Borderless Education
Challenges and Opportunities for Southeast Asian Universities
ASAIHL 2008

ASAIHL
International Conference 2008

Chalermprakiat Building
Sukhothai Thammathirat Open University Nonthaburi, Thailand

7 - 10 April 2008

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Sub-theme 2: Educational Programmes and Management: Off-shore and Outsource

Group A
Group B

Sub-theme 3: Quality Assurance and Recognition of Qualification
Group A
Group B

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Sub-theme 1: Universities at Crossroads: Changing Education Context
Group A
Group B

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Group A
Group B

Sponsors **450**

On behalf of Sukhothai Thammathirat Open University, it is indeed a great pleasure and honor for us to host the ASAIHL International Conference 2008 to commemorate the University's 30th anniversary under the timely theme "*Borderless Education: Challenges and Opportunities for Southeast Asian Universities"*. This conference promises to be filled with many intellectually stimulating discussions and opportunities for the development of warm friendship and I would like to extend my welcome to you all to attend this assembly, to be held in Nonthaburi from 7-10 April 2008.

The theme for this conference, "*Borderless Education: Challenges and Opportunities for Southeast Asian Universities"*, is designed to address the current issues which affect all academic institutions in this region, due to rapid changing information and knowledge-based society. We hope that the ASAIHL International Conference 2008 will be an ideal session for exchange of ideas and productive information leading to future development.

The success of this conference would not be possible, however, without your active participation. We would also invite you to come to our campus to enrich your experience, exchange new ideas, share best practices, and develop potential partnerships.

I wish you all the best.

Sincerely,

Prof. Pratya Vesarach, Ph.D.
Chairman, the ASAIHL Conference Organizing Committee
President of Sukhothai Thammathirat Open University

I would like to extend my warmest greetings to all participants in the ASAIHL Conference on "Borderless Education: Challenges and Opportunities for Southeast Asian Universities" during 7-10 April 2008.

Borderless education indicates the development which would cross or have the potential to cross the traditional borders of higher education. Universities in our region are facing immense challenges due to a burgeoning population and increased competitiveness in a global market and I am pleased that the ASAIHL National Council in Thailand in co-operation with Sukhothai Thammathirat Open University (STOU) decided to host the 2008 ASAIHL Conference to coincide with the 30th Anniversary Celebration of STOU.

The Conference will cover various topics including quality assurance and recognition of qualifications and management of off-shore programs as well as innovative technologies and learning resources of E-learning. I am positive that participants will have a better insight and understanding of the future challenges and be prepared to develop a global-oriented strategic response aligned to the educational vision and mission and objectives of member universities.

Allow me to extend my congratulations to the organizing committee and everyone behind these collective efforts and all those who made this Conference a successful and rewarding experience.

Dr. Ninnat Olanvoravuth
Secretary-General
Association of Southeast Asian Institutions of Higher Learning (ASAIHL)

Conference Programme

Day 1: Monday, 7 April 2008		
Time	**Programme**	**Venue**
17.00 – 19.00	ASAIHL Administrative Board Meeting	Sukhothai Thammathirat Open University
19.00	Dinner for Administrative Board	

Day 2: Tuesday, 8 April 2008		
Time	**Programme**	**Venue**
08.00 – 09.00	Registration	1st floor, Chalermprakiat Building
09.00 – 10.00	Opening Ceremony - Welcoming Address by President of STOU (Prof. Dr. Pratya Vesarach) - Welcoming Address by President of ASAIHL (Prof. Dato' Dzulkifli Abdul Razak, Vice-Chancellor of University Sains Malaysia and Chairman of the Malaysian Vice-Chancellors' Committee) - Opening Address and Keynote Speech on Borderless Education: Changes and Opportunities for Southeast Asian Universities (Prof. Dr. Wichit Srisa-an, Chairman of STOU University Council and Founding President of STOU)	Main Hall, 2nd floor, Chalermprakiat Building
10.00 – 10.30	**Refreshments**	Foyer
10.30 – 12.00	**Plenary Session I** - Realising Human Potential: Towards assuring education as a right for all **Speaker:** *Prof. Dr. William John Lovegrove,* Vice-Chancellor and President of the University of Southern Queensland, Australia - E-learning and borderless education: Opportunities for ASAIHL **Speaker:** *Prof. Dr. John A. Spinks, Senior* Advisor to the Vice-Chancellor of the University of Hong Kong and Executive Director of U21Global ***Moderator:*** Assoc. Prof. Dr. Somporn Puttapithakporn	Main Hall, 2nd floor, Chalermprakiat Building
12.00 – 13.30	**Lunch**	Dining Room, 1st floor
13.30 – 15.00	**Plenary Session II** - Breaking Down Boundaries Through Effective Networking and Exchange of Institutional Experiences **Speaker:** *Prof. Tan Sri Datuk Dr. Anuwar Ali,* Vice-Chancellor and President of Open University Malaysia - Three-year experience of the International Cyber University for Health in Asia-Pacific **Speaker:** *Prof. Dr. Young Moon Chae,* President of Cyber University, Korea ***Moderator:*** Assoc. Prof. Dr. Saritpong Limpisathian	Main Hall, 2nd floor, Chalermprakiat Building

15.00 – 15.30	**Refreshments**	Foyer

Presentation of Country Reports (15.30 – 17.30)

Chair: Assoc. Prof. Dr. Patamaporn Yenbamrung
Venue: Main Hall, 2nd floor, Chalermprakiat Building

No	Country	Presenter	Title	Institute
1.	**Brunei**	Dr. Anny Arbi	Changes and Development in Universiti Brunei Darussalam: Future Direction?	Universiti Brunei Darussalam
2.	**Cambodia**	Ms. Chhim Rumuny	Quality Assurance Standard Requirements in Higher Education	International University
3.	**Hong Kong**	Mr. Thomas Wu Wai-on	A Success Story – Student Exchanges in Hong Kong 2002-2007	The Chinese University of Hong Kong
4.	**Indonesia**	Mr. Deni Friawan	Recent Development of Higher Education in Indonesia: Issues and Challenges	University of Indonesia
5.	**Malaysia**	Prof. Rozhan M. Idrus	Demystifying the Challenges of e-learning: A Malaysian Analysis and Proposal	Universiti Sains Malaysia
6.	**The Philippines**	Engr. Elnora Lucero (presenting on behalf of Ms. Ma. Teodora E. Gutierrez)	Online Learners' Interaction and Characteristics in Relation to Achievement and Satisfaction	Technological Institute of the Philippines
7.	**Sri Lanka**	Prof. Jayantha Wijeyaratne	Borderless Education: Challenges and Opportunities for Sri Lankan Universities	University of Kelaniya
8.	**Thailand**	Asst. Prof. Dr. Chutima Thamraksa	The Borderless World: Is It Time to Eliminate University Boundaries in Thailand?	Bangkok University
9.	**Vietnam**	Dr. Vu Viet Binh	Vietnam National University, Hanoi Under the Impacts of Borderless Education	Vietnam National University

18.00 – 21.00	**Reception Dinner & Cultural Show**	Aneknitat Building

Day 3: Wednesday, 9 April 2008

Parallel Session I (09.00 – 12.00)

Sub-theme 2: Educational Programmes and Management: Off-shore and Outsource	**Sub-theme 3:** Quality Assurance and Recognition of Qualification
Group A	**Group A**
Venue: Room 2003, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Dr. Wannapa Ponoy	**Venue:** Room 2018, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Dr. Sasikarn Tawisuwan
1. Toward a Collaborative University System, Government Roles: A Case of Indonesia **Dr. Loeky Haryanto** Hasanuddin University, Indonesia	1. The Cultural Communication of Instructor in Classroom **Assoc. Prof. Dr. Porntip Desomchok** Sukhothai Thammathirat Open University, Thailand
2. Off-shore Outsourcing in Wawasan Open University **Ms. Grace Lau Pee Hoay** Wawasan Open University, Malaysia	2. Policies and Practices of Quality Assurance and Qualification Recognition in the University of the East-Philippines **Dr. Edgardo Gonzaga** University of the East, The Philippines
3. Towards Unified Communication: The Polytechnic University of the Philippines (PUP) Inter-Campus Connectivity **Prof. Dr. Pastor B. Malaborbor** Polytechnic University of the Philippines, The Philippines	3. Tracking Institutional Performance Using Importance-Satisfaction Analysis **Prof. Ramli Bahroom** Open University Malaysia, Malaysia
4. Hong Kong as a Regional Educational Hub **Dr. John Cribbin** The University of Hong Kong, Hong Kong	4. Preventing Dropping-out Among the First Year Students of Sukhothai Thammathirat Open University **Prof. Dr. Sumalee Sungsri** Sukhothai Thammathirat Open University, Thailand
5. The Forming of Attitude and Behavior Based on Information Technology Through Curriculum of Information System within Education : A Case Study in the Subject of Curriculum Development at Master's Degree, Indonesia University of Education **Dr. Hansiswany Kamarga** Indonesia University of Education, Indonesia	5. National Defence University Malaysia Riding on Outcome-Based Education: The Case of Civil Engineering Programme **Lt. Kol. Ir. Dr. Norazman M. Nor** Universiti Pertahanan Nasional Malaysia, Malaysia
6. Challenges and Opportunities for Thai Universities in a Changing Educational Environment: A case study "Searching for Buffalo Tracks in Thung Ruang Thong Village to Create Profit to Thai Rice through a Sustainable Sufficiency Economy" **Ms. Damratsiri Silpawatananun** Payap University, Thailand	6. Development of English Test via Electronic Media in a Distance Learning System **Assoc. Prof. Dr. Alisa Vanijdee** Sukhothai Thammathirat Open University, Thailand

Sub-theme 2: Educational Programmes and Management: Off-shore and Outsource	**Sub-theme 3:** Quality Assurance and Recognition of Qualification
Group B	**Group B**
Venue: Room 2003, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Sunee Silphiphat	**Venue:** Room 2018, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Dr. Ranee Esichaikul
7. Webblog and University Learning: Experience from Managing Class of Marketing Subject Using Webblog **Mr. Yudi Sutarso** STIE Perbanas Surabaya, Indonesia	7. Challenges and Opportunities for Universities at Crossroads: Creating and Implementing the Innovative Integrated Management System (IIMS) into Sustainable Food Industry Purposing to Level Up the Country's Competitiveness. **Assoc. Prof. Dr. Prasert Suttiprasit** Sukhothai Thammathirat Open University, Thailand
8. A Proposed Model for the GMSVU Pilot Project **Assoc. Prof. Dr. Vipa Jaroenpuntaruk** Sukhothai Thammathirat Open University, Thailand	8. The Challenge of Research Universities: A SWOT Analysis **Prof. Datin Dr. Rohaty Mohd Majzub** Universiti Kebangssan Malaysia, Malaysia
9. Communication, Leadership and Teamwork Skills as Core Competencies Among Higher Education Students **Prof. Datin Dr. Siti Rahayah Ariffin** Universiti Kebangssan Malaysia, Malaysia	9. Media and Risk Perception amongst Thai People during the Era of the Coup **Pol. Lt. Col. Asst. Prof. Dr. Siriwan Anantho** Sukhothai Thammathirat Open University, Thailand
10. The Collaboration between STOU and ICRISAT through Global Distance Education for Developing Graduate Program in Agro-ecology **Assoc. Prof. Dr. Chayaporn Wattanasiri** Sukhothai Thammathirat Open University, Thailand	10. The Mobile Teaching and Learning Technology for the Undergraduate Students **Dr. Norazah Mohd. Nordin** Universiti Kebangssan Malaysia, Malaysia
11. Accommodating Different Learning Style: The Universiti Kebangssan Malaysia Experience **Dr. Ruslin Amir** Universiti Kebangssan Malaysia, Malaysia	11. English for Mobile A Model for Learning English on Mobile Devices **Mr. Firouz B. Anaraki** Assumption University, Thailand
12. The Medium-of-Instruction Controversy: Bilingual Education and the University **Prof. Leo Chan Tak-hung** Lingnan University, Hong Kong	

12.00 – 13.30	**Lunch**	Dinning Room, 1st floor, Chalermprakiat Building

Parallel Session II (13.30 – 16.30)

Sub-theme 1: Universities at Crossroads: Changing Education Context	**Sub-theme 4:** Blended and E-learning: Innovative Technologies and Learning Resources
Group A	**Group A**
Venue: Room 2003, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Dr. Chittinun Tejagupta	**Venue:** Room 2018, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Dr. Vipa Jaroenpuntaruk
1. Institutional Readiness for Cross Border Education: A Case of Indonesia University of Education **Dr. Didi Sukyadi** Indonesia University of Education, Indonesia	1. Either Blended or Single Media: Which Suits Distance Students? **Assoc. Prof. Dr. Sakorn Boondao** Sukhothai Thammathirat Open University, Thailand
2. Ensuring Continuous Academic Mobility in a Borderless World: The Open University Malaysia Experience **Assoc. Prof. Dr. Rahmah Hashim** Open University Malaysia, Malaysia	2. Performance-based Blended Learning Delivery for Online Curriculums in Thai Universities **Dr. Santithorn Bunchua** Assumption University, Thailand
3. Borderless Education Best Practices in Southeast Asia: The Key to Regional Prosperity **Dr. Victor M. Arguelles** University of Batangas, The Philippines	3. Blended and E-Learning: Instructional Resources for Borderless Education **Dr. Lourdes D. Sabile** University of Manila, The Philippines
4. Learning Pedagogy in the Age of Globalisation: A Malay Experience **Mr. Jyh Wee Sew** National University of Singapore, Singapore	4. Analysis of Blended Learning Strategies for Technical Course in the Open and Distance Learning Environment **Mrs. Sharifah Rosfashida** Open University Malaysia, Malaysia
5. Borderless Higher Education: Need to be Reviewed and Revised for the Betterment of Southeast Asian People **Prof. Dr. Paitoon Sinlarat** Dhurakij Pundit University, Thailand	5. E-learning: Concepts and Issues for Higher Education **Asst. Prof. Dr. Daniel Churchill** The University of Hong Kong, Hong Kong
6. Guru vs. Google: Changing Face of Higher Education in Thailand **Mr. Kuldeep Nagi** Assumption University, Thailand	6. Knowledge Acquisition of Thai Metal Forming Die Designer Leader **Mr. Saneh Boonramphai** Rajamangala University of Technology Isan, Thailand

Sub-theme 1: Universities at Crossroads: Changing Education Context	**Sub-theme 4:** Blended and E-learning: Innovative Technologies and Learning Resources
Group B	**Group B**
Venue: Room 2003, 2nd floor, Chalermprakiat Building **Chair:** Assoc. Prof. Dr. Chayaporn Wattanasiri	**Venue:** Room 2018, 2nd floor, Chalermprakiat Building **Chair:** Prof. Dr. Sumalee Sungsri
7. The Challenge of Cultural Divergence to Economic Convergence **Asst. Prof. Brian Lawrence** Assumption University, Thailand	7. Tutorial via the Internet on the Dietetics Course **Assoc. Prof. Dr. Vasina Chandrasiri** Sukhothai Thammathirat Open University, Thailand
8. Accessibility and Opportunities in Tertiary Education: Borderless and "Pedalaman" **Assoc. Prof. Dr. Alias Mohd Yatim** Open University Malaysia, Malaysia	8. Industry-Based Technologies as Blended Learning Resources: An Application of Competency-based Programs Leading to International Certification Geared Towards an Outcome-driven Curricula in Business and Information Technology (IT) Education of La Consolacion College Manila **Dr. Ronald M. Pastrana & Mr. Arnel C. Fajardo** La Consolacion College Manila, The Philippines
9. The Challenges and Implications of Globalization in the Field of Higher Education: A Sociological Treatise **Asst. Prof. Noel R. Rafer** Bicol University, The Philippines	10. Exploring the Use of a Constructivist E-learning System in a Blended Learning Environment **Dr. Thanakorn Wangpipatwong** Bangkok University, Thailand
10. Borderless Education: A Challenge for Whom **Assoc. Prof. Dr. Phasina Tangchuang** Chiang Mai University, Thailand	11. Ethical Considerations of Online News **Assoc. Prof. Chantana Thongprayoon** Sukhothai Thammathirat Open University, Thailand
11. Localization and Global Networking: Dealing with Borderless Education **Ms. Ika Rini Indrawati** Universitas Gadjah Mada, Indonesia	12. Perspectives on Blended Learning in Malaysia Higher Learning Institutions: Needs, Readiness and Future Challenges **Ms. Ling Siew Eng** Universiti Teknologi MARA Sarawak, Malaysia
12. Industry-Academe Linkage in Higher Learning: Symbiosis for Globalization **Assoc. Prof. Rumel V. Atienza** De La Salle University, The Philippines	

16.30 – 17.30	Closing Ceremony - Wrap-up and closing by Assoc. Prof. Dr. Panee Sitakalin, Vice-President for Network Development and International Affairs, STOU	Room 2018, 2nd floor, Chalermprakiat Building

18.00 – 20.30	**Farewell Party & Cultural Show**	Phitayapat Building

Day 4: Thursday, 10 April 2008

08.00 – 18.00	**Post-Conference Tour (*Damnoen Saduak Floating Market & Shopping*)**

Conference Theme

Main Theme

- **Borderless Education:** Challenges and Opportunities for Southeast Asian Universities

Sub-themes

- Universities at Crossroads: Changing Education Context
- Outsource Education Management
- Imported and Exported Programmes
- Quality Assurance and Recognition of Qualification
- Blended and E-learning: Innovative Technologies and Learning Resources

Prof. Dr. Wichit Srisa-an

Born in Chachoengsoa province in 1934, Prof. Dr.Wichit was educated first at schools in his hometown and then at Suan Kularb College in Bangkok. He went on to study at Chulalongkorn University and graduated with Bachelor degrees from the Faculties of Arts and Education. As a Fulbright Scholar, Prof. Dr. Wichit earned a Master's Degree and Ph.D in Educational Administration in 1967 from the University of Minnesota, U.S.A. In recognition for his academic achievements and contributions, he subsequently received the Outstanding Achievement Award from the University and became the Founder of its Thai Student Association.

Prof. Dr.Wichit gained his first work experience in the field of Education at the Faculty of Education, Chulalongkorn University in 1961. In 1973, he became the Vice Rector for Planning and Development. He was appointed Deputy Permanent Secretary, Ministry of University Affairs in 1974, a position he held until 1987. During that time he also became the Founding President of the first Open University in Thailand and Southeast Asia, Sukhothai Thammathirat Open University. From 1987-1994 he held the position of Permanent Secretary of the same Ministry and was Acting Secretary-General of the Civil Service Commission for a one year term from 1991-1992 during that period.

Since then, Prof. Dr. Wichit has become Founding Rector of two autonomous universities in Thailand namely, Suranaree University of Technology, the first autonomous public university in the northeast of Thailand and Walailak University in the south of Thailand. He is currently Executive Vice President of the Chulabhorn Research Institute and also chairs or is on the board of a number of public and private university councils in Thailand.

For more than 30 years, Dr. Wichit has dedicated himself to the development of Thai education. He has been actively involved in Thailand's educational policy and administration and has held several key positions within the education system. From 1991-1992, he was a Member of the National Legislative Assembly and Chairman of the Committee on Education and Culture of the National Legislative Assembly. As an expert in educational administration, Prof. Dr. Wichit Srisa-an introduced a system for educational planning and research for higher education institutes. Moreover, he played a crucial role in the drafting of the National Education Act of 1999 and served as Chairman of the Executive Committee with the Office of Education Reform. n October 2006, Prof. Dr. Wichit Srisa-an, a prominent figure in the education arena of Thailand, was appointed Minister of Education.

Among his many published works for domestic and international journals are 5 research works on higher education, 10 education textbooks and approximately 60 articles on educational issues.

In accordance with his active role in promoting international cooperation in education, Prof. Dr. Wichit has served as Founding President of the Asian Association of Open Universities and the Association of Universities of Asia and the Pacific, Head of the International Council on Education for Teaching and Chairman of the UNESCO Consortium on Innovations in Higher Education for Asia and the Pacific and the first Chairman of the Governing Board of SEAMEO RIHED.

Prof. Dr. William J. Lovegrove

Professor William or 'Bill' Lovegrove has been Vice-Chancellor and President of the University of Southern Queensland (USQ) in October 2003.

Since his appointment, Professor Lovegrove has strengthened the University's reputation as an international leader in e-learning and distance education. He has also developed a strong corporate direction, increased alliances with communities and industry and developed a more innovative approach to research and teaching.

Before taking up this position he previously held senior positions at Griffith University and the University of Wollongong.

Professor Lovegrove's qualifications include a Bachelor of Arts, First Class Honours and Doctorate in Psychology through the University of Queensland and completion of an Advanced Executive Program from the Kellogg School of Business at North Western University in the United States.

Outside the world of academia, Professor Lovegrove is equally talented, keeping superbly fit with down-hill skiing and competing in triathlons.

Prof. Dr. John A. Spinks

Prof. Dr. John A. Spinks is currently Senior Advisor to the Vice-Chancellor at The University of Hong Kong, recently ranked as one of the top 20 universities in the world. He has received teaching and research awards from the University. Most of his 90+ papers in international journals and books have centred on human cognition but he has also published studies in educational assessment and prediction, and has been involved in Hong Kong Government research projects on assessment of creativity and selection of gifted/talented children.

