifespan of the individual. It is a continuum of education from the creche or crib to old age. There is a blurring of boundaries between formal, non-formal and informal education

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