His roles in The University of Hong Kong have included being Pro-Vice-Chancellor, with responsibilities for teaching and learning, from 1999 to 2004. He had previously taken up leadership positions in student affairs, the Faculty of Social Sciences and the Department of Psychology, and has been directing undergraduate admissions to HKU for over ten years. He was awarded an Honorary Fellowship by the Open University of Hong Kong in 2007. He currently sits on the councils or advisory boards of the Open University of Hong Kong, Quest University Canada, and Raffles University Singapore. His other positions outside the University include having been President of the Hong Kong Psychological Society and Chairman of JUPAS, the Joint University Programmes Admissions Scheme, which is a post-qualification application and selection system for students to enter all the government-funded universities in Hong Kong.

His experience in international affairs, particularly in South-East Asia is extensive. Within Hong Kong, Professor Spinks is currently Chair of the Internationalization Subcommittee of the Heads of Universities Committee of Hong Kong, overseeing the development of international student recruitment for the Hong Kong universities. He has been invited to numerous meetings of South-East Asian presidents and universities, as well as to the Universitas21 meetings of Presidents and Managers, and frequently works in Mainland China, helping to set up collaborative arrangements and promoting student recruitment. HKU currently attracts over 11,000 applicants from Mainland China for the 250 places made available annually.

In the field of quality assurance, Professor Spinks was Coordinator for the universities' liaison group for the quality assurance exercise held in Hong Kong in 2002-3, and led The University of Hong Kong's successful presentation and response to this audit. He has been a reviewer on site visits for a number of agencies, and has run workshops and seminars and given keynote speeches on quality assurance in several Asian countries. He is particularly concerned now with the quality assurance of online education, having worked as Executive Director with U21Global, the online graduate learning arm of the Universitas21 consortium of research-led universities, since 2005. He currently leads U21Global in the areas of international, national and professional accreditation, and has written on the issues facing providers of borderless education in a world of accreditation that is largely bordered in nature.

Prof. Tan Sri Datuk Dr. Anuwar Ali

Y.Bhg. Professor Tan Sri Datuk Dr. Anuwar Ali currently holds the post of President/Vice Chancellor of Open University Malaysia. He is also the Chief Executive Officer of Multimedia Technology Enhancement Operations Sdn. Bhd. (METEOR) which is the holding company of Open University Malaysia. Prior to this, he was the Director of Higher Education at the Ministry of Education as well as the Vice Chancellor of Universiti Kebangsaan Malaysia (UKM).

In 1970, he started his career as an Assistant Director at the Ministry of Trade and Commerce. After three years, he joined Universiti Kebangsaan Malaysia (UKM) as a tutor in the Economics Faculty. His career at UKM spanned over thirty years, moving on to various posts before he was appointed as the Dean of the Faculty and Deputy Vice Chancellor before his appointment as the Director of Higher Education at the Ministry from 1995 to 1998. In 1998, he returned to UKM and was appointed the Vice Chancellor of UKM where he served for another 5 years. In January 2004, he became the President/Vice Chancellor of Open University Malaysia until now. He is also the Chairman, Southeast Asian Regional Open Learning Centre (SEAMOLEC), Jakarta, Chairman of the Advisory Panel of Malaysian Institute of Economic Research (MIER) and President of Queen's University Alumni Malaysia, a Board Member of International Medical University and INTI University College.

Professor Tan Sri Anuwar's expertise in industrial and technology development has benefited the Malaysian Government when he was appointed as a Consultant to prepare the Industrial Master Plan (1986–95), Action Plan for Technology Development and the Action Plan for Small and Medium–Scale Industries. He was also Chairman, Malaysia Examinations Council, Member of the Asia Pacific Council of Griffith University, Queensland, Australia, a Board Member of Bank Pembangunan Malaysia, a Member of the Securities Commission and SIRIM Training Services Sdn. Bhd.

Professor Tan Sri Dr. Anuwar Ali was born in Jasin, Melaka on 11 July 1946. He received his primary education in Tanjung Malim, Perak and Jasin, Melaka before moving on to Melaka High School until 1965. He then continued his tertiary education at Queen's University in Belfast, Northern Ireland and obtained a B.Sc. (Econs) in 1970. During his time as a tutor and lecturer at UKM, he obtained his Masters in 1975 and Ph.D in 1982 at the University of Leicester and University of Kent, Canterbury, UK respectively.

Prof. Dr. Young Moon Chae

EDUCATION

1982 University of North Carolina at Chapel Hill, Ph.D. in Health Informatics
1975 North Carolina State University at Raleigh, M.A. in Statistics
1972 North Carolina State University at Raleigh, M.A. in Applied Mathematics
1969 Yonsei University at Seoul, Korea, B.S. in Mathematics

EXPERIENCE

2007.1 President, Korea Society of Health Informatics and Bio-Statistics
2007.8 Adjunct Professor, Graduate School of Public Health, University of North Carolina
2007.3 Dean, International Cyber University for Health, Asia Pacific Academic Consortium in Public Health
2006.8 Dean, Graduate School of Public Health, Yonsei University
2005 President, Korea Society of Medical Informatics
2002 - Vice President, Korea Telemedicine Association
1999.8-2000.3 Visiting professor, Division of Medical Informatics, Duke University Medical Center
1999.8 WHO short-term consultant to Malaysia
1998- Editorial member, International Journal of Medical informatics
1998- Vice President, Korean Society of Medical Informatics
1998.8 Vice Chairman, Organizing committee for the World Congress on Medical Informatics 1998, Korea
1997.7 WHO short-term consultant to the workshop on District health information system , Philippines
1996-98 President, Korea Intelligent Systems Society
1995-99 Professor and Associate Dean, Graduate School of Health Science and Management, Yonsei University
1993-96 Vice President, Korea Society of Management Information Systems
1993.7 WHO short-term consultant to Harbin, China
1993- Member of the Advisory Board for the National Health Information Systems in Korea
1990.8 WHO short-term consultant to Papua New Guinea
1987-94 Associate Professor, Dept. of Preventive Medicine, College of Medicine, Yonsei University
1984-86 Assistant Professor, Dept. of Preventive Medicine, College of Medicine, Yonsei University
1982-84 Assistant Professor, Graduate School of Management, Clark University, Worcester, MA
1980-81 Computer Programmer and Statistician, Carolina Population Center, Chapel Hill
1976-80 Demographer and Statistician, North Carolina Division of State Budget and Management, Raleigh
1969-70 Computer Programmer, Korea Institute of Science and Technology

Country Reports

Changes and Development in Universiti Brunei Darussalam: Future Direction?

Dr. Anny Arbi
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Abstract

This paper traces the history and development of Universiti Brunei Darussalam (UBD) since its inception in 1985 more than 20 years ago. It will discuss the development of the different faculties in term of the efforts made to meet the demand of changing times and the influences of globalization. As a result of these developments, new courses and programs have been designed and old ones modified accordingly. Both quantitative and qualitative aspects of the developments of UBD will be examined. Issues and problems related to the efforts of UBD to meet the changing times will also be discussed in this paper. In particular the paper will focus in detail the efforts made by the Sultan Hassanal Bolkiah Institute of Education (SHBIE) in UBD, on ways to train teachers to teach the new national curriculum (SPN21), designed to produce students for the fast changing world, equipped with appropriate knowledge, skills, values and attitudes. Questions such as how best do we educate our potential teachers? Should we think locally or globally? Which direction should SHBIE take? The findings will be discussed in detail in this paper.

International University (IU)
Quality Assurance Standard Requirements in Higher Education

Ms. Chhim Rumuny
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Abstract

International University (IU) was founded on November 09, 2002 and was officially approved by the Royal Government of Cambodia by December 16, 2002 (Sub-decree 122). IU is well known among the students and the public as the pioneering and biggest private university in Cambodia that provides medical education in addition to other courses such as Social Science, Humanities, Rural Development, Agriculture, and Languages etc.

In 2005-2006, IU received a Certificate of Provisional Accreditation on the Foundation Year Course for one year from Accreditation Committee of Cambodia (ACC) and in 2006-2007, IU received a certificate of Full Accreditation on the Foundation year Course for three years from ACC. Moreover, every medical student have to pass the entrance exam after their foundation year course program and they have to take exit exam prepared by National Committee after they finish all the requirement courses and practices. These exams are the most important and specific from other fields for medical education only.

Recently based on ACC, all universities are required to assess their quality of academic provision. The assessment is carried out both by internal and external assessors. For the external quality assurance, it is specified by law that a team of assessors appointed by the Office of Standard and Education Quality Assessment, the autonomous sector, will be responsible for the quality audit, assessment, and accreditation for each individual university.

At International University, the quality assurance criteria are performance-based. They are based on the nine aspects of criteria set by the ACC. These aspects include: Mission and goals, Government structure and strategic planning, Academic program, Teaching staff, Students and student services, Learning resources and services, Physical facilities, Financial management and planning, Information dissemination.

IU is trying its best to apply the 9 standards of the ACC as well as the international medical education standards to meet academic excellence. Our Quality Assurance and Assessment Department is ongoing and still in processing and serving the best highest quality net-work not only within the country but internationally.

Key words: Quality, Assessment, Medical Education, Entrance and Exit Exam, Standard

A Success Story – Student Exchanges in Hong Kong 2002-2007

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Abstract
Internationalization remains a top priority among universities in Hong Kong. The diversification of student mix is an important part of that effort. Diversification can be achieved by recruiting students from outside of Hong Kong and by developing international student exchanges. This paper describes developments in international student exchanges in Hong Kong from 2002 to 2007. Over that five-year period there has been a five-fold increase in the flow of exchange students to Universities in Hong Kong.
The major factors that hinder the development of student exchanges are discussed and the efforts to overcome those are described. In 2002, the Hong Kong Special Administrative Region Government decided to support a series of initiatives to expand exchanges. This paper reports on those initiatives and other continuing efforts to expand student exchanges. A summary of the current situation in Hong Kong at the eight publicly funded Universities is presented. Developments in student exchanges at The Chinese University of Hong Kong are used to illustrate what can be done to achieve a dramatic expansion in student exchanges.

Keywords: Diversity of student mix ….. student exchanges …. initiatives to expand exchanges…. Hong Kong ….Chinese University of Hong Kong

INTRODUCTION

The most important aspect of borderless education is to allow students from different countries and cultures to mix and to learn from and with each other. The view shared by the universities and government in Hong Kong is that international student exchanges can make important contributions in an increasingly globalised world. The benefits include

- enhanced foreign language abilities,
- increased awareness of cross-cultural issues and competence, and
- building global networks of Hong Kong university graduates.

Increasing opportunities for student exchanges has been accepted as an important way of preparing Hong Kong's next generation for future challenges. Attracting more foreign students to study in Hong Kong was also seen as means of providing firsthand experience of Hong Kong and the Mainland to those students. That will in turn increase the likelihood that some of them may wish to work in Hong Kong in the future.

Universities in Hong Kong are funded publicly through the University Grants Committee. Currently eight universities operate under that framework with autonomy in governance and in awarding their own degrees:

- The Chinese University of Hong Kong
- The University of Hong Kong
- The Hong Kong University of Science and Technology
- The Hong Kong Polytechnic University
- City University of Hong Kong
- Hong Kong Baptist University
- Lingnan University
- The Hong Kong Institute of Education

In addition there are two publicity assisted private Universities, namely Hong Kong Shue Yan University and the Open University. This paper will mainly address student exchanges among the UGC funded institutions and will use the CUHK as an example to illustrate points made.

THE CHINESE UNIVERSITY OF HONG KONG (CUHK)

The Chinese University of Hong Kong is an internationally recognized university that aspires to be a leading comprehensive research University in Hong Kong, in China and the region; and to be the international university of choice in East Asia. The role that the University has agreed to play with the Grants Committee is *"to deliver teaching at an international competitive level … to be internationally competitive in its areas of research strength and to pursue actively deep collaborations in its areas of strength with other higher education institutions so as to enhance Hong Kong's higher education system"*.

To realize this vision, the University's international strategy includes programmes to broaden its student mix and to recruit outstanding scholars and students from around the world. To enrich the educational experience of its students beyond Hong Kong's borders so as to broaden their horizons. The Chinese University of Hong Kong (CUHK) will be used as a case study to highlight some of the main points in the development of student exchanges as part of borderless education.

Currently 16% of the annual cohort of CUHK undergraduate students goes abroad for full year or full semester student exchanges. CUHK is very close to achieving its goal of providing at least one exchange opportunity for every student who desires it since some 93% of the annual cohort of undergraduates are indeed involved with some form of learning activity outside of Hong Kong, mostly through short term programmes or summer activities.

STUDENT EXCHANGES IN HONG KONG

Generally speaking, four factors represent the most difficult hurdles that universities in Hong Kong face in their efforts to expand student exchanges:

1. Lack of funding to support students when they study abroad.
2. Shortage of student housing to accommodate incoming students.

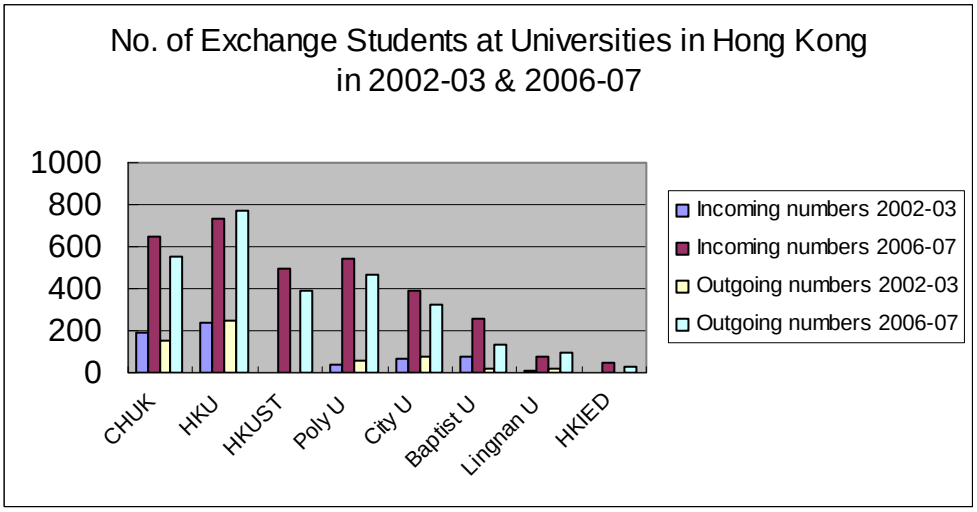
3. Low awareness of Hong Kong as a study destination.
4. The living environment in Hong Kong.

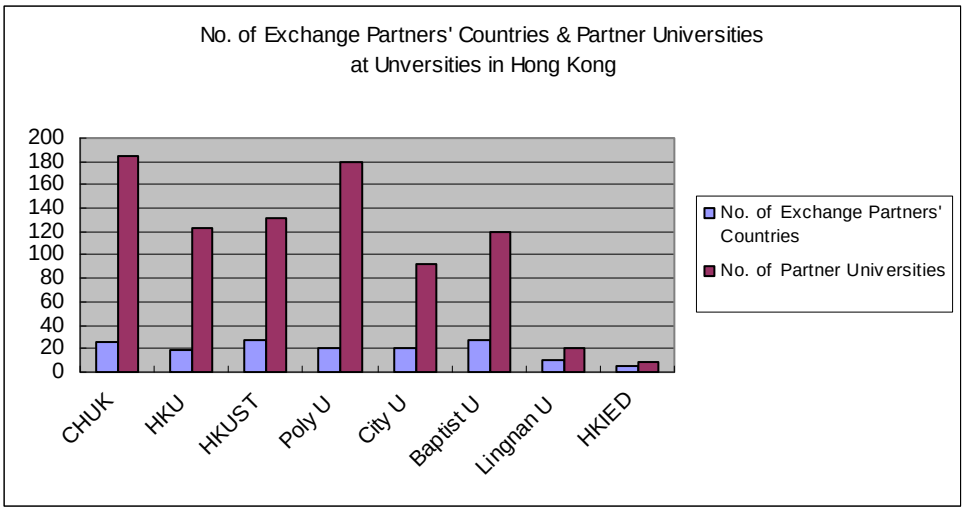
The Hong Kong Special Administrative Region (HKSAR) Government has responded to requests for assistance from universities to tackle these challenges. This paper will discuss the most significant initiatives that have been adopted in Hong Kong to meet the challenges and some current trends in student exchanges.

Recent initiatives taken by the universities in Hong Kong have enabled all local universities to make quantum leaps in expanding their student exchange activities. There has in fact been a remarkable fivefold increase in student exchange activities as shown in the following table:

		Chinese Univ. of Hong Kong	Hong Kong Univ.	H K Univ. of Science & Technology	Polytechnic Univ.	City Univ.	Baptist Univ.	Lingnan Univ.	Hong Kong Institute of Ed	TOTAL
Incoming numbers	2002-03	193	240	n/a	40	67	76	13	0	629
	2006-07	643	736	497	547	390	260	73	45	3,191
Outgoing numbers	2002-03	156	250	n/a	57	76	22	23	0	584
	2006-07	549	770	395	468	321	134	92	28	2,757
Exchange Partners	Countries	25	18	28	20	21	28	10	5	-
	Partner Universities	185	123	131	180	92	119	20	9	-

Table 1: Participation in Student Exchanges at Universities in Hong Kong 2002-03 compared to 2006-07 academic years (in student headcount numbers)





The difference between incoming and outgoing numbers of students reflects a growing trend, especially in North America, for students to prefer one semester study abroad. On the other hand, the preference among Hong Kong students is to spend an entire academic year abroad. The situation in Hong Kong is however changing and the same trend of increasing short term exchanges seems to be emerging in Hong Kong.

REMOVING BARRIERS to borderless educations and TRENDS in student exchanges in Hong Kong

The HKSAR Government funds public universities through an independent agency, the University Grants Committee (UGC) which is made up of members from the government, private sector and universities (both local and international). Government initiatives to help expand student exchanges were therefore channeled through the UGC.

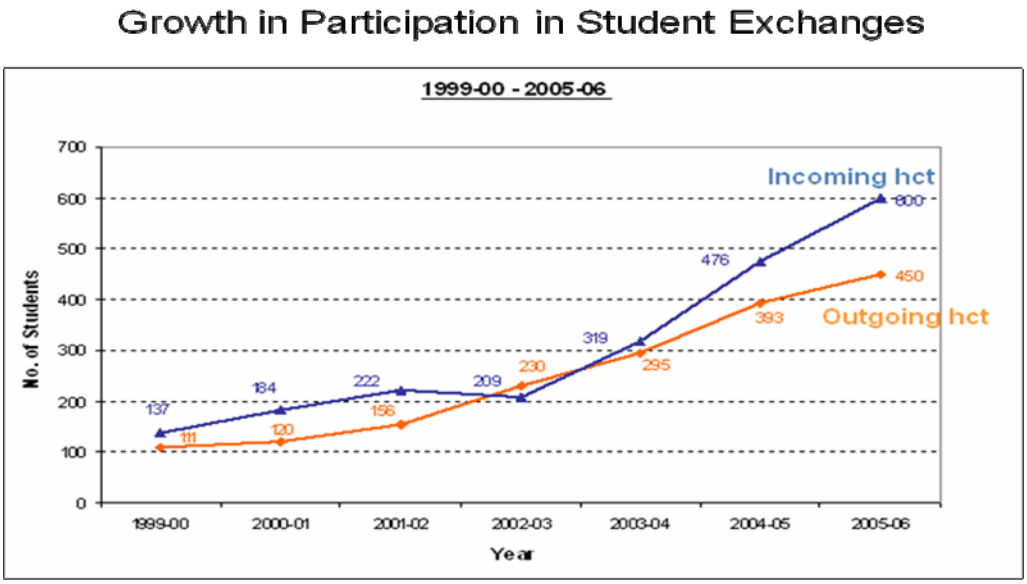
Members of UGC have recommended that funding student exchanges should be seen as strategic investments in strengthening Hong Kong's role as a major international business and financial centre to the benefit of long–term sustainable development of Hong Kong as a global business and financial centre. Two main initiatives that have made substantial impact on the growth of student exchanges should be reported here:

A. 2002 initiative – UGC earmarked grants to encourage students to participate in exchanges

In 2002, UGC agreed to make available a grant totaling HK$120 million (US$15.38m) over the three year period starting 2002-03 to the eight institutions it funds to kick start an expansion of student exchanges. The one-off grant was distributed among the institutions on the basis of (a) their then level of student exchange activities; and (b) their respective first year first degree enrolments. (2001-02 was used as the base year for the calculations.) The conditions of the grant were:

1. Each university had to agree target figures for the increase in student exchanges taking into account their current level of activities.
2. The major part of the grant should be spent on assisting outgoing students. 75% of the grant must be used to fund awards to students and only a small part of that portion may be used to fund incoming students from Mainland China.
3. The universities undertook to sustain the enhanced level of exchange activities even after the expiry of the grant period and even if the grant was not renewed.

To illustrate the impact of this initiative, in the case of CUHK, the actual grant received over the three year period amounted to HK$15.95m (US$2.04m) and over that period student exchange activities expanded as shown in the following chart of student headcount numbers.



B. 2006 initiative – additional allocation of student hostel places

Following consultations between the institutions and UGC, the HKSAR Government agreed to allocate an additional 1840 student hostel places (or 4% of current undergraduate population) to enable the universities to continue the momentum to increase student exchanges. The capital cost (at September 2005 price levels), to the HKSAR Government of this initiative is estimated at HK$350 m (US$44.87m). The universities will have to find matching funds in addition to this estimate. All recurring costs of operating the student hostels have also to be funded on a self financing basis.

Half of the total of 1840 hostel places was distributed among the universities by reference to approved undergraduate enrolment in 2007-08. The universities were invited to make bids for additional allocations from the remaining 920 places. The bids were to be based on

1. Existing extent of exchange activities.
2. Plans and commitment for exchange activities and how to pursue, support and fund exchanges in the long run.
3. Occupation of existing hostel places by local and exchange students.
4. Diversity of the university's incoming exchange students.
5. Practical plans for construction.

After receiving the bid proposals, the UGC decided to further top slice 175 places and to evenly distribute them to the universities. The remaining balance was then allocated on the basis of the merits of individual bids. Again to quote an example, the total allocation to CUHK was:

1. Total additional hostel places to be made available: 1840
2. Allocation to CUHK
   - based on undergraduate enrolment: 190 (20.65%*)
   - share of top sliced places 25 (14.28%*)
   - allocation based on bid and past performance 180 (24.16%*)

   Total 395 (21.47%*)

(*percentage of total in each line item)

The impact of this initiative is of course yet to be realized because the allocation will need to be converted into financial approvals, followed by submission of building plans and actual construction work. In some cases, the process may be further complicated by land having to be found and allocated to the university concerned. Cooperation over building efforts to create an joint centre to house exchange students is currently being examined.

C. Financial aid and related fund raising

All local universities are eager to expand student exchanges and have undertaken to sustain the higher level of student exchange activities. Accordingly all local universities are providing financial assistance to their local students. The following table illustrates current practices at various universities.

	CUHK	**HKU**	**HKUST**	**POLY U**	**CITY U**	**BAPTIST U**	**LINGNAN U**	**HK I Ed**
Financial aid provided to ALL outgoing students	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BASIS for awarding financial aid								
1. Irrespective of personal means	Travel grants			Grants	50% subsidy	Grants	Grants	Grants
2. Demonstrated financial needs	Grants	Grants	Grants	Grants	Loans	Grants		Grants

Table 2: Financial aid schemes operated by Universities in Hong Kong

Fund raising efforts at CUHK to support this important aspect of borderless education have been intensified. The University has accordingly been able to continue a range of financial assistance arrangements including:

1. Exchange scholarships established by donors that are awarded primarily on academic merit.
2. Every student who is chosen for a CUHK sponsored student exchange will be encouraged to undertake that exchange through a travel award to help to meet costs of return air tickets to the study abroad destination.

3. Further financial aid may be provided based applications which are assessed through means testing.

The University's commitment to providing financial aid is very substantial as shown in the following table:

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Scholarship	119,000	20,000	20,000	40,000	105,000	1,123,400	2,062,925
Financial Aid	-	2,940,540	3,781,990	4,963,650	4,657,775	4,514,500	4,637,478
Total	119,000 (US$15,300)	2,960,540 (US$379,600)	3,801,990 (US$487,400)	5,003,650 (US$641,500)	4,762,775 (US$610,600)	5,637,900 (US$723,000)	6,700,403 (US$859,000)

Table 3: CUHK commitments to scholarships and financial aid to support student exchanges in HK dollars

All CUHK students who participated in outgoing student exchanges were thus assisted either through scholarships or financial aid to help them meet the additional cost of studying abroad.

D. Credit transfer arrangements – removal of barriers

The universities in Hong Kong have all reported that they do not use any regionally developed credit transfer arrangements, e.g. ECTS in Europe or UCTS in Asia, to deal with credit transfers. Currently all use their own internal accreditation procedures to determine whether to award credits to recognize academic work undertaken by their students while studying abroad. None of the universities have experienced any particular difficulty in doing so.

E. Joint efforts to promote borderless education

The universities in Hong Kong have formed a joint committee to coordinate international recruitment of students and undertake joint promotions overseas to help recruitment. The Committee also contributed to two major collaborative efforts to promote student exchanges in 2006 and in 2007 when the universities hosted joint HONG KONG PAVILIONS

- in September 2006 in Basel, Switzerland, at the annual conference and exhibition of the European Association of International Education (EAIE), and
- in May 2007 in Minneapolis, USA, at the NAFSA annual conference and exhibition.

These conferences are of course the main international gatherings of international office staff from many universities from across the world to meet annually. The Hong Kong Pavilions served as a base for the universities to distribute information about universities in Hong Kong, their student mobility programmes, postgraduate studies programmes and to meet partner universities. This is an important part of the outreach programme. After reviewing the outcomes of those two projects it has been agreed that this collaboration should be continued and the next joint pavilion will be mounted in Washington DC in May 2008.

The joint effort was assisted by the Hong Kong Trade Development Council which is also assisting the universities to participate at selected student recruitment fairs in various parts of the world.

F. The trend towards shorter duration of student exchanges

There is a growing trend for students to prefer shorter period exchanges and one semester exchanges are becoming more popular. While a mix of full year and shorter duration exchanges make it easier for universities to balance the exchange numbers, it reduces opportunities to experience and to assimilate cultural learning. It also creates additional administrative workload.

There is also evidence that summer study abroad programmes are increasingly an important part of study abroad at many universities. The main concern with this phenomenon is that often summer schools are offered as "island programmes" enrolling only visiting students with little or no inter-action with domestic students. While considerable learning, especially in languages may be possible, the inclusion of meaningful contacts with domestic students would make such programmes much stronger and reinforce the benefits of borderless education.

To prepare students for borderless learning, CUHK has intensified orientation programmes and adopted computer mediated learning to help outgoing students prepare for study abroad. It has also enhanced flexibility by offering partner universities the ability to send a mix of one year, one term and summer term students. To ensure that summer school students are offered the same learning opportunities the University adopted a summer school format that ensures a high rate of participation by its own students. Since Hong Kong sends a lot of students to study at foreign universities, and many return to Hong Kong in the summer, those students were also targeted in order that they may have an opportunity to contact students in higher education in Hong Kong.

The following table shows the distribution among the various categories of students admitted to the 2006-07 International Summer School:

	No. of students	% of total
International students from exchange programmes	148	30
International fee-paying study abroad students	85	17
CUHK students	195	39
HK residents studying at overseas (or other local) Universities	65	13
Total	495	100

Table 4: CUHK International Summer School participants

G. Increasing borderless education through diversifying destinations

There is a particular preference among university students in Hong Kong to seek international experience in English speaking countries. In the past, the preferred destination was USA which is similar to the situation in many countries. But the trend of increasing opportunities in other destinations, including Mainland China, has become more noticeable. In the case of CUHK, in the 1990s USA was the destination for some 80% of all outgoing students. Currently North America attracts about 40% of all outgoing exchange students (note that in absolute numerical terms the number of students has still increased dramatically). Europe attracts about 30% of outgoing students and Australasia attracts the remaining 20%.

H. Targets set for borderless education through exchanges

As reported earlier in this paper, all the universities in Hong Kong have made student exchange as an important part of the undergraduate learning experience. The universities have adopted targets to guide their efforts to expand borderless education for their undergraduate students. In some cases specific numerical or percentage targets have been adopted, for example, the Hong Kong Baptist University has the target of sending 25% of its cohort of students by 2010 and on internships or exchanges and hopes to send as many as 60% in the long run. Lingnan University expects to send one fourth of all its undergraduates to study for one term abroad.

In the case of CUHK, 22% of the annual cohort is given an opportunity to study for one semester or one year on exchange in the 2006-07 year. The target is that within the coming next three year funding cycle, 30% of the annual cohort should be able to spend one semester or one year abroad. In the medium term future, the plan is that all students who wish to do so should be given an opportunity to gain some experience outside of Hong Kong. For the year 2005-06, if all participation including in short term summer programme or a full semester exchanges are counted, 93% of all CUHK students have benefitted from such opportunities.

CONCLUSION

It will be seen that student exchanges at all the universities in Hong Kong have expanded very significantly in recent years. The expansion has been made possible through of a variety of strategies. Some of the initiatives are funded by the Hong Kong Special Administrative Region Government through its University Grants Committee while others are funded by support from private donors.

Recent Development of Higher Education in Indonesia: Issues and Challenges

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Abstract

During the last decades, we have seen a rapid expansion in higher education sector. However, the centralized education system has resulted internal inefficiency, poor initiatives-particularly in research and lack of public accountability in many Indonesia universities. Facing these issues, the government of Indonesia launched new long term vision and reform covering all higher education institutions (HEIs) in Indonesia. aims to outline the main characteristics of the higher education sector in Indonesia and review major policy developments. The paper will discuss the issues and challenges in the development of higher education in Indonesia, particularly in some issues including financing of higher education, accessibility, and the development of research capacities. The explanation in this paper is put in the context of regional and internationalization of higher education issues, including the inclusion of higher education under GATS.

Keywords: Indonesia, higher education, public expenditure, institutional reform, internationalization of higher education

1. Introduction

Indonesia's universities have been relatively young in history. However, during the last decades, we have seen a rapid expansion in higher education sector. A study by Nizam (2006) recorded that the student population in higher education institution (HEIs) increased from just around 200,000 students in 1975 to 2.5 million students in 1995. The gross enrollment ratio grew from only 2% in 1975 to more than 13% in 2004. Unfortunately, as argued by Moeliodihardjo *et al* (2000), this development was not followed by proper long-term planning, vision and good funding mechanism. It has been identified some weakness in Indonesia's university system. World Bank (1996), for example, identified that the universities suffered internal inefficiency, poor initiatives-particularly in research and lack of public accountability which are mainly due to the centralized education system. Undoubtedly, these problems brought negative impacts on quality, efficiency, and relevance of higher education in Indonesia.

Facing these issues, the government through Directorate for General Higher Education (DGHE) has launched new long term vision and reform covering all higher education

institutions (HEIs) in Indonesia. Some major reforms are the autonomy of university's governance, funding mechanism, private and public HEIs relationship and curricula content set in line with national development context. These reforms bring serious challenges for HEIs, particularly regarding financial matters yet also offer opportunities in the context of independency and autonomy. It is not surprising that Indonesia's universities still seek the best format and practice for facing challenging in the near future

Our study, moreover, aims to outline the main characteristics of the higher education sector in Indonesia and review major policy developments. The paper will discuss the issues and challanges in the development of higher education in Indonesia, especially in some issues including financing of higher education, accessibility, and the development of research capacities. Explanations will be emphasized in the context of regional and internationalization of higher education issues, including the inclusion of higher education under GATS.

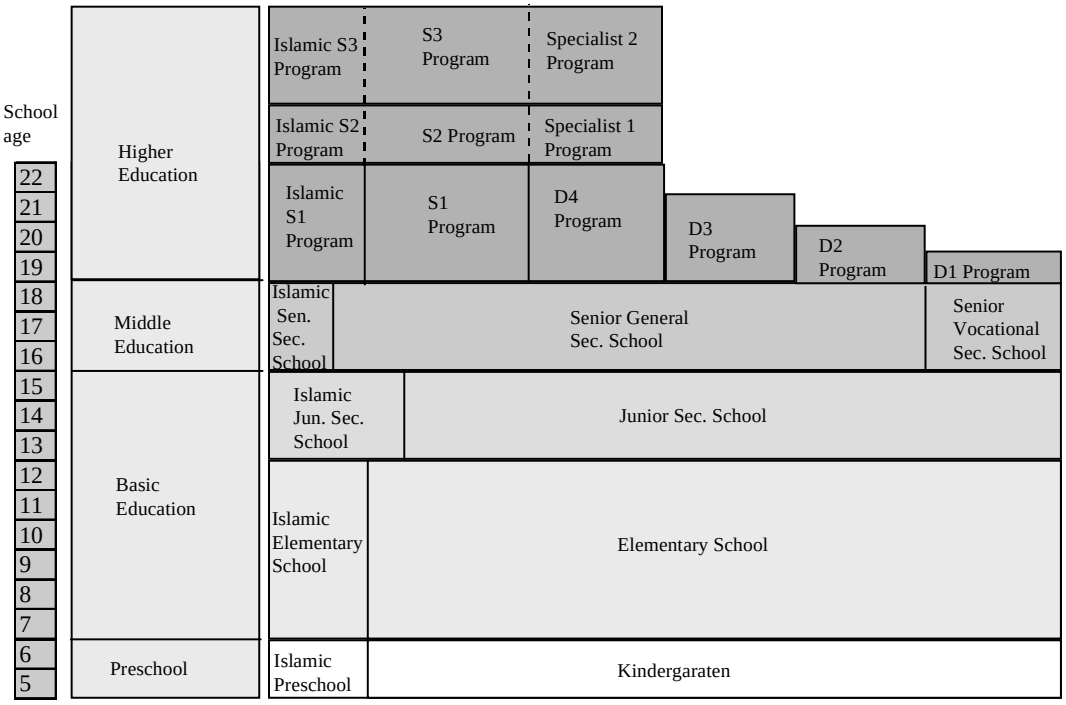
The rest of this paper will be organized as follow. Section two will discuss about recent development in Indonesia's higher education system. The explanation will include the discussion on institution, structure and types of HEIs in Indonesia, the explanation on enrollment in Indonesia HEIs, the examination on the public expenditure on higher education, the overview of accreditation, quality assurance, and research capacity in Indonesia HEIs, and the review of higher education reform in Indonesia. Lastly, section three will discuss about future development of Indonesia higher education in the globalization era.

2. Recent Development

Institution, Structure and Types

Recently, based on the Indonesian Education Act No. 20/2003, the organizational structure of the school system can be separated into two stream that are: the Islamic stream under the Ministry of Religious Affairs (public and private), and the secular stream under the Ministry of National Education (public and private). Basically, these two steams are separated into three levels of education. They are basic education, middle or secondary education, and higher education. For the last one, the higher education is an extension of secondary education. The Indonesia higher education system consists of academic and professional education. Academic education is mainly designed at mastering science, technology, and research, whereas professional education is aimed more at developing practical skills. The institutions providing higher education are categorized into university, institute, collages, academy, and polytechnic in both public and private sectors.

Figure 1: School System in Indonesia



Source: Mohandas (2004)

A university consists of several faculties conducting academic and/or professional education in several disciplines, technologies and/or the arts while an institute consists of faculties conducting academic and/or professional education disciplines which belong to the same group of professions held. On contrary, a college conducts academic and professional education in one particular discipline. Meanwhile, an academy and a polytechnic are a vocational higher education institution (HEI) that provides professional skills and Diploma degrees. An academy conducts applied science education in one or part of a discipline, technology or the arts, while a polytechnic conducts applied science education in several particular fields.

Based on its status, the higher education institutions (HEIs) in Indonesia can be divided in two groups that are: the Public HEIs and Private HEIs. The Public HEIs are under the jurisdiction of the regulation on state treasury law, education system law, and civil servant law, and they are treated as part of the ministry (government entity). Meanwhile, the Private HEIs are regulated under the foundation and education system law, and they are considered as the business arm for the foundation. Under these statuses, Brodjonegoro (2000) argued that the HEIs have no independency for carrying out their mission as the moral force and become less accountable and less innovative.

Enrollment: Access and Equity

The higher education in Indonesia was begun in the late 19th century when first institution of higher education was established by the Dutch as part of an ethic policy to provide professional training to local doctors. As the colonial established social stratification, moreover, there were only students from elite groups enrolled in universities. Before the Second World War it is predicted that only 200 students enrolled in universities in the colonial period. Since independence, higher education has experienced dramatic growth, particularly after the Education Act in 1961 was enacted. In post independence, the political climate and nationalism spirit aspired that the country at least has one public university in each province. Around 23 new higher institutions were established during 1960s and these institutions covered almost 26 provinces in Indonesia. This policy has brought higher education to mass scale.

The development of higher education became faster during 1970s to 1980s, when Indonesia was experiencing strong economic growth, fuelled by an oil-price boom. At that time, as demand for higher education from both consumer and users grew faster than the public sector was willing or able to provide, this condition led to the growth of many private institutions. Since that time, various kinds of higher education institutions experienced rapid development, leading by the private institution. Currently, as shown in the table below, the higher education sector consists of around 2.7 million student enrolled in 82 public institutions and 2,756 private institutions. Furthermore, the table 1 also indicates that over ten years there has been declined in public universities places by more than 150 thousand places, whilst the places in the private sector increased by nearly 525 thousand places.

Table 1: Development of Higher Education Institutions, 1996-2006

Type of Institution	1996	2001	2005
Public			
University	31	45	46
Institute	14	5	6
Polytechnics	-	25	26
Others	6	6	4
Total	51	81	82
Enrolment	878,138	845,110	718,355
Private			
University	262	322	375
Institute	44	43	43
Polytechnics	9	47	126
Academy	407	596	964
College	571	923	1,248
Total	1,293	1,931	2,756
Enrolment	1,448,775	2,114,060	1,973,455

Source: Higher Education Statistic (2006)

Nevertheless, the participation rate of higher education is considerably lower than primary and secondary rates, although the enrollment rates in Indonesia higher education experienced increasing trend recently. As illustrated in the table 2 below, in 2005, for instances, the gross enrollment ratio for higher education was only 15%, while of those elementary, junior, and senior level were about 114%, 85%, and 52%. Furthermore, this participation rate of higher education in Indonesia was also low compared with other South East Asia countries. As reported by World Bank (2006), the Indonesia's gross enrollment rate for higher education was lower than of those Thailand (31.9%), Malaysia (28.3%) and Philippines (29.4%).

Table 2: Gross Enrollment Ratio, 2001-2005

Level of Education	**2001**	**2002**	**2003**	**2004**	**2005**
Pre-primary	20.47	22.12	32.36	39.09	46.63
Elementary	112.13	113.32	114.24	113.85	114.06
Junior Secondary	76.14	77.06	74.09	74.25	85.22
Senior Secondary	44.71	46.64	48.25	49.85	52.2
Tertiary	13.67	13.93	17.43	14.26	15

Source: Ministry of Education (2006)

In addition, compared to other educational levels, inequality in access to higher education by region is also quite high. By the region, as seen in table 3, the gaps of enrollment rates in higher education between urban and rural areas was the largest compare to of those in the primary and secondary level. In 2003, for example, the net enrollment rate of higher education in urban area was 15.4%, compared to of that in rural area which was only about 2.1%. Meanwhile, this condition was the worst compare to net enrollment in primary (rural: 92% and urban: 92.8%), junior secondary (rural: 57.5% and urban: 72.7%), and senior secondary (rural: 56.1% and 28.7%).

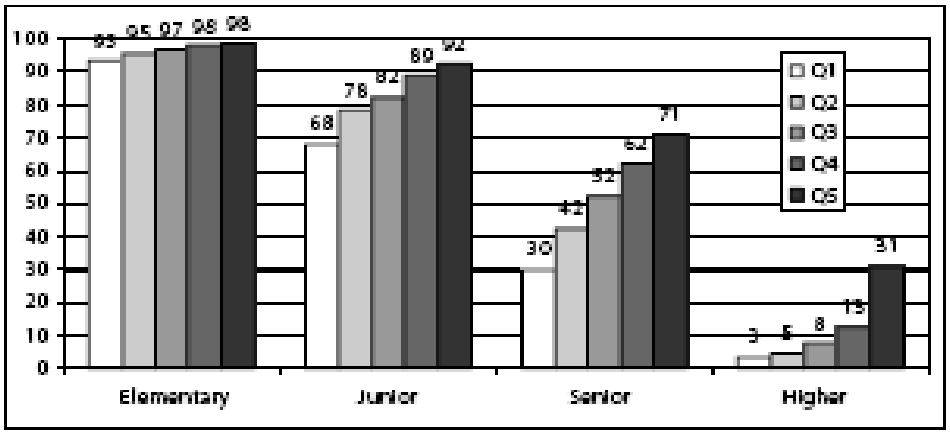
Table 3: The Enrollment Rates in Indonesia by Region

		Level of Education			
		Primary	Junior Secondary	Senior Secondary	Tertiary
Urban	Male	92.3	72.5	56.9	16
	Female	92	73	55.2	14.9
	M+F	92	72.7	56.1	15.4
Rural	Male	92.6	56.2	28.5	2.1
	Female	93	58.8	29	2.1
	M+F	92.8	57.5	28.7	2.1
Urban + Rural	Male	92.5	62.6	40.5	8.8
	Female	92.6	64.5	40.6	8.3
	M+F	92.6	63.5	40.6	8.8

Source: Central Bureau Statistic, Susenas (2003) quoted from UNESCO (2005)

In the same vein, as illustrated in figure 2, the inequality in access to higher education by income level is also high. In the past decades, while the inequality access in elementary education has been able to be eliminated, the inequality increases with the level of education. In the tertiary level, while the enrollment of higher education in the richest quintile reached 30.9%, only 3.3% of the poorest quintile is able to continue their education to the tertiary level.

Figure 2: Disparity Access to Education by Income Groups



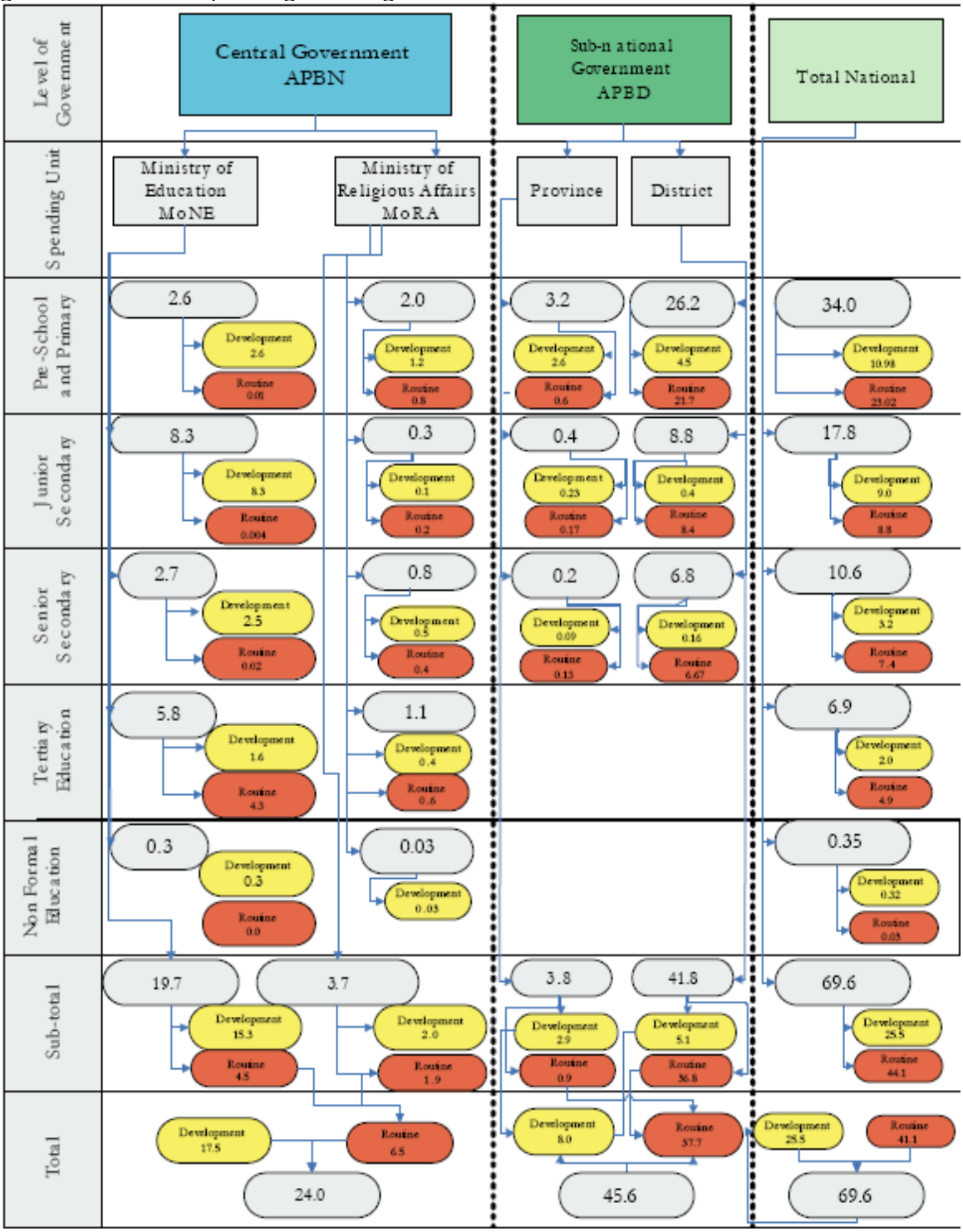
Source: Triaswati and Roeslan (2003)

Public Expenditure

Education sector in Indonesia has been under funded. It is both lower than its neighbor countries and below the total education expenditure mandated by the constitution. As reported by World Bank (2007), the percentage of total public expenditure on education to total GDP and the proportion of total public expenditure on education to total national expenditure have remained low, although there have been improvement in recent years. Although the percentage of national education expenditure to GDP has increased from 2.4% in 2001 to 3.8% in 2007, the level was still below of that Malaysia and Thailand which reached 8.1% and 4.6% respectively. In the same vein, while the education expenditure as percentage of total national has increased from 11.4% in 2001 to 17.2% in 2007, the Indonesia spending on education remains below 20% of total national expenditure that has been obligated by the constitution. Furthermore, the percentage of public expenditure on education to total national expenditure in Indonesia was also lower than Malaysia and Thailand. In 2006, for example, the education expenditure as percentage of total national expenditure in Indonesia, Malaysia, and Thailand are 16.9%, 27.0% and 27.0%, respectively.

The public expenditure on higher education received only small portion in the total expenditure on education. As shown in the figure 3 below in 2004, for instance, the allocation of public education expenditure has been dominated for basic education level, rather than for higher education level. The tertiary education only received less than 10%, while the primary education (pre-school, primary school, and junior secondary) and middle or secondary education obtained around 75% and 15%, respectively. In this respect, the government policy seems to focus on provision of education for the masses.

Figure 3: Education Spending Per Program and Level of Government, 2004



Source: World Bank (2007)

Compared to other countries, the public expenditure on higher education in Indonesia has similar figure with of those in other countries in Asia Pacific. As seen in the table 4, the proportion educational expenditure for higher education in Indonesia is higher than Japan, Republic of Korea, Mexico, and India although it is below of that Australia and United state. However, Indonesia's public expenditure per pupil as percentage of GDP per capita is the second lowest among the countries in the table. The Indonesia position is slightly higher than Republic Korea.

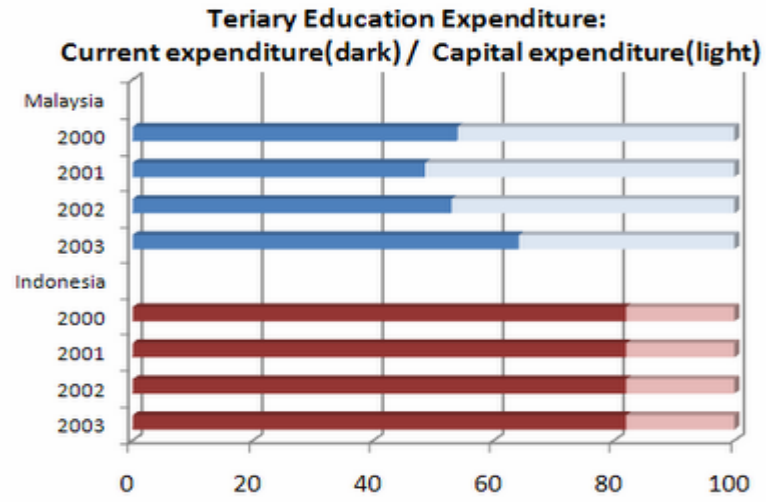
Table 4: Public Expenditure on Higher Education of Some Countries in Asia Pacific

	Australia	Indonesia	Japan	Malaysia	R.o.Korea	Mexico	US	India
Public expenditure per pupil as a % of GDP per capita	22.48	13.27	19.61	93.69	9.34	44.07	26.68	68.57
Education expenditure in tertiary as % of total educational expenditure	23.92	23.16	16.8	34.99	13.6	16.86	26.25	20.09

Source: Fahri (2007)

The large part of tertiary education expenditure is spent for current expenditure, including the salary (and welfare) and non salary. Based on the figure 4 below, we can see that in the period of 2000 to 2003, more than 80% of tertiary education expenditure was spent for the current activities expenditures, while the remaining 20% was used for capital expenditure. The capital expenditure in Indonesia was much below of that Malaysia which was accounted about 50%. As argued by Beekens (2006), the low capital expenditure in Indonesia reflects serious underinvestment in Indonesia's higher education institutions since capital consists of land acquisitions, university building development, and equipment purchase.

Figure 4: Tertiary Education Expenditure by Nature of Spending in Indonesia and Malaysia, 2000-2003



Source: UNESCO

Accreditation, Quality Assurances, and Research Capacity

In Indonesia, the quality control of higher education institutions is run trough external and internal accreditation system. The internal accreditation started to be initiated at some established university, such as University of Indonesia and Gajah Mada University, in the late 1990s as part of good practice process within the university. The quality assurance is internally run and aimed to improve the quality standard of higher education services. Meanwhile, the external accreditation is carried out by the National Education Board for Higher Education (Badan Akreditasi Nasional Perguruan Tinggi, BAN-PT), which was establish in 1994 to conduct academic program assessment and evaluation for both public and private HEIs. Mandated by the National Education Act No 2/1989 and Government Regulation on Higher Education No 60/1999, the BAN-PT is the only accreditation body in the Indonesia higher education system and based on ministerial decree 188/U/1998, all programs in HEIs, both public and private, had to be accredited by BAN-PT since 2001. Through the accreditation process, undergraduate and diploma programs are categorized into four levels from A (satisfactory) to D (unsatisfactory), while postgraduate programs are categorized into three levels: U (excellent), B (good), and T (fair).

The qualities of many HEIs are still poor. As reported by BAN-PT (2005, quoted from Nizam (2006)), in 2002, for example, of 6,777 programs (60% of more than 11,000 programmes to be assessed), where as 84% of them were undergraduate programs (S1), the majority, or around 85% of undergraduate programmes categorized B and C. Furthermore, around 15.73% public HEIs were accredited A, while only 5.26% private HEIs were accredited A. This result indicated that the public universities are considerably superior to private HEIs, further reflecting the role of public HEIs as quality leaders and private HEIs as expansion absorbers.

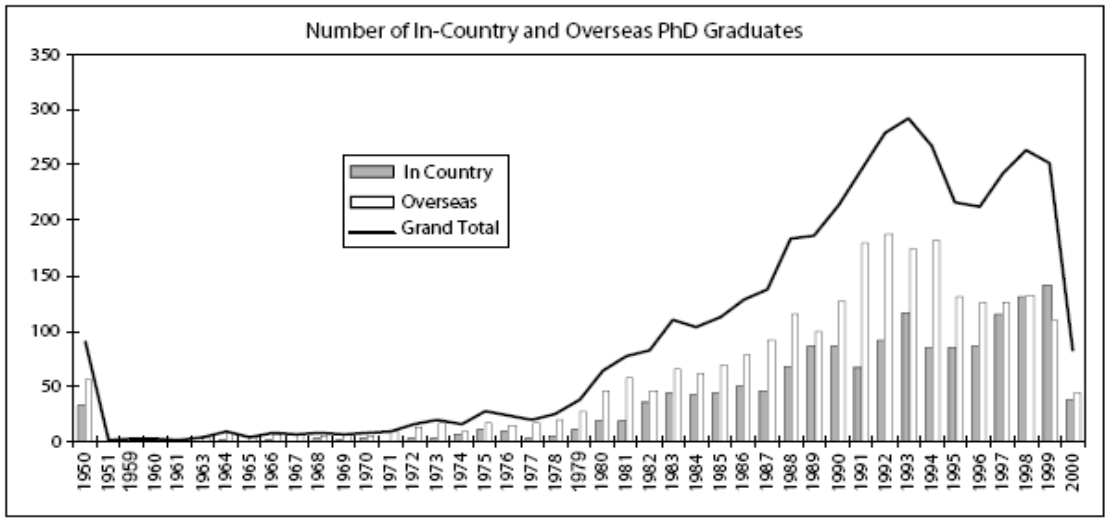
The low qualities of HEIs in Indonesia is caused by the fact that the HEIs system has grew much faster than the improvement of qualification levels of academic staff and commitment to teaching and research. Limited fund for education development, as reflected in the poor remuneration of academic staff, has affected to poor working conditions and academic life. As explained by Buchori and Malik (2004), many academic staff in Indonesia public HEIs have commonly not been well paid and it means that many staff dedicate their energy and time to off campus work, or business, including management or teaching at private HEIs, than to work at public HEIs. In the same vein, the condition in the private HEIs was even worst since they have lower proportion of qualified and full time staff.

In addition, the proportions of staff with higher degrees with Masters or Ph.D. also vary significantly across the sectors. As explained by Nizam (2006), before the extensive programme of human resource development aimed to develop research capacity that was supported by the 9th World Bank education sector project and took place at public Universities in 1980s, most of university staff did not have opportunity to be trained beyond undergraduate level. In the same vein, Mochtar and Buchori (2004) illustrated that in the public HEIs there were only 8.6% of academic staff hold Ph.D. and 29.2% possess Master level qualifications. This condition was much better than of those in the private HEIs. Furthermore, World Bank (1996) showed that the differences was almost 300%, which there were only 11% of academic staff in private HEIs trained beyond the first degree, compared with 30% in public HEIs. As argued by Welch (1997; 1998), this condition was due to few number HEIs offering graduate programmes and low salary levels, relative to other occupations in other economic sectors, where high degrees are also less needed.

Recently, the increased funding from the government supported by donors for the development of human resources has directly generated an increased the numbers of academic staffs possess Ph.D

and master's degree, the disparity of staff qualification between HEIs across countries remains high. As shown in the figure 5, number of PhDs and master's from overseas and in-country universities increased in last decades. During 1996-2000, for example, the number of PhDs and master from overseas increased by 32% and 40%, while the new in-country PhDs also grew significantly and even surpassed those from overseas by 1998. Nevertheless, according to the *Directory of Doctors* 2000 as seen in the table 5, about 75% of PhDs registered worked in the four established public HEIs in Java (University of Indonesia, Institute Pertanian Bogor, Institute Teknologi Bandung and University Gajah Mada), resulting high disparity of staff qualification between universities in the most populated island in Indonesia, Java, and outside of Java, although this disparity should be placed in the perfective that by the fact around 74% of students enrolled in Java.

Figure 5: the number of new in-country and overseas PhD graduates



Sources: Nizam *et al* (2003)

Table 5: Distribution of Staff with PhD, 2000

Location	Private	Public	Autonomous	Total
Java	333 (9%)	1054(28%)	1420(38%)	2807(75%)
Outside Java	47(1%)	891(24%)		938(25%)
Total	380(10%)	1945(52%)	1420(38%)	3745(100%)

Source: Directory of Doctor 2000

In addition to lower quality of teaching staff, the HEIs is suffered by the absent of solid system for supporting high-quality study programs and research. The quality of Indonesia HEIs, particularly in the private HEIs, weakens by the low staff-student ratios. Welch (2006) showed staff student ratios deteriorated in the last decades. The staff student ratio decreased from 1:6.6 to 1:10.1 in 1980, 1:12.4 in 1990, and 1:13.7 in 1998. In the same vein, the quality of HEIs impaired by low investment and per-pupil spending rates, as reflected in poor facilities and equipment. Welch (2006) stated that the levels of computer equipment and software are "below the performance standard" for the number of students enrolled.

Higher Education Reform

In the last decades, the GOI has taken a number of measures to improve the quality, efficiency and relevance of higher education in Indonesia. In 1995, the GOI through DGHE established the Higher Education Strategy Task Force assigned to conceptualize the strategy for higher education in Indonesia for the next decades. This task force, later on, launched *The New Paradigm* for higher education management based on quality, autonomy, accountability, accreditation, and evaluation. The New Paradigm has been applied by substantially change the mode of individual universities operation and their overall legal, regulatory, and financial controls.

To strengthen institutional capacity at the center as well as individual universities, the New Paradigm has been implemented by the establishment of the Board of Higher Education (DPT), with three Councils (education, Research, and Development), and the National Accreditation Board for Higher Education (BAN-PT). The DPT has the responsibility to provide the strategic advice and to buffer between the DGHE and external funding bodies as well as between DGHE and the universities that receive the competitive grants. Meanwhile, the BAN-PT is mandated to independently arrange and conduct the accreditation of academic programmes of private and public HEIs. The BAN-PT is aimed to improve transparency of the higher education system in Indonesia, to guide consumers, to guarantee accountability, and to strengthen incentives for individual universities to raise quality standards, efficiency and relevance.

In the financial aspect, the New Paradigm also has given the individual public HEIs the power and responsibility to work more as if they were private-sector institution. The individual public HEIs is required to conduct self-evaluation, prepare institutional development plans based on their own particular needs, arrange budget according to their projected resources and priority needs in order to received investment funds from the central government. Furthermore, supporting by monetary loan from the World Bank and Asian Development Bank, the New Paradigm also initiated competitive funding schemes for research and academic programme development in the 1990s. This competitive funding schemes implemented by the introduction of the University Research for Graduate Education (URGE) project in 1995, the Development of Undergraduate Education (DUE) project in 1996, the Quality for Under graduate Education (QUE) project in 1998-2004. Later on, based on these models the GOI also introduced the semi-QUE, DUE-like, and Competitive Funding Programme (PHK) as the mechanism to allocated its funding to universities. The scheme is directed to achieve certain targets as measured by performance indicators that have been decided and made by the grantees. As reveal by Nilzam (2006), it is expected that the efficiency and productivity of government investment will improve. Moreover, this process is expected to enhance bottom-up planning, cost awareness, and sense of ownership amongst institutions.

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Moreover, in order to made the education process to be managed autonomously, in 1999 the GOI issued a new government regulation (PP 61/1999) that set down the mechanism to transform state/public HEIs into autonomous universities called “State Legal Entity University “ (*Universitas Badan Hukum Milik Negara* (BHMN)). As implementation, the GOI asked the four most established public HEIs (Universitas Indonesia, Universitas Gajah Mada, Institut Teknologi Bandung, and Institut Pertanian Bogor) to pioneer the transformation. In December 2000, based on government regulations (PP 152, 153, 154, and 155/2000), those four universities formally change to become new public legal entity

universities. After this transformation, the universities has not become part of government bureaucracy anymore and more responsible to the public rather than to ministry. Similar to reform in Latin America, by creating a "para-market relationship" the GOI provide the operational cost in form of block grant based on their performances. In addition, the university management changes toward more corporate system. Furthermore, in the university transition plans, all staff who used to be civil servants would be transformed to become university employees within ten years. However, as argued by Susanto and Nizam (2004) the inadequate supporting legal and financial measures have hindered the reform to be effectively embedded into the entire system.

3. Future Development: Internationalization of Higher Education

Globalization has influenced and affected the national higher education system and higher education institution. Since the world is fast moving toward a knowledge-based economy, the development of higher education is very essential as strategy to survive and compete in the world economy. As stated in UNESCO (1998), higher learning and research is expected to have greater role in improving the cultural, social, economic and environmental aspects for sustainable development of individuals, communities, and nations. In this regard, an effective and functioning higher education system is needed to enhance global competitiveness and local relevance. Tadjudin (2005) argued that the globalization has weaken the government control on the higher education system and forced the Indonesian universities to be more efficient with better quality in order to compete in the global market. Globalization has generated demand for quality of graduates that meet international standards.

Along with the advance of technology and communication, in 1994 Indonesia entered the globalization era with the ratification of the World Trade Organization's establishment (Act No. 7). Indonesia resignation in the WTO imply that Indonesia also agree with the General Agreement on Trade in Services (GATS). In GATS, the trades in services are categorized into four mode of supply, i.e: cross border supply, consumption abroad, commercial presence, and presence of natural persons. These four modes have already found in Indonesia, such as reflected by the distance education and e-learning and many Indonesian students that study abroad. In addition, to meet the demand for higher education, many overseas institutions are already operation in Indonesia in co-operation with Indonesia partners, although the GOI has not allowed any overseas universities to solely open a local programme. The National Education System Act No. 20/2003 has predetermined that only an accredited foreign HEIs can open a programme and it has to cooperate with a local HEIs.

The inclusion of education under GATS has created pros and cons among academic community. The effect and results of globalization and deregulation of services, particularly higher education, should be cautiously and carefully evaluated. Nizam (2006) explained that for the GATS supporters along with the inability of the GOI to meet increasing domestic demands for higher education, the liberalization of educational trade is an inevitable consequence of globalization and the liberalization is believed will give positive impact on higher education and the overall national economy. On the other hand, the opponent worried that GATS worried with the possible negative aspects of the "marketization" of higher education that might lose the social and cultural role of higher education in national-building and its position as public goods that harm and further marginalize the poor. The government intervention is needed to develop the enabling framework and legal infrastructure to protect the poor and to guarantee the education for all can be pursued now and in the future.
In this regard, given its internal limitation and constraints as explained above, the GOI is expected to continue the reform in Indonesia higher education system to effectively contribute

to the nation's competitiveness. While the higher education reform in Indonesia has been taken places in last decades, many expected outcomes have not been able to reach. There are many challenges to be deal by the system. A head, as stated in the new DGHE long-term strategy, the development of higher education in Indonesia will be focused on improving nation's competitiveness, autonomy and decentralization, ant the organization health of universities.

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Demystifying the Challenges of e-learning: A Malaysian Analysis and Proposal

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Abstract

The implementation of an electronic learning (e-learning) mechanism in an institution of higher learning presents a serious challenge in both the electronic and the learning components. The Malaysian definition of e-learning which states the use of network and multimedia technologies to improve the quality of learning by enabling access to knowledge and remote resources for the development of a K-society, is simple enough to follow. Logically, there should be a smooth transition from the age-old teaching practices in the face to face tradition that can be made more interesting and efficient with the use of information technology and e-learning strategies. Interesting approaches in the form of blended and hybrid learning and the use of learning management systems (LMS) have been implemented in various institutions. An analysis of current literatures in e-learning practices in both public and private institutions of higher learning revealed fundamental problems in the implementation of e-learning; lack of senior leadership, lack of encouragement, fear of intellectual piracy, inadequate technical training, insufficient equipment and no incentives for innovation. This presentation seek to demystify the hurdles of e-learning by consolidating e-learning in a comprehensive manner maneuvered from the viewpoint of the system of education, rather than just the electronic or the learning part. A systemic e-learning orbit model (SeLOM) is proposed; a model that affords due considerations in the notions of reform, training, pedagogy, implementation, quality and scaling up as well as the components of e-learning at each orbit level for implementing and cultivating the lasting use of an innovation.

Keywords: e-learning, blended learning, hybrid learning, learning management system, e-learning model

Introduction ..

Malaysia found its connectivity with the world with the installation of the first telephone line in 1874. The country developed its first computer system in 1966 and since then several initiatives to facilitate the integration of ICT in different areas have been introduced. The privatisation of the telecom sector in 1987, and the formation of the NTP (National Telecom policy) in 1994, led to the full liberalisation of the market. The enactment of the Communications and Multimedia act in 1998 established the Malaysian Communication and Multimedia Commission (regulator) in support of national policy objectives. The Malaysian government has been very proactive towards ICT development, and Malaysia was ranked 30th in the world for Internet penetration and 26th for e-readiness (Kakroo, 2007). The Internet penetration grew from over 3.5 million subscribers in 2000 to 10 million by early 2005, said Mr. Ibrahim Shah Taarit Shah, Head e-Commerce, Application Service Hosting of Telekom Malaysia. During this same period, the Malaysian population grew 7% while the Internet penetration grew by 171%. Most of these users surf the Internet daily with an average of 10 hours per week, mainly for e-mailing activities, education research and information research. Almost 84% of Malaysia's 27 million people had a mobile telephone service by March 2007 (UNCTAD, 2007).

There are currently 20 public universities and 17 private universities in Malaysia. The are also 3 Open universities from the private universities group.

E-Learning in Institutions of Higher Learning ..

e-learning is a fairly recent phenomenon and the term was only coined in 2000; the roots of e-learning go back to the early uses of technology to support learning, in particular the use of training films, TV and videotapes (ELH, undated). That being the case, the Universiti Sains Malaysia (USM: http://www.usm.my), pioneers of distance education in Malaysia in 1971 have been implementing e-learning since 1983 with the systematic redesign of learning materials into printed pedagogic self-instructional modules incorporating audio and videocassettes, slides and filmstrips. The prominent inclusion of telecommunications was brought about by the introduction of audio teleconferencing in 1988 and the incorporation of an electronic writing board in 1989.

In June, 1995, USM once again made history in distance education in Malaysia in particular, and the world in general, by joining the elite universities of the world in using interactive full-motion video conferencing and in August 1997, the Minister of Education, Malaysia launched USM's virtual library system. Through USMNet, students can access this service via the Internet access providers in the country to further enhance their learning experience via distance education. A home-grown electronic portal was launched in 2003 with full migration to Moodle in December 2005. As of 2006, the video conferencing sessions are steamed live on the Internet enabling student access from anywhere in the world (with connection).

In other institutions of higher education, e-learning emerges in a diverse nature beginning with the Universiti Tun Abdul Razak (UNITAR), launched on the 21st December 1998, which was the region's first MSC-Status virtual university where education is delivered through the pervasive use of e-learning technology like the Internet, web-based or CD-based courseware and facilitator-based tutorials or academic meetings (UNITAR, 2003).

The Multimedia University (MMU) via the MMU e-Learning Campus is Multimedia University's on-line virtual campus, which offers affordable university credit academic programmes, and professional courses delivered using an innovative Learning Management System and Delivery engine called the Multimedia Learning System (MMLS) (MMU, 2003). The Online Delivery of Universiti Technology MARA (UiTM) in their distance education programme launched in 1990, included among others, features of online additional and supplementary learning materials, support services such as online counseling, via fax, telephone and e-mail, online learning facilitators, online Discussion and online library. Meanwhile, the Universiti Putra Malaysia (UPM) Online Programme Delivery System initiated in November 1999 brought together three parties to deliver the programme, that is, the Institute for Distance Education and Learning (UPM), the Department of Communication (UPM) and an IT company (Abu Daud Silong et al, 2001). The Open University Malaysia (OUM) combines the printed modules and face to face teaching with Internet-based support systems, including a digital library, for the e-learning that provides continuous interaction between the learners and the faculty (Latifah & Ramli, 2003).

E-Learning, what is the situation ..

The current status of e-Learning endeavours in public institutions of higher learning in Malaysia was recently tabled at the 1st Roundtable Conference on e-Learning in Public Institutions of Higher Learning in Malaysia held at the UiTM from 30-31 January 2008. The conference was participated by delegates from 16 public universities. We shall glean the salient points in their deliberations.

It was surprising to note that only two institutions (12%) has a Centre of e-Learning while the rest were subsumed under various ICT units or multimedia centre and one institution only had an administrator without any attachment to a unit. 56% were operating on an open source learning management system (LMS) while 50% of the institutions outsourced the construction of their respective LMS.

Another startling discovery was that only four institutions (25%) has a policy on e-learning in their respective institutions while the rest were implemented on a voluntary basis with one institution making it compulsory for one subject to be delivered as an eLecture as part of the course evaluation process. It was also revealed that the development of the coursewares was performed by the academic staff themselves in 80% of the institutions.

The features of the LMSs were quite standard with fragments of additions such as the University Campus Interactive Television (UCiTV)(UTHM), the live videoconferencing streaming on the Internet (USM) and webcast & podcast (UTM). Even then, these were management systems rather than any pedagogical assertions.

The problems cited in the e-learning systems were issues relating to;

- Academic staff -centred
- Only one administrator
- LMS restrict creativity
- Online test
- Not user friendly
- Low usage
- Content experts
- Too many LMS at the same time
- Loss of data
- Slow connection
- Not SCORM compliant
- Training at all levels
- Mismatch with university system
- Roles and responsibilities all round

In a case study by Puteh (2007), two institutions, namely Universiti Kebangsaan Malaysia (UKM) and Universiti Teknologi Malaysia (UTM), was analysed for their development of e-Learning strategies since 1996. To cut a long story short, it was found that generating senior leadership capable of integrating the various university plans and strategies was not successful. These leadership issues are exacerbated by the working environments that are characterised by lack of encouragement, fear of intellectual piracy, inadequate technical training, insufficient equipment and no incentives for innovation.

We are not alone ..

The whole endeavour of a successful launch of e-Learning is somewhat a mystery insofar as the repetitive nature of the problems faced; it seems as though it permeates across the entire academic world. In India, Mishra (2007) put forth that e-Learning in India is still at an infant stage, in spite of the tremendous developments in the IT sector. The poor access to technology demands building of 'digital bridges' to support student learning, and emergence of a range of communities of practice that thrive on the World Wide Web and support their own life long learning needs. He also ascertained that i) there are politics behind the promotion of e-learning; ii) there are no policies to support e-learning; and iii) the pedagogies of e-learning yet to unfold clearly

The e-Learning experiences in Thailand through the strong policy of the present government to reform all levels of education in Thailand by using information and communication technology (ICT) is still plagued by the problem about human resources such as the lack of instructional designer and programmer. There is also the problem of the lack of hardware and software resources - servers or equipments using for connecting the network. Furthermore, the problem about the cost of copyright of software using for developing e-Learning exists. This problem may be solved by developing freeware system in the institutes (Sombuntham & Theeraroungchaisri, 2006).

What seems to be the problem?

Katz (2001) believes that too many institutions have not considered the use of information technology within the context of their educational goals. To use our technological tools to change education, we must know what is it we are trying to do – what the purpose of education is.

Past research endeavours (eg. Jaber & Moore, 1999) have reported some of the primary reasons or factors include the lack of training and support including inadequate financial support, inadequate time for teachers to develop lessons plans using computers and the accessibility to, and availability, of computers and peripherals; many teachers may also not want to use computers for teaching even when they are available. Leggett & Persichitte (1998) described five important obstacles identified in over four decades of research in technology implementation —lack of time, expertise, access, resources, and support.

In 2004 University of Pennsylvania researchers Robert Zemsky and William F. Massy's wide-ranging study on e-learning concluded that "e-learning took off before people really knew how to use it." What were the problems? Too many ventures, too many untested products and a tendency on the part of vendors to over promise and under deliver — much like the dot com boom of which the movement was arguably a part.

What the designers of successful e-learning courses also learn is that there can be no hidden assumptions: The introduction of new topics, the pace, and other ways of teaching are based on the feedback from students, not on one's intuition or past experience. That's the promise. What's the reality? For the most part, faculty members use the electronics to simplify tasks, not to fundamentally change how they teach their subjects. They readily translate lecture notes into PowerPoint presentations. They use course-management tools like Blackboard and WebCT to distribute class materials, grades, and assignments.

But the materials are simply scanned, and the assignments neither look nor feel different. Even when the textbook comes with an interactive CD-ROM, or when the publisher makes the same material available on a proprietary Web site, most faculty members do not assign it. Only modest breakthroughs have occurred -- in the use of e-mail to communicate rapidly and directly with students and in the adoption of computerized testing materials. For e-learning to come closer to fulfilling its potential, those who promote and support it should talk less and deliver more. E-learning's early adopters must understand that their success depends as much on the context in which they operate as on the power of the technologies they promote. Ultimately, the future of e-learning is linked to the pace of educational change and reform; that means that the full potential of electronically mediated instruction will not be realized unless and until large numbers of faculty members come to believe that they should substantially improve the educational quality of their instruction, especially for undergraduates (Zemsky & Massy, 2004).

Surveys by Bonk (2002) and Collis and Moonen (2001) point to a lack of understanding amongst key players of online pedagogy related to good e-learning design, leading to disappointing completion rates. The problem, it seems, is that the complexity and cost of setting up new e-learning systems requires the active involvement and agreement of six very different key professionals:

- the teacher
- the designer
- the learner
- the technician
- the supplier of software systems
- the institutional manager (budget holder),

Each has a different set of expertise, priorities and concerns. Each speaks a separate professional language making it very difficult to achieve consensus. Usually, the teacher and always the learner are left out of key decisions. And worse, the academic researcher who reviews what works and what does not work is rarely around the table. Coherence of understanding is, as a consequence, difficult to achieve and sustain (Stephenson, 2005). There is no more reason for us to repeat past mistakes. The first correction that must be made is that we must take e-Learning as serious as our existing conventional system taking into account the educational ecology of Internet based education and web-based instruction.

Proposed solutions

Khan (2008) has proposed an interesting framework of considerations for e-learning called the eight dimensions of the framework for e-Learning. The framework takes into account all facets of e-Learning that should be given due consideration, customisable to ones own scenario as can be seen in Figure 1. The eight dimensions are;

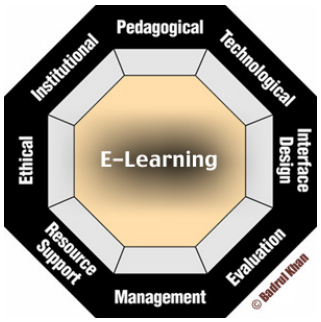

Figure 1 Khan's (2008) framework for e-Learning

- **Pedagogical** refers to teaching and learning. This dimension addresses issues concerning content analysis, audience analysis, goal analysis, media analysis, design approach, organisation and methods and strategies of e-learning environments.

- **Technological** examines issues of technology infrastructure in e-learning environments. This includes infrastructure planning, hardware and software.

- **Interface design** refers to the overall look and feel of e-learning programs. Interface design dimension encompasses page and site design, content design, navigation, and usability testing.
- **Evaluation** for e-learning includes both assessment of learners and evaluation of the instruction and learning environment.
- **Management** of e-learning refers to the maintenance of learning environment and distribution of information.
- **Resource support** dimension of the E-Learning Framework examines the online support and resources required to foster meaningful learning environments.
- **Ethical** considerations of e-learning relate to social and political influence, cultural diversity, bias, geographical diversity, learner diversity, information accessibility, etiquette, and the legal issues.
- **Institutional** dimension is concerned with issues of administrative affairs, academic affairs and student services related to e-learning.

After synthesising the ups and downs of e-learning, we have discovered approaches that are segmented with no coherence in its implementation. We do not have to repeat past practices. Hence, the systemic e-learning orbit model to facilitate for our e-learning efforts is proposed (Idrus, 2008). The basis for the Systemic e-learning Orbit Model (SeLOM) was adopting from Bohr model of the atom where the atomic orbit assumes the e-learning orbit and we shall customise the orbit in terms of e-learning orbitals (components) leading towards a quality learning environment. Figure 2 shows the Systemic e-Learning Orbit Model (SeLOM).

An institution implementing conventional teaching and learning practices (T&L) is assigned as being at the ground state in the e-learning orbit. The introduction of e-learning in the institution is with the intention of elevating the T&L practices to include elements of e-learning. In this case, we shall consider the end result of such an endeavour as e-learning Level1 (e1) or the first excited state, as shown in Figure 2. In the consideration of introducing e-learning, the orbit e1 will contain all the components of e-learning such as the Khan's eight dimensions and any additional component deemed relevant such as stakeholder and technogogy. The components of each level will be determined by each institution based on their own parameters. The e1 orbit MUST stabilise, which means that the key components in the orbit must talk to each other and come to a concensus of what learner managed learning means.

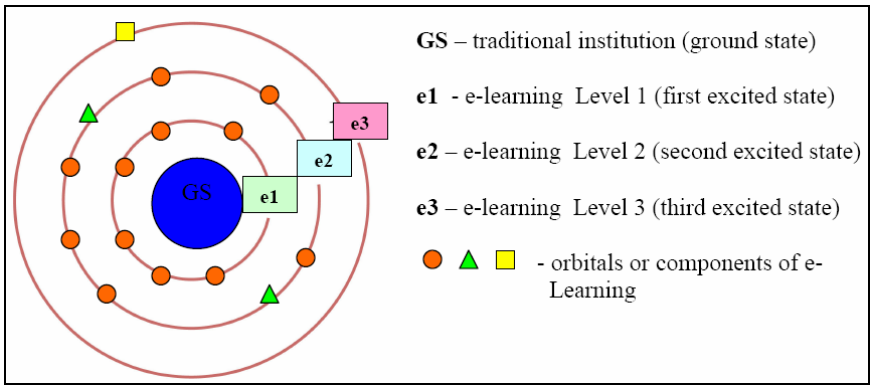

Figure 2 Systemic e-Learning Orbit Model (SeLOM).

he orbit e1 is also subjected to quality checks in terms of learner managed learning pedagogical approach, good ICT practices, pedagogical dimensions when evaluating Computer Based Education (CBE), pledges to learners as well as the return on investment, to name a few (Stephenson, 2005). Only when the e1 level has stabilised can the institution jump to e-learning level 2 or the second excited state (Figure 3).

The emission of the atomic jump between orbits will produce a high quality, pedagogically articulated e-learning environment at level 1 in the e-learning orbit. e1 level must be maintained then on, or it will cause instability in an effort to attain level e2. In the case of drop back to level e1, the component causing the instability will have to be rectified to achieve stability once again.

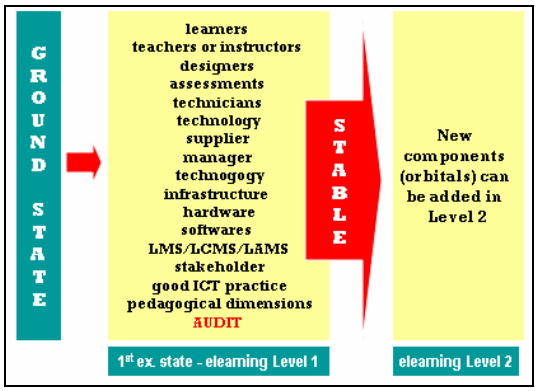

Figure 3 Movement between of levels

The systemic approach allows for the identification of specific components in the orbit that requires attention. The instability can be caused by any orbital or component such as interruption in the network, lack of instructor support, viruses, or outdated learning materials, for example. The systemic approach also allows for new and relevant component (a shown by the triangle and square components on the orbit) to be introduced at any orbit level, as can be seen in Figure 2. When level e2 has stabilised, we can jump to the next level. What is left is a resultant high quality e-learning environment at level 2.

The systemic e-learning orbit model (SeLOM) can also be applied to other electronic media utilized in education but are address under a different designation such as m-learning and the Internet tools-based in Web 2.0 and Learning 2.0.

Institutions need to plan the e-learning endeavours in a blue-print that can be implemented in phases. According to the systemic e-learning orbit model, institutions will have to identify and determine the components and levels of implementation leading to a final desired e-learning environment. The quality assurances and checks at each orbit will also ensure a level *par excellence* before proceeding to the next.

Concluding remarks

The challenge for us in higher education (or at any level, accordingly) is to find ways of giving students real confidence, based on real experience, that they can indeed manage their own learning. The way to achieve this is to give students real experience of managing their own learning, within a critical and quality controlled e-learning environment. The process of learning, in this respect, is also the outcome of learning. Too, we forget that information has meaning and significance only within a framework of interpretation. We have thus far concentrated on the electronics part and management systems. It is time the learning to make an appearance. It is time to address the individual learners in a way e-Learning can manifest its far-reaching capacity and capability.

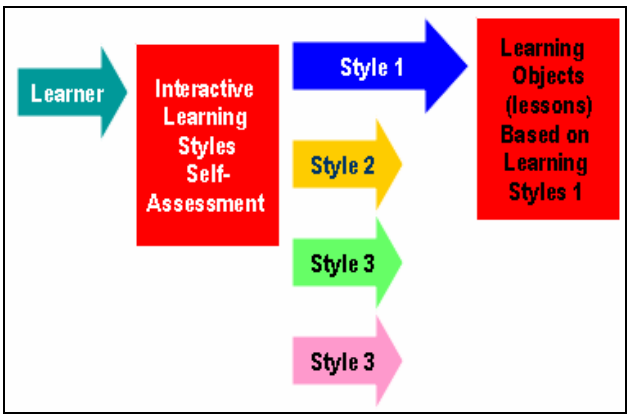

Figure 4 Construction of learner-centred learning objects

It is time for the construction of learning objects that conform to the learning need and preferences of the learners. Despite the lip service paid to individual differences, traditional education has failed to move away from the group mentality that has driven it for so many years. The very language of education, which separates students into grades, classes, honors, average, even learning 'styles,' forces the mind into perceiving groups, not individuals.

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Online Learners' Interaction and Characteristics in Relation to Achievement and Satisfaction*

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Abstract

This paper aims to identify and assess the variables that contribute to the successful delivery of online instruction in terms of learners' interaction and characteristics.

A 20-item survey questionnaire was used with a forced-choice response scale (no middle neutral or undecided choice). It was distributed to forty-six (46) online learners enrolled in the master's degree program in one of the State Universities in the Philippines. The focus of the questions was on the areas of learners' characteristics and their interaction with peers, content and instructor as well as their satisfaction in the course. The data obtained was then used in a 2^3 factorial design of experiment in order to identify the optimum combination of learner's interaction with his environment in relation to academic performance. The study also used Pearson moment of correlation to determine relationship on all variables.

From the eight possible combinations of learner's interaction with his environment, high level of interaction with content and peers provides the highest academic performance in a qualitative course. This interaction occurs two to three times a week for two to three hours. However, high level of learner's interaction with the content and with the instructor provides the highest academic performance in a quantitative course. Frequency of access in course website(r=. 707) and frequency of learner-learner interaction(r=. 504) found to be strongly related to student satisfaction.

The interaction with the content and one's peers represents an active form of learning for online instruction in a qualitative course. However, in a quantitative course, instructor and course documents are vital factors in an online instruction setting.

Since Learner-learner interaction affects the overall experience in both courses, it must be always present in online instructional delivery. This way, adult learners would not only benefit from the online instruction but also young learners as well who want to interact regularly with them. Consequently, authentic learning will be achieved.

Keywords: Online Instruction, Learner-Content Interaction, Learner-Learner Interaction, Learner-Instructor Interaction, Learning Environment, Factorial Design

* This paper was based on a thesis project conducted by the main author

1. INTRODUCTION

As early as 1916, John Dewey referred to interaction as the defining component of the educational process that occurs when the student transforms the inert information passed to them from another and construct it into knowledge with personal application and value (as stated in Craig, 2005). The overuse or misuse of interaction strategies can lead to boredom, overload and frustration (Berge, 1999). In this regard, online designers need to assess the quantity or frequency and quality of interaction required in the course in order to support learners in achieving the learning outcomes.

2. RESEARCH OBJECTIVES

In view of all the related literature and several studies on the factors that lead to successful and quality delivery in online learning. Existing researches (Bradley 2005, Johnston, J. 2005, MacDonald,C. 2005, Debourgh 2003, Mcgorry 2003, Lionarakis and Papademetriou 2003, Walker,S. 2003, Rollins,J. 2002, Jiang,M. and Ting,E. 2000) encompass survey research techniques and gaps existed on how the use of interaction contributes to the learning outcome and satisfactions of online learners. In this regard, this paper seeks to address the following questions:

1. Which learner's interaction and its frequency affect the student's achievement and satisfaction in the course?
2. Is there a significant relationship between the learners' characteristics and the degree of interaction?
3. Is there a significant relationship between learners' characteristics and student satisfaction?

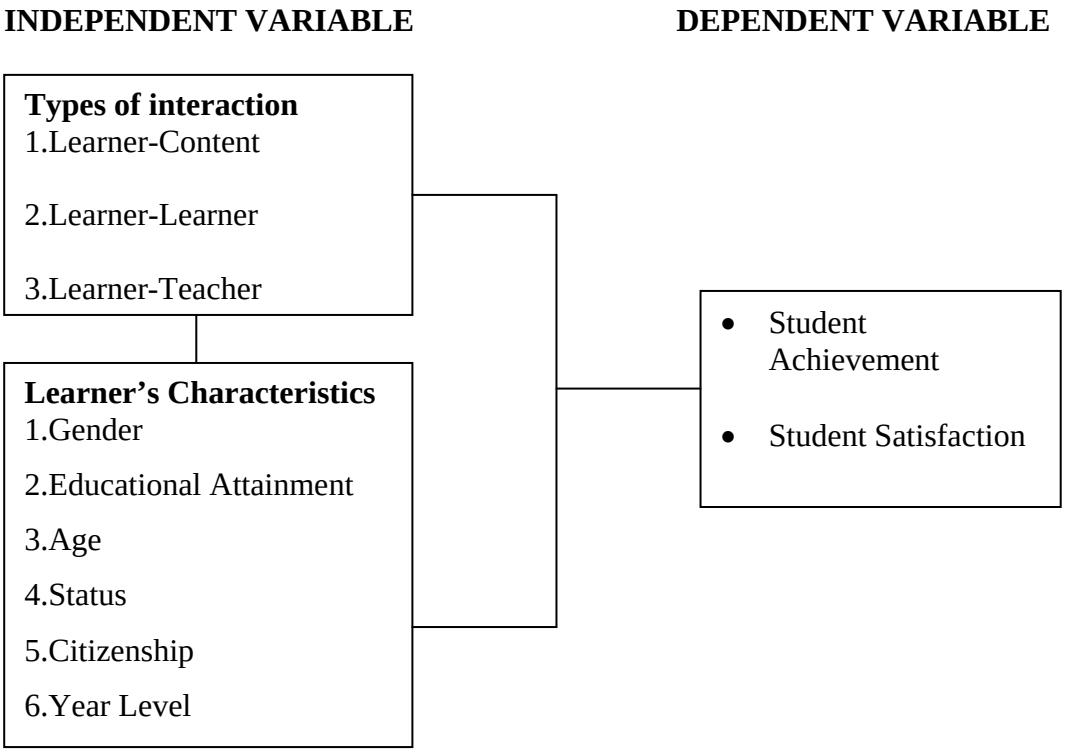

Fig.1 – Conceptual Framework

As seen in the above figure, one of the independent variables is the type of interaction. Moore (1989) has identified the three types of interaction: learner-content, learner-learner, and learner-instructor. Learner-content interaction occurs when student reads course documents, modules, books; views lecture videotapes or listens to audiotapes. According to Holmberg (1983), in order to master the content, the learner should engage in an internal didactic conversation. Learner-learner interaction takes the form of group projects; discussion with the group member, etc. The role of learner-learner interaction to the overall effectiveness of online instruction in the literature was mixed. Some students reported that other learners were essential to their success, while others commented that fellow learners detracted them from their success (Biner, Welsh et al. 1997). In learner-instructor interaction, the instructor provides an organized plan or curriculum, course modules and communicates with the learners throughout the learning process. Moore (1989) argues that learner-instructor interaction is a crucial component that facilitates the other two interactions and creates an effective learning environment. The most frequent form of communication between faculty and learners was using email as cited by Cain (2005) and ranged from daily to weekly contacts.

Another independent variable is the learner's characteristics, which are commonly viewed in educational research to form a hypothesis or conduct analysis (Cain, 2005). It is the concept of this study that the independent variables affect the student achievement and satisfaction in the course. Moreover, the independent variables which are learners' interaction and characteristics might have a significant relationship with each other.

3. METHODOLOGY

The primary sources of data were the enrolees in a master's degree in a certain State University during the second semester of school year 2005-2006. Questionnaires were distributed randomly to the forty-six online learners during the face-to-face assembly with the approval and support of the instructors in each class. A cover letter was attached to ask the students to volunteer to participate in the study. Emphasis on the confidentiality of the information was discussed as utmost consideration. There were 20-item questions focusing on the following areas: Learner's characteristics (item 1-10), importance and level of interaction with the content (item 11-12), Interaction with co-learners (item 13-14), Interaction with the Instructor (item 15-16), interaction with the technology (item 17A-17F), student satisfaction with the course (item 18-20). The questionnaire used a force-choice response scale with no middle neutral or undecided choice. Likewise, the proponents sought the help of the two experts in this field in order to validate the content of the survey questions to ensure that it measures the different variables set in the study. Reliability test was also conducted by having it pre-tested to the ten online learners, and analyzed the consistency of it through the use of Cronbach Alpha. The reliability result is .686, which means that the survey questionnaire worked within the confined conditions to ensure that it is consistent and accurate. The questionnaire was developed to gather data in order to measure the independent variable of interactivity and learners' characteristics in relation to the dependent variable, which are student achievement (i.e. final grade) and student satisfaction.

The final grade was obtained with the approval of the instructor and the respondents. Interview was also conducted to the randomly selected students and instructors. The data obtained was then used in a 2^3 factorial design of experiment in order to identify the optimum combination of interaction with his in relation to academic performance and student satisfaction. Pearson moment correlation was also used to test the relationship on all variables.

4. RESULTS

4.1 **Learners' Characteristics**

The learners' characteristics were reflected by their gender, educational attainment, age, status, citizenship and year level.

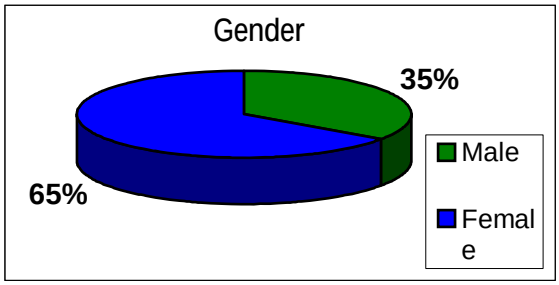

Fig.2-Gender Distribution

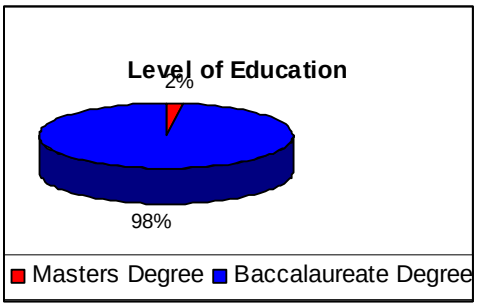

Fig.3 – Level of Education Distribution

Majority of the learners are female. Likewise, almost all of the respondents' level of education was a baccalaureate degree. Two percent (2%) of the total respondents have already earned master's degree. This will reflect that despite of having earned a master's degree, there are some who wishes to continue with their learning.

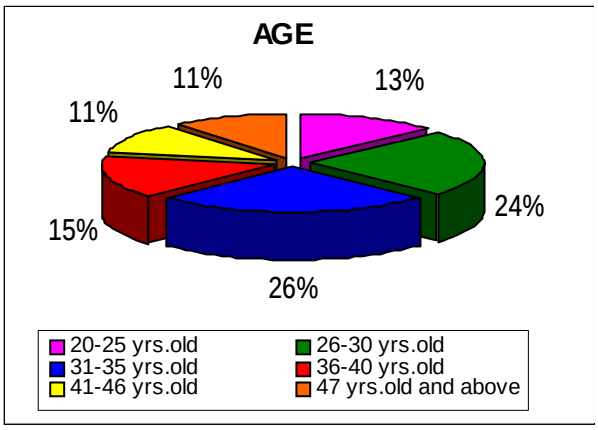

Fig.4 - Age Distribution

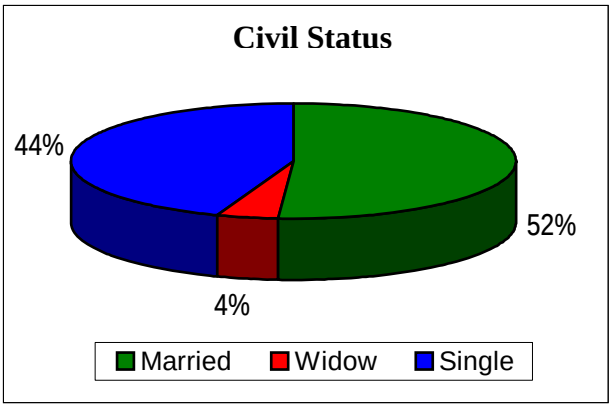

Fig.5 – Civil Status Distribution

The age of the majority of the learner's falls between 31 – 35 years. Old and most of them are married. They can be considered as adult learners.

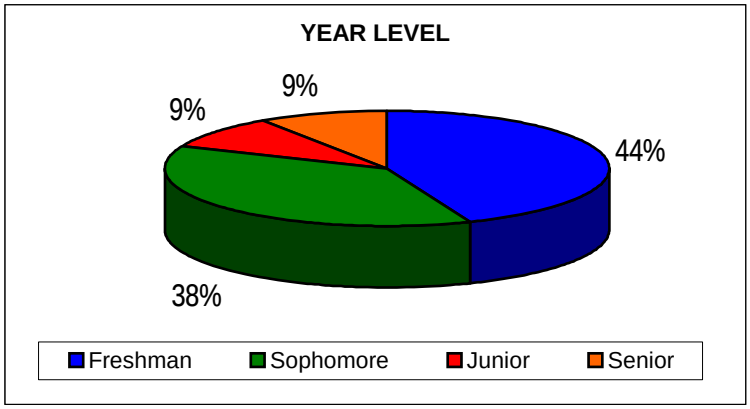

Fig.6 – Year Level Distribution

Moreover, Forty four percent (44%) of the respondents were in their first year of learning in an online instruction. All respondents are Filipino.

4.2 **Eight combination of treatment in 2^3 factorial design**

There are eight combinations that a learner uses in interacting with his learning environment as shown on the table below.

Table 1 - Eight combination of treatment in 2^3 factorial design

Run	Factor A (LC)	B (LL)	C (LI)
1	-	-	-
2	+	-	-
3	-	+	-
4	+	+	-
5	-	-	+
6	+	-	+
7	-	+	+

The first column named as run is the treatment combination. The factor A B and C are designated as the learner's interaction with his environment that is learner's interaction with the content, with his peers and with his instructor. The negative sign (-) is assigned as low-level interaction, which is for the responses of: never and occasional. For the responses of never, it means that respondent had not interacted with his learning environment, while occasional means that respondents had interacted with his learning environment once a week for one to two hours. The positive sign (+) is assigned as high-level interaction, which is for the responses of often and always, in this case, the learners had interacted with his learning environment more than twice a week for three to four hours.

The forty-six (46) respondents who are taking the same master's degree program came from the three different courses offered during the second semester of school year 2005 to 2006. Twelve (12) respondents came from Philosophy and Science in Public Administration, nineteen (19) respondents came from Statistics in Public Administration and fifteen (15) respondents came from Leadership and Organizational change. The latter is a major subject while the two remaining is a core subject. Using the obtained data and values (i.e., final grade) under the treatment combination as shown in table 1, the results reflected that there is a significant difference with the qualitative courses and the quantitative course having a p-value less than .018 ($p < .018$). However, the two qualitative courses investigated showed no significant difference with the final grade having a p-value of .082(p=. 082). The following figures depicted the spread of final grades with respect to the different treatment combinations of the different courses.

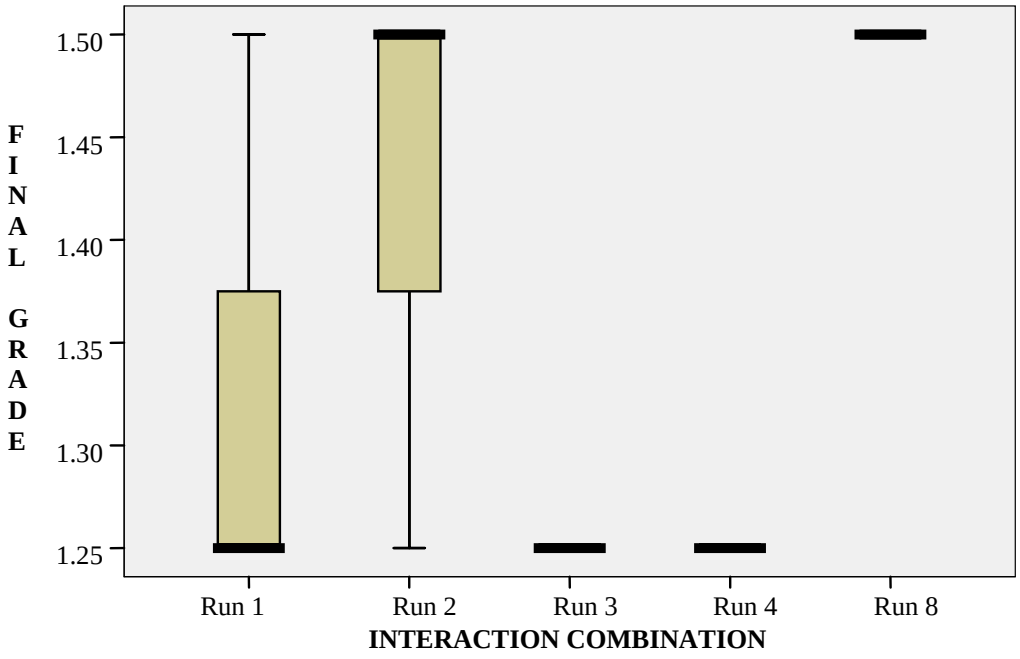

Fig.7 - Learners' interaction combination used in Philosophy and Science in Public Administration

This qualitative course is concerned with the major theories of administrative organization. Run 1 and Run 2 are the most occurring combination used by the learners. However, Run 3 and Run 4 seem to be more effective in achieving the favorable grade since there is no variability present in these treatments. Run type 5, 6, 7 were not used in this course by the respondents. The highest final grade that can be attained in the course is 1.0 and the lowest grade is 5.0.

Run 1 is a treatment combination composed of learner's low-level interaction with the content, his peers and his instructor. On the other hand, Run 2 is a treatment combination composed of learner's high-level interaction with the content but low-level interaction with peers and instructors. Run 3 is a treatment combination composed of learner's low-level interaction with instructor and content but a high-level of interaction with his peers. For example, Run 3 means that learner's interaction with the instructor and content is once a week for one to two hours and his interaction with peers is twice or more a week for three to four hours. This follows the same with the other run type with their designated level of interaction.

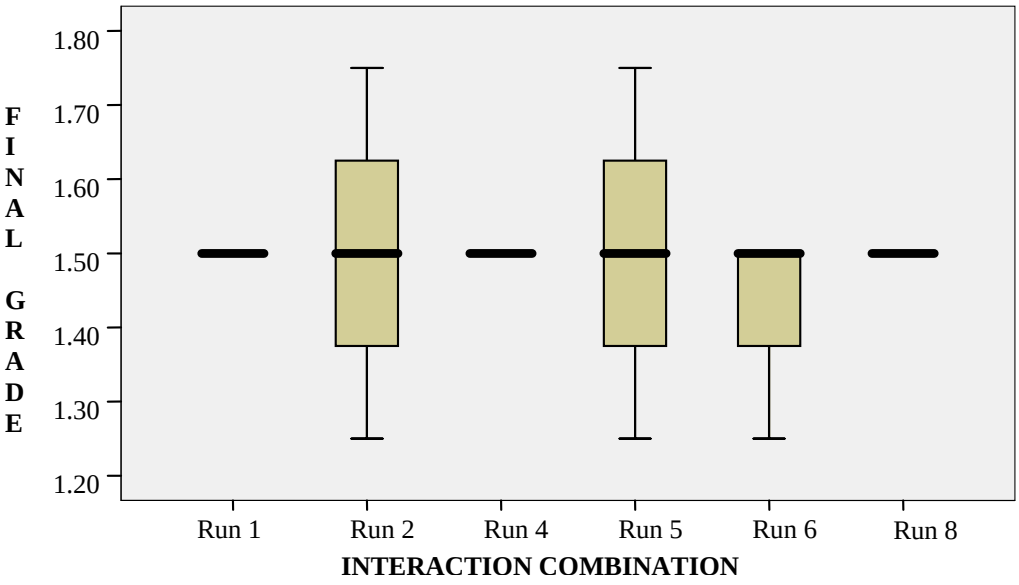

Fig. 8– Learner's Interaction combination used in Statistics in MPA

This quantitative course is designed to introduce students to basic statistical concepts and methods that are relevant to public policy and research. The most occurring learner's interaction combination for this course is Run 1. All of them got a final grade of 1.5. Run 2 and run 5 have the same distributions of grades as reflected in their minimum and maximum grades achieved. With the informal interviewed conducted by the proponents to the several learners, the course material in this subject is limited to printed materials taken from the reference books. Run 6, which represents high interaction with the instructor and content and low level of interaction with peers had indicated favorable outcomes among the run type since it has lesser variability compared with Run2 and Run 5 and also achieved a higher average final grade over Run1, Run 4 and Run 8.

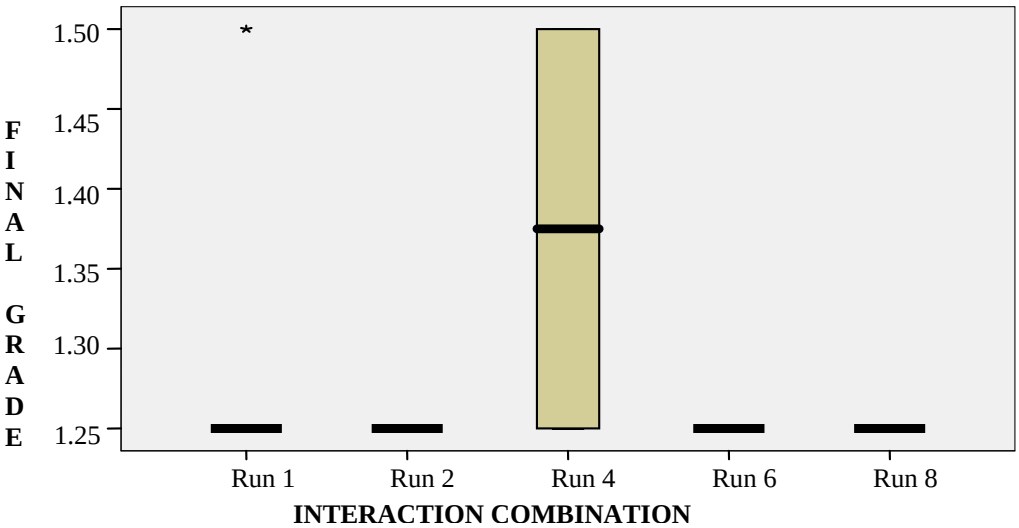

Fig. 9- Learner's Interaction combination used in Organizational and Leadership Change

The above figure shows the learners' achievement in another qualitative course where it concerned with the structure and mission of public administration, the role of administrative leadership in applying theory to solve organizational problems. Run 4 treatment combination reflects a greater variability as compare to the other treatment combinations used in this course. The remaining treatment combinations present in this course have resulted in the same learning achievement, which has a final grade of 1.25, where it indicated a favorable outcome.

4.3 **Students Satisfaction**

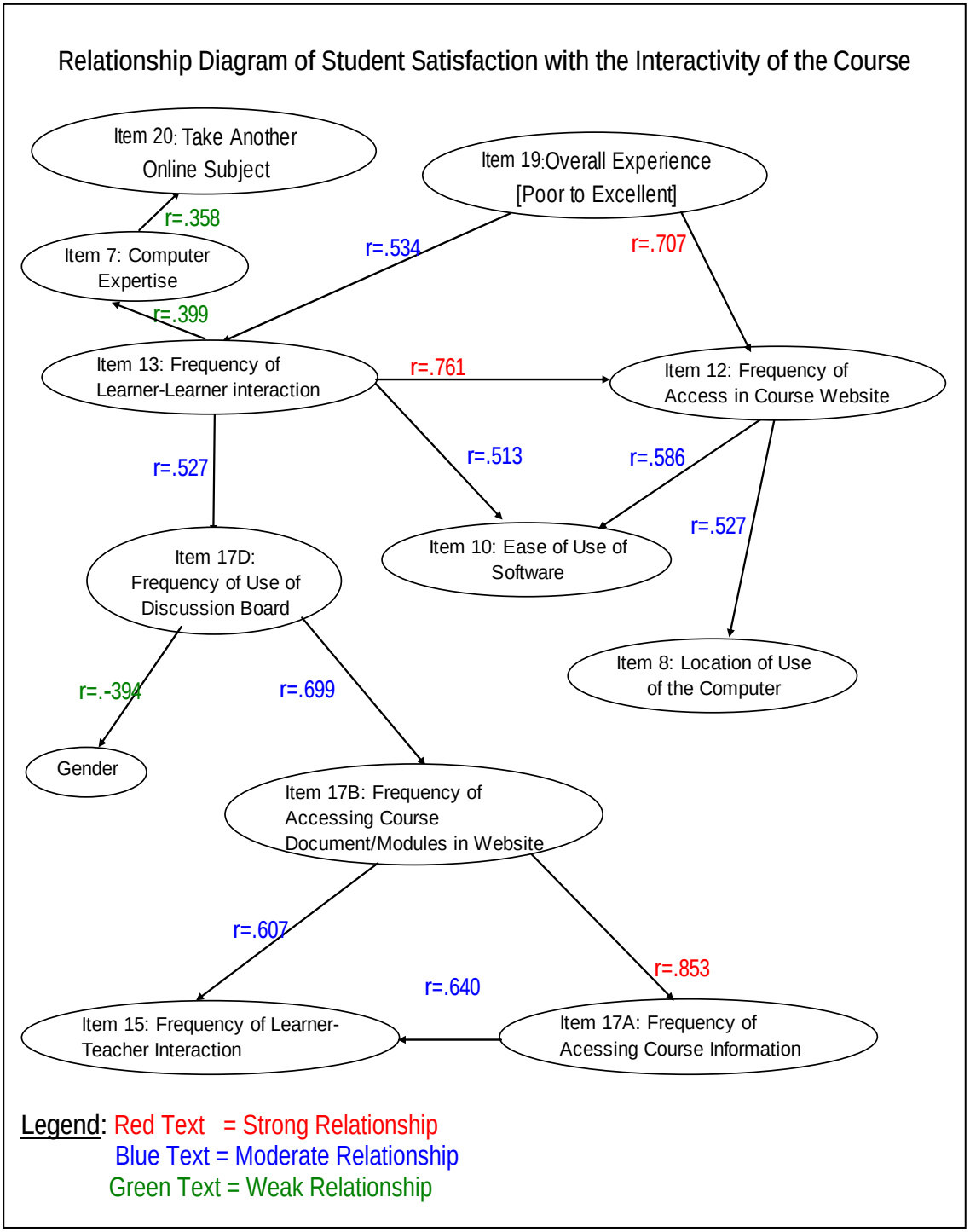

Fig.10 - Relationship Diagram of Learner Satisfaction with the Interactivity of the Course

The student satisfaction in the course is an indicator of the degree to which the learners are pleased in the service of the university in terms of comparing their expectations as against their perceived experience. In the survey questionnaire, item 18, 19 and 20 measures the student satisfaction in the course. As depicted in the figure above, there is a strong positive relationship of the overall experience in the course to the frequency of accessing the course website, having a correlation coefficient value of 0.707. About 54.2% of the total respondent stated that they access the course website occasionally or once a week. Frequency of learner-learner interaction also affects the overall experience in the course. The learner-learner interaction takes place when they post message to the discussion board or to the e-mail. The data gathered revealed that 52.2 % of the total respondent post message to the discussion board occasionally or once a week. It is interesting to note that gender has a negative relationship with the frequency of use of discussion board (r=-.394). Majority of the learners are female and most of them are married, this will show that the greater the frequency of use of the discussion boards the lower the female participants. Therefore, it validated the study of Hayek & Kuh (1999) and Hu and Kuh (2000) that there is a slight inclination that men are frequent users of technology and are more likely to benefit compared to women. Level of computer expertise somehow affects the frequency of interaction with the co-learners (r=0.399). From the total respondents, 95.2 % rated themselves as intermediate to advance intermediate in computer proficiency. Moreover, computer proficiency affects the chance of taking another course or subject online(r=0.358). The higher the computer literacy the higher the chance of taking another course online, it shows that they empowered themselves with the navigation in the course website, course documents and the several tools available to them in the course website.

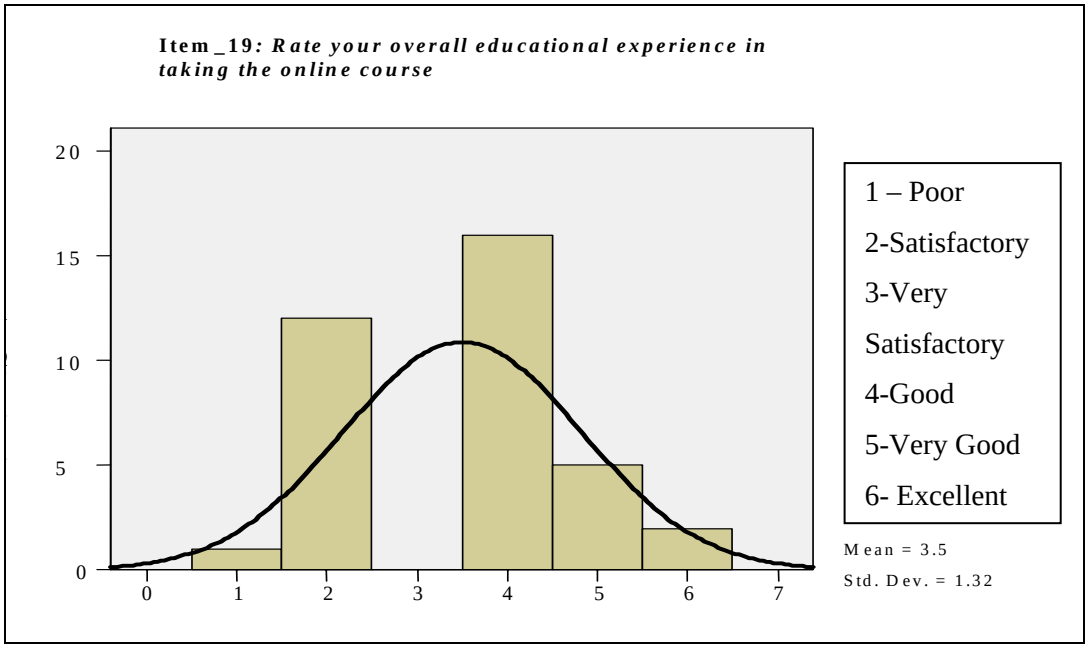

Fig. 11 – Graphical illustration of the learners' overall experience in taking the course

The overall rating of all the respondents to their courses taken has a mean value of 3.5. In this regard, learners' rate the course between very satisfactory to good.

5. Conclusions

The interaction with the content and one's peers represents an active form of learning for online instruction in a qualitative course. However, in a quantitative course, instructor and course documents are vital factors in an online instruction setting.

Since Learner-learner interaction affects the overall experience in both courses, it must be always present in online instructional delivery. This way, adult learners would not only benefit from the online instruction but also young learners as well who want to interact regularly with them. Consequently, authentic learning will be achieved. In enclosing, learner's knowledge of using technology has great effect in the successful experience in an online learning.

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Borderless Education: Challenges and Opportunities for Sri Lankan Universities

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Abstract

As in other countries, the demand for higher education is continuously increasing in Sri Lanka. Of around 120,000 students who qualify for higher education every year, only about 20,000 are selected to the 14 state universities other than the Open University. The education at these 14 state universities is free and in addition, around 75% of the students get a monthly stipend by way of a scholarship or bursary. Therefore, the demand for state universities is extremely high.

Around 5,000 students register annually at the Open University of Sri Lanka and another 40,000 register for open and distance learning courses at the conventional universities. Of the balance number, some go abroad for their higher studies and most follow the courses at private Higher Educational Institutions (HEIs). Some of the private HEIs conduct classes for the examinations of professional institutions located abroad and students sit for examinations on-line. Some others prepare students for the examinations of foreign universities that are conducted in Sri Lanka.

Therefore, due to extremely limited number of places available in the state universities and large number of students who qualify for university education, there is a high potential for borderless education in Sri Lanka, which has been exploited by many private HEIs.

These private HEIs are registered under the Registrar of Companies or Board of Investment (BOI). However, majority of them have not obtained the approval of the UGC. Some of the private HEIs, which have affiliations with foreign universities do not have even basic physical and human resources, and the poor quality of education provided results in many students failing examinations and abandoning the courses after spending large amounts of money. In addition, some of these private HEIs, which claim affiliation to foreign universities are found to be bogus institutions.

However, the private HEIs which have received the approval of the UGC and BOI offer degrees from prestigious foreign universities and their graduates are readily acceptable in the employment market. They have an advantage over most of the graduates of state universities due to their fluency in English, better IT knowledge and communication skills.

Some of the Sri Lankan universities are also engaged in borderless education through private HEIs in some Asian countries. However, this is mainly for subjects such as Buddhist Studies.

Keywords: Sri Lanka, Borderless Education, Buddhist studies, private HEIs

Introduction

In Sri Lanka, there are 15 universities under the University Grants Commission (UGC), two universities which come directly under the Ministry of Higher Education (MoHE) and the Defense University under the Ministry of Defense. The 15 universities which come under the UGC include 14 conventional universities and the Open University. Sri Lanka is one of the few countries in the world, which provides university education free of charge. In addition to free education, about 75% of the students enrolled in state universities are provided with a monthly stipend through scholarships or bursaries.

In addition to above universities, there are 74 private Higher Education Institutions (HEIs) throughout the country. Of these, five have been recognized by the UGC and granted the degree awarding status (Rajapakse 2008). These five HEIs, although not named as Universities, are authorized to award degrees in some identified fields. All these private HEIs are registered under the Registrar of Companies or the Board of Investment. The Private HEIs, which do not have the degree awarding status are franchised institutes or external campuses of foreign universities or professional institutions. They train students for the examinations of these universities or professional institutions and the degree/professional qualification is awarded by the respective foreign university/professional institution. However, majority of these private HEIs are not approved by the UGC. Some of these private HEIs, which conduct classes for the examinations of foreign universities, do not have even basic physical and human resources. The poor quality of education provided by them results in many students failing the examinations and abandoning the courses after spending large amount of money and wasting time. In addition, some of the private HEIs, which are operating in Sri Lanka are found to be bogus institutions (Peiris and Ratnasekera 2007).

In addition to these private HEIs that train students for the examinations of foreign universities/institutions, there is another group of private HEIs which train students for the external degree examinations of local universities. However, most of them are not registered under any authority. As such, there are no statistics on the exact number of such institutions.

The Demand for Higher Education

Every year, about 120,000 students pass the General Certificate of Education (Advanced Level) Examination, which is also the university entrance examination. However, due to limited number of places available, only about 20,000 students are admitted to the conventional universities which are under the UGC. Of the remaining number, about 5,000 register at the Open University and about 40,000 register at the conventional universities to follow the degree courses through open and distance learning mode. Of the balance, few get employed, few go abroad and many follow professional courses or degree courses of foreign universities offered through private HEIs. As such, there is a high demand for professional courses and degree courses offered at the private HEIs.

The selection procedure to the conventional universities is as such that for courses other than Arts and Indigenous Medicine, students are not selected purely on merit; only 40% are selected on merit, 55% are selected based on the population of each administrative district and 5% are selected from the administrative districts which are considered to be educationally disadvantaged districts. Of the total number of 25 administrative districts in Sri Lanka, 16 are considered to be educationally disadvantaged districts (UGC 2007). Therefore, many students who have scored less marks at the G.C.E. (Advanced Level) examination than that of some of the students in the districts which are considered to be educationally advantaged districts, get admitted to the 14 national universities for science based courses such as Medicine, Engineering, Information Technology, Computer Science, Biological Science, Physical Science and Environmental Science as well as for Management courses. Further, the students from so called educationally disadvantaged districts, who have scored low marks get selected to more prestigious courses while those who scored higher marks than those students, get selected to not so prestigious courses. This is clearly evident from the data given in Table 1. The students who have got selected for Medicine from the Nuwara Eliya District, which is considered to be an educationally disadvantaged district, have got less marks than those who have got selected for Nursing from the Colombo District, which is considered to be an educationally advantaged district. This results in a group of doctors, who had poor results at the GCE (Advance Level) Examination than that of the nurses. This system of University admission based on educationally disadvantaged districts was introduced in 1974 and even after 34 years, it is in operation although there are many educationally disadvantaged schools in the districts which are considered to be educationally advantaged. Further, many students of so called educationally disadvantaged districts come to city centers to attend private tuition classes, which is another big industry in Sri Lanka today. However, still this system introduced in 1974 prevails, resulting in non admittance of many students who have faired better at the G.C.E. (Advanced Level) examination than some students who get admitted to the 14 conventional national universities of the UGC. These students who do not get admitted to the 14 national universities seek alternative sources of higher education. Therefore, some of the students who go abroad and/or follow professional/degree courses at the private HEIs are those who have faired better at the G.C.E. (Advanced Level) examination than some of the students who have got admitted to national universities. As such, the demand for courses at private HEIs is extremely high in Sri Lanka.

Some parents, even their children get selected to national universities, are reluctant to send them to those universities due to many reasons. Some parents do not send their children to the universities located in provincial areas, instead they admit them to private HEIs. Another reason for not sending children to state universities is the ragging where the new students are subjected to mental and physical harassment by senior students. Although this is prohibited by law, at some universities, such mental and physical harassments still take place.

Therefore, some of the more affluent parents send their children to private HEIs where such mental and physical harassment is not in existence. Another reason for the reluctance of sending children to state universities is the frequent closure of those due to student protests, riots and clashes. Sometimes, two student fractions with opposite political ideologies fight with each other resulting in the closure of universities. Sometimes, the students protest against the administration, which also results in the closure of universities. Therefore, it is very rarely that the students in state universities complete their study programmes within the stipulated time. However, in private HEIs, such protests, riots and clashes do not take place and students graduate within the stipulated time period. Therefore, some of the affluent parents prefer to send their children to private HEIs rather than sending them to state universities. Due to this multitude of factors, there is a high demand for higher education provided by private HEIs which offer professional courses and degree courses of foreign universities.

Challenges for Sri Lankan Universities

One of the main challenges faced by Sri Lankan universities due to borderless education is the retaining of qualified staff. The qualified and talented staff members are attracted by the private HEIs that conduct classes for the degrees of foreign universities offering them better remuneration. This happens especially in the fields of Information Technology and Computer Science.

In addition to retaining qualified staff, it has also become difficult to recruit young graduates who have faired well at the degree examinations to the academic staff because they are also attracted by these HEIs for better remuneration.

Other challenges faced by the Sri Lankan universities are to keep the curricula updated to be in par with those of the HEIs that train students for the degrees of foreign universities and to produce graduates who can compete in the employment market with the graduates of these private HEIs. At present, most of the state universities are updating their curricula regularly to keep up with the modern trends and are also taking action to enhance the subject specific skills and soft skills of the undergraduates. This has been encouraged by the external quality assessments of academic programmes carried out in Sri Lankan universities at present. In the external quality assessments, special attention is paid to curriculum design, content, and revision, and skills development. When assessing curriculum content and revision, attention is paid to find out whether the curricula are designed to incorporate the recent developments in the subject, whether contents are of sufficient depth and breath and whether regular revisions are carried out considering the inputs from all stakeholders including alumni, potential employers, and experts in the field. In this way, local universities have taken action to face the challenge of updating curricula.

Skills development is another aspect which is evaluated in external quality assessments. The skills include not only the subject specific skills but also the communication skills, IT skills and soft skills. State universities in Sri Lanka are paying much attention to develop English communication skills and IT skills among their undergraduates. Special English and IT classes are conducted during the orientation period of new entrants. In addition, English and IT courses are included in the curricula of degree programmes. Some universities have made it compulsory to pass English courses in order to graduate.

Much attention is also paid to develop soft skills among the undergraduates. Many workshops are conducted with the participation of potential employers from the public and

private sectors to develop soft skills. These are generally organized by the Career Guidance Units which have been established in almost all state universities. In addition, the academic departments encourage co-curricular and extra-curricular activities as these also help to develop soft skills among undergraduates.

With the paying of much attention to develop the skills expected by the potential employers, the universities in Sri Lanka have addressed the challenge of enhancing employability of their graduates.

However, even though the Universities have taken action to update curricula and develop life skills among the undergraduates, frequent clashes among the student groups with opposite political ideologies, which are highlighted in mass media tarnish the names of state universities which will ultimately affect academic activities as well as the employability of their graduates. In addition to these clashes, there are frequent protests on government policies and also protests requesting the enhancement of facilities. If the protests and clashes are uncontrollable, the authorities close the universities which results in disruption of academic activities and prolongation of the academic year. These student protests are spearheaded by a minute group of students who are mostly backed by some political parties of the country.

Therefore, another challenge for state universities is to minimize if not to eradicate these student clashes, which reduce the employment prospects of the graduates as well as tarnish the names of the state universities. Many actions have been taken by the state universities to reduce these clashes. These include educating the students on the adverse impacts of these activities, making a public outcry against these uncivilized actions, liaising with parents, taking legal action against the students who are responsible to those clashes etc. However, since the student activities are backed by outside political forces, the efforts taken by the university authorities sometimes become in vein.

Opportunities for borderless education

Since there is a large number of students who cannot get into a national university although they fulfill basic entry criteria, there are vast opportunities for Sri Lankan universities to cater for these students through the open and distance modes of learning. Many of the major universities in Sri Lanka, other than the Open University, have already started such courses, which have a high demand. These include the Bachelors degree programmes in the fields of Arts, Humanities, Social Sciences, Commerce, Science, Information Technology and Management. There is a higher demand for such courses offered through conventional universities than those offered by the Open University. Therefore, there is a high opportunity for Sri Lankan conventional universities to extend the education beyond their physical boundaries.

In addition to offering such open and distance learning courses within the country, there is a potential to offer such courses outside the country too. This exists specially for some subjects such as Buddhist Philosophy, Buddhist Culture, and Pali, which have a considerable demand in some Southeast Asian Countries.

Conclusion

Due to high demand for higher education and limited number of vacancies available in the state universities, there is a high potential for borderless education in Sri Lanka which is exploited by private HEIs offering courses of foreign universities. As a result, the state universities have to face many challenges including retention of qualified teachers, attraction of good students and production of competitive graduates. Frequent clashes among student groups having opposite political ideologies, backed by the political forces outside the universities had sometimes adversely affected the employability of graduates of state universities in the private sector, resulting in better employment prospects for graduates produced by private HEIs through borderless education. Conventional state universities also have a high potential for borderless education through open and distance mode of learning within Sri Lanka as well as in the Southeast Asian region.

Table 1: Cut-off Z scores for the Colombo district, which is considered to be an educationally advantaged district and the Nuwara Eliya district, which is considered to be an educationally disadvantaged district for some selected courses in 2007 (Source: UGC 2008).

Course	Colombo	Nuwara Eliya
Medicine	2.0357	1.4042
Dental Science	1.9696	1.3746
Molecular Biology and Biotechnology	1.9462	1.3583
Veterinary Science	1.8640	1.2707
Medical Laboratory Technology	1.7391	1.3168
Physiotherapy	1.7351	1.2487
Radiography	1.5341	1.1747
Nursing	1.4275	1.0411
Pharmacy	1.6963	1.2213
Biological Science	1.4696	0.8759

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The Borderless World:
Is It Time to Eliminate University Boundaries in Thailand?

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Abstract

The strong force of globalization in the 21st century has eroded the significance of national boundaries causing a free flow of goods, services, information and education across the globe. In such a borderless world, knowledge is viewed as a key determinant of economic competitiveness and success, thus, transforming the industrialized economy which emphasizes labor and capital into a knowledge-driven economy. In the new economy where knowledge is power, education is an indispensable tool for empowering individuals with the skills, attitudes, and values necessary for continuing human and economic development. Higher education in particular is seen as a driver of change, for its mission is to ensure that graduates have the ability to respond to the strong demands for societal changes, and national and global economic competition. Realizing the necessity for producing quality manpower, Thailand has enacted the National Education Act 1999—the reform of education in various areas with the hope of advancing the country as a knowledge-based and self-sufficient society that can profit from innovations and increased competitiveness in the global arena. However, there is relatively slow progress in higher education reform owing to a number of barriers in the education system. This paper thus explores the existence of boundaries within the Thai university context including boundaries between: the real world and academia; the dominant and emerging paradigm; the teacher and the student; and the conventional learning environment and the community of learners. In minimizing these boundaries and achieving the goal of educational reform, the paper then proposes that university administrators take the following schemes into consideration: redesigning real-world based curriculums; transforming the instruction paradigm into the learning paradigm; reconceptualizing the teacher's role; and restructuring the learning environment and its physical organization.

Globalization: Borderless World & Borderless Education

In this 21st century no buzzword is more popular than "globalization." The term evokes a world with a continuous flow of economic, financial and cultural activities, and services. The globalization phenomenon has generated new terms including "borderless world" and "borderless education." The former term acknowledges the disappearance of national boundaries which has opened up new opportunities for people to benefit from a greater freedom of choice and to conduct businesses across the globe. The latter term emphasizes the actual or virtual mobility of students, teachers, knowledge and academics from one country to another, or so-called "transnational education" (Knight, 2002). To pursue transnational education, the World Trade Organization, through negotiations on the General Agreement on Trade in Services (GATS), requests that countries reduce national barriers such as national legislation and higher education policies, visa and customs regulations, intellectual property rights and the quality assurance arrangements. The term "borderless education," according to Middlehurst (2006), also describes the provision of education that crosses the traditional boundaries of time, space, and geography. As such, borderless education in this sense is often referred to as "virtual learning," "web-based learning/instruction," "cyberspace learning environments," "online learning," or "electronic learning." All of these terms are often used interchangeably.

The popularity of virtual learning is on the rise in the borderless world owing to the rapid advancement in Information and Communication Technology (ICT). In Thailand, a number of universities are striving to develop e-Learning courses and programs with aims to pursue lifelong learning and offer unprecedented access to quality education. Some institutions such as Assumption University, Rangsit University, and Thailand Cyber University—a consortium project of 27 universities under the supervision of The Commission on Higher Education—even go further in providing online certificates, baccalaureates, and postgraduate degree programs in several areas for non-traditional students—learners who, for a variety of reasons, are unable to attend formal education and are most likely to benefit from learning without limits. There is no doubt that borderless education of this type is a breakthrough in the integration of technology into the education system and thus has a promising future in education markets. Nonetheless, there is still a scant prospect for online education to become a real competitor to current formal education. Higher costs for online development, inequality of access to Internet, concerns about acceptance of online instructions or value of online learning, and acceptance of online degrees by potential employers are seen as barriers to widespread implementation of virtual education. In addition, a deeply rooted Thai culture that values graduates from traditional universities is a factor affecting students' decisions whether or not to pursue this new educational alternative. In short, it can be said, there is still no guarantee that cyberspace learning environments can do an equal or a better job than the types of campus-based or site-based universities, which have served the needs of Thai learners for more than a hundred years.

Borderless World: Knowledge Economy & Education Reform

In a borderless world where boundaries in education are diminishing their significance, no country has a monopoly on 'knowledge.' Facilitated by the power of ICT, knowledge, once put forth, can cross national borders and pervade the world much more easily than can physical capital or people. As a result, the old economy emphasizing only labor and capital has gradually evolved to a knowledge-based economy in which value is put on intellectual capital. As knowledge is a crucial determinant of advance in the global economy, nations must enhance and improve their workforce for overall efficiency. Each country needs manpower equipped with the

skills, attitudes, and values necessary for continuing human and economic development. Education, therefore, is seen as an agent of change. The main challenge facing higher education in particular is to assure that graduates have the ability to respond to the strong demands for societal development, and to national and global economic competition. But to achieve this, higher education systems need to ensure sufficient quality to enable the full benefits of education to be realized.

In Thailand and elsewhere, the demand for competitive advantage in the global knowledge economy has led governments to enact the reform of education as a key factor in strengthening competitiveness, employment and social cohesion. As indicated in the 1999 National Education Act, a better quality of education will improve the country's development in terms of economics, politics, society and culture. It is hoped that through education reform, Thailand will become a knowledge-driven and self-sufficient society that can profit from innovations and increased competitiveness in the global economy.

University Boundaries in Thailand

One of the Thai education reform goals is to enable learners "*to acquire critical thinking skills, abilities for problem-solving; creation of innovations and desire for lifelong learning; ability to create new tasks; self-adjustment to the world of work; self-dependence; and capability of attaining social benefits"* (Office of the Education Council, n. d., p. 19). This, however, has posed tremendous challenges confronting the current education system in Thailand. Despite the disappearance of national boundaries across the globe, Thai higher education still sustains many barriers that inhibit the progress of education reform. These include: boundaries between academia and the real world; boundaries between old and new education paradigms; boundaries between teachers and students; and boundaries between conventional and new learning environments. In view of these challenges, it is time for the administration of all universities to eliminate these boundaries in order for the learning process to be optimized and maximized. The next section of this paper explores some of the propositions that might be of use for university administrations to abolish the aforementioned boundaries in order to achieve the goal of education reform in producing graduates equipped with the skills, attitudes and values needed to cope with the work world.

Reforming the Curriculum: Real-World Based

One might hear a frequent complaint from many graduates that, regardless of knowledge certified by degrees, they use very little of this knowledge in their subsequent careers. Moreover, when faced with uncertain, unique, or conflicting situations, they are incapable of handling the circumstances appropriately. Likewise, employers also echo that many graduates possess content knowledge and technical skills but lack process skills such as the ability to communicate, to solve problems, to adapt to change, to work in groups, and to provide leadership, all of which constitute successful job performance over time (Harvie, 2004). This absence of real-world skills may lie in the curriculum-in-use that it is still defined in terms of "subject knowledge and disciplined-centered," rather than "practitioner knowledge and student-centered." Given this tension, the challenge facing the reform of education in Thailand is how it can remove the boundary between academia and the real world to empower the students with the sustainable process skills they may need in coping with the world of work.

Curriculum reform might well be the response to this challenge. Curriculum is a key determinant of the quality of education and learning achievement. Thus, if the reform of education is to succeed in its tasks, the curriculum should be restructured. The main concern in designing real world-based curriculums should be how to organize better learning opportunities where actual interactions take place between the university and the world outside. The process of curriculum reform, according to Zhou (2006), has to be dynamic, engage many stakeholders, and respond to diversified learning needs, as well as social demands. To achieve this, it is important that the university administration mandate the process of systematic "needs analysis" on what students, the prime stakeholders, need to know to function in the complexities of the real world rather than on what the teachers know how to teach. The process must also seek involvement from other stakeholders—teachers, industries and communities—for their views and insights relating to the requirements of workplace and the society's continuously changing interests, demands, and needs.

In addition, to minimize the borderline between academia and the real world, curriculums should be meaningful to students in terms of their relevance to them as individuals and members of society, in terms of their present and future contexts, and in terms of an increasingly interdependent world. For this reason, designing a curriculum that would cope with the challenges in the world around it requires the application of basic principles of the "four pillars of learning" outlined by Delors (1996):

1. Learning to know—the ability to "learn how to learn" by mastering learning tools: concentration, memory skills, and thinking skills.
2. Learning to do—the ability to apply the learned knowledge and skills to life at work; in other words, it is a shift from skills to competence.
3. Learning to be—the ability to develop as a complete person in terms of physical, intellectual, spiritual, moral, and cultural facets of life.
4. Learning to live together—the ability to develop understanding of self and other people, awareness of the interdependence of all individuals and cultures, and skills to settle disagreements in a peaceful way.

From these four pillars of learning, Zhou (2006, p. 6) has attempted to identify the following key competencies that are expected from learners:

1. Competence in collecting, selecting, processing and managing information
2. Competence in mastering instruments of knowing and understanding
3. Competence in effectively communicating with others
4. Competence in adapting oneself to changes in life
5. Competence in cooperatively working in teams
6. Competence in resolving conflicts through peaceful dialogue and negotiation

These pillars of learning and their key competencies can provide a framework wherein education should aim at*: **preparing graduates how to learn throughout life, develop as complete persons, and live in harmony with others in an interdependent world.*** As this notion promotes the principle of lifelong learning and provides learners with the means and confidence to be successful and responsible in an evolving world, it should be placed at the core of all curriculum reform. To begin with, the pillar of "learning to know" should be incorporated in the objective of all curriculums with an aim to engage the students in the process of knowledge discovery both formally and informally throughout their life. As this pillar highlights the importance of general education as a foundation to develop the students'

understanding, knowledge and discovery, Perkins (1992) proposed that a curriculum should offer courses that emphasize "exploratory learning" or "approaches to learning." This is to raise, in individual learners, an awareness of how they learn best, of thought processes and of learning strategies. The development of curriculums, it can be said, should aim at enabling students to "learn how to learn" and benefiting from the lifelong opportunities that education provides.

The reformed curriculum should also stress the pillar of "learning to do" by enhancing students' opportunities to translate what they know or learn into practice. While studying, students should be encouraged to acquire and develop process skills such as communication, problem solving, adaptability, teamwork, negotiation, and leadership. One way to foster this pillar of learning is to establish cooperation with industries in order to provide students with an opportunity to be continuously trained for their professional life. A joint program between universities and industries is a significant means to diminish the boundary between the real world and education. In short, it can be said, curriculums should be designed so that education is combined with real-life experience in order to equip students with the ability to handle differing and unforeseeable situations in the so-called "life at work."

Equally important is the pillar of "learning to be" which highlights the development of an individual as a complete person. This includes the "*formation of personality, both individual and collective, with the achievement of self-knowledge, self-understanding, self-fulfillment, and development of wisdom*" (Delors, 2002, cited in Teasdale, 2005, p. 4). Curriculum reform, based on this principle, should provide students with opportunities for development in all facets of life: aesthetic, artistic, scientific, cultural and social, as well as creative, and imaginative. These aspects of learning can empower students to discover themselves, and to become more fully human.

In addition, the pillar of "learning to live together" can be applied through developing general education courses on both domestic and real world contemporary issues such as world peace, cultural and religious diversity, terrorism, corruption, social inequality, poverty, and global warming. This is to raise students' awareness of and concern for societal and global problems, inculcate in students desirable moral values and ethics, strengthen their sense of social responsibility, and provide opportunities for students to develop an understanding, acceptance, and respect for different people. Closely related, the reformed curriculum should develop linkages between disciplines so that students will learn to see knowledge as an interrelated and coherent whole. For example, the topic "learning to live together" can be taught through selected content from several interdisciplinary subjects such as global education, population education, technical education, environmental protection education, peace education, and HIV/AIDS/SARS prevention. According to Gardner (1999), learning content and method organized in an integrated approach can help students develop their range of capacities, positive attitudes and effective habits of mind.

As can be seen, designing a real-world based curriculum requires that universities focus on how to create opportunities for students to learn both the academic and process skills needed in the world outside. More importantly, the curriculum should provide the foundation for students to cope with everyday life and lifelong education, and promote full human values and good citizenship, as well as develop an understanding and respect for cultural diversity and values of other people.

Transforming the Instruction Paradigm into the Learning Paradigm

Evidently, to develop and sustain student learning productivity, universities must undergo a shift in education paradigm, away from the traditional yet common "transmission or instruction paradigm" toward the "learning paradigm" (Barr & Tag, 1995). Problems under the predominant paradigm are evident: teachers have a mission to provide instruction primarily through delivering lectures to students who, as empty vessels, merely receive knowledge. Under this scheme, the focus is on the teacher,
the imparter of knowledge, while learning is the responsibility of the student. Knowledge is thus viewed as something to be transmitted one-way from teachers to students. Such a model clearly mistakes a means for an end; that is, it takes the means or method called 'instruction" or "teaching" and makes it the end or purpose of learning. In the new learning paradigm, on the contrary, the mission of teachers and universities is not to provide instruction or knowledge but to produce learning in students (Herman Miller, 2006). Teachers become the designers and facilitators of powerful learning environments, while universities become the providers and contributors of learner-centered environments. This new learning paradigm is in line with the Thai National Act of 1999 which articulates clearly that the teaching and learning process must be transformed from a teacher-centered into a student-centered approach.

It is worth noticing at this point that one of the higher education reform goals in Thailand is to produce graduates equipped with ICT skills to meet the demands of the digital age. Responding well to this, universities enthusiastically bring into their institutions and classrooms ICT and digital technologies, but, sadly, with an approach still born of the "instruction paradigm." ICT is thus exploited merely as a means to assist teachers in delivering their lectures. Apparently, universities and their faculty are not yet capable of crossing the boundary out of their old accustomed practices. The result of this has been an absence of progress in how teachers teach and how students learn despite what might be possible with the "new technology" and the "new learning paradigm."

In view of this challenge, it is time for university administrations to take strong and bold measures to restructure teaching and learning processes. They should inculcate progressive changes into their faculty by using diverse strategies such as enforcing a policy on the reform of teaching, establishing a professional development center that provides teachers resources to change their practices, organizing on-going in-service teacher training and workshops on the "learning paradigm" and how to put the concept into reality, conducting systematic classroom observations, providing peer coaching and mentoring, encouraging teacher self-reflection, and evaluating teaching practices. With strong support and continual involvement from university administrators, teachers will be guided to cross the boundary of their conventional teaching practices and move from the instruction paradigm to the new learning paradigm where teaching is seen as more meaningful and challenging.

Reconceptualizing a Teacher's Role

In Thai culture, where hierarchical social structure is a central theme, an emphasis is placed on vertical respect relationships and submission to authority. Teachers, with a higher status than students, are regarded as second parents whose mission is not only to impart knowledge but teach morals and mold the students to be good citizens in the society as well. The image, generally assigned to a teacher, is that of a "righteous entity" possessing great knowledge. Students are trained accordingly to obey whatever the teacher says rather than to initiate or negotiate the outcome of the learning process. With regard to this social

pattern, it is not surprising to see in Thailand an imposing boundary between teachers and students. Such a boundary, in effect, has led to the typical model of classroom interaction so called "IRE"—teacher **I**nitiation, student **R**esponse, and teacher **E**valuation (Mehan, 1979). In this IRE pattern, the teacher is always at the front of the room, providing knowledge, asking students to demonstrate the taught knowledge, and later on evaluating the students' responses and performances according to the set criteria. The students are relatively passive recipients of knowledge and they expect the teacher to be entirely in charge of their learning.

This conventional learning process has to be transformed if Thai higher education is to achieve the prescribed reform goal. Of prime importance, the boundary between teachers and students must be removed. This, however, does not mean the entrenched image of the teacher as a second parent should be eradicated. On the contrary, it should be sustained and revered; teachers should still play a crucial role in caring for their students and instilling into them the desirable moral values and ethics that encourage the students to attain good citizenship. Nonetheless, teachers need a radical change in reconceptualizing their traditional role as the repository of knowledge. Under the new "learning paradigm," described earlier, the role of the teacher should no longer be authority and knowledge giver, but facilitator and designer creating an environment conducive to maximum learning. This can be done by providing a setting in which the students can play an active and inquiring role in their own learning. Furthermore, as the name of the game is learning, not instruction, teachers must also become "learners among learners," allowing themselves to learn with their students.

In achieving this reconceptualization, university administrations should be the key drivers of change by making the new concept visible and widespread. Through constant repetition of this idea in public—talking about it in university board meetings, faculty meetings, and new teacher orientations, publicizing the idea in university papers and newsletters—university administrators will be able to bring attention to the issue; that is, a new discourse about the teacher's role in the "learning paradigm" will be introduced. University administrators should further provide their faculty with sufficient literature relevant to this new concept. With a thorough reading, teachers will better understand that they are now living in an age of unprecedented dissemination of knowledge where they are no longer the main source of information and knowledge. Therefore, they need to shift their role from "knowledge givers" to "knowledge facilitators." In addition, it is important that teachers be engaged in the knowledge sharing activity both in formal and informal settings. Intranet blog technology can be used here as a platform for sharing information, ideas, and stories about teaching in the new paradigm. If this concept is successfully implemented, it can be said, teachers will look at their classrooms through a new lens and with new understanding, and will eventually act out the new role. The social distance between teachers and students, which is the major boundary to the sharing of knowledge, negotiation of learning, and free flow of communication in the classroom, will accordingly be reduced.

Transforming the Learning Environment

In Thailand and elsewhere, "brick and mortar" is the standard classroom configuration comprising a chalkboard or a whiteboard, a teacher's lectern in the front, and a number of bolted chairs for students. With the advent of new technology nowadays, most universities provide the classroom with hi-tech equipment such as multimedia computers, LCD projectors, and digital visualizers to maximize the teaching and learning process. Despite these fancy devices, the learning environment has not changed much. The room where the furnishings are not moveable can be a boundary to learning productivity in terms of its reinforcement of the typical "IRE" pattern of classroom interaction described earlier. Therefore, if the goal of

education is to increase opportunities for students to develop to their full potential, university administrators should initiate changes in the learning environment. They should transform the conventional learning environment into a more alive and active learning zone where "structured or organized chaos" takes place. In a structured or an organized chaos classroom, according to Holland and O'Connor (2004), the learning process is not "*necessarily sequential or linear, but chaotic in terms of entering, leaving, and returning to each learning phase*" (p. 2). Rather than sitting quietly at their seats doing the assigned tasks, the students are engaged in active learning—working in a collaborative effort on assignments, talking, generating, and challenging ideas with their peers and teachers. In such a learning environment, reflection occurs throughout the learning process; students continuously refine and reflect on their own and others' work as they generate and apply new understanding. As a result, a conventional classroom would convert to a "learning community"; that is, the learning takes place in a nurturing and supportive environment where there is excitement but hard work, where there is a noticeable growth in students, where students' awareness of their potential is strengthened, where teachers become a member of the community, and most importantly, where students look forward to attending because they enjoy learning.

Furthermore, to heighten the idea of the learning community, the physical organization of "brick and mortar" classrooms should be transformed into "learning studios" featuring, what Herman Miller (2006) advocated: "*ergonomic furniture, wireless technology, mobile teaching stations, wall writing areas, and informal learning spaces within the formal instructional setting*" (p. 5). With flexible seating configurations and use of enhanced technology, the learning studio allows for a variety of interactive activities. Teachers can organize the setting to respond to the day's learning theme whether it be the presentational or interactive style. Also, instead of being seated towards the front, students face each other, while teachers, instead of sitting and giving lectures behind a lectern, wander the room, facilitating the learning process, encouraging small group discussions, monitoring progress, and occasionally sharing relevant information with the students. This kind of learning environment leads to lively interactions among members of the learning community; that is, involvement, collaboration, and reflection are all feasible and encouraged. As a result, the learning process is made vibrant rather than stagnant.

Conclusion

The need for higher education reform in Thailand is based on the challenge to equip the country's manpower with the knowledge, skills and values essential to increase national capacities to meet the knowledge-based economy in a borderless world. Nevertheless, the long-time existence of many barriers in Thai universities has decelerated the process of education reform. Eliminating these boundaries and bringing reform to success is, therefore, a prime mission for the administration of all institutions. It is necessary that the administration restructure the current discipline-based curriculums in a way that would highlight student-centeredness; making curriculums meaningful and relevant to students in terms of usefulness in the context of a world of work. By applying the principles of the "four pillars of learning," the reformed curriculum could provide opportunities for students to learn how to acquire knowledge, learn how to act, learn for life, and learn how to live together. These are vital for individuals to acquire general knowledge, process skills, and develop capacities for lifelong learning.

It is also necessary that university administrators demonstrate that deep and meaningful learning takes place in their facilities. In so doing, the administrators as policy makers should move their institutions from the comfort of the traditional and predominant "instruction paradigm" to the challenge of the emerging "learning paradigm." The teaching and learning process, once teacher-oriented, has to be transformed to concentrate on how to create opportunities for students to maximize their learning and develop to their full potential. Closely related, the administration should also initiate the replacement of the teacher's traditional role as "knowledge instructor" with the new role as "knowledge facilitator" providing students with the skills and motivation to become lifelong learners. Additionally, to enhance learning productivity, it is important that the typical patterns of classroom environment be transformed into a learning community where structured chaos can take place. That is, students actively engage in the process of learning through talking, collaborating, contemplating, arguing and challenging ideas with peers and teachers in a supportive environment. Finally, it is also important that university administrators consider transforming the classroom infrastructure from the typical "brick and mortar" into the "learning studio" model equipped with movable furnishings and new technology. This will facilitate more dynamic interactions among individuals—both students and teachers—in the learning community.

With serious involvement and profound commitment, university administrations are able to remove the aforesaid boundaries thus leading their institutions to successful education reform. However, the road to transformation is never strewn with roses but requires major cultural adjustments. One critical problem that prevents the reform of education from progressing faster is the resistance to change. The fact that people fear change is understandable; many teachers embrace the culture of conservatism and inertia. This fear culture, apparently, has retarded the pace and magnitude of change. Thai Universities in particular were not built to adjust rapidly to change; instead, they were built to resist change with such explanations as they are too big, too structured, too settled, and too bureaucratic. Nonetheless, given all the revolutionary changes, the challenges of rapid globalization, the enormous influence of new technology and the transformation towards knowledge-based economy, universities can no longer remain aloof. Rather, their only option in confronting this new circumstance is either to redefine themselves to operate fruitfully in the vanguard of change, or to stay stagnant, be overpowered and lag behind in the borderless world.

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Vietnam National University, Hanoi
Under the Impacts of Borderless Education

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Abstract

Borderless education has become a fact of life. “That higher education is now located in a globalize economic environment is the new orthodoxy.” (Osborne 2006: 115). Institutions increasingly do not just compete for research income and students within national contexts; rather, they are the participants in the global-wide markets for research and students. This paper attempts to address the problem of how Vietnam National University, Hanoi (VNU, Hanoi) has responded to borderless education. As a way of start, the paper will provide a brief account of VNU, Hanoi. This will be followed by a discussion of some main problems experienced by the university during the past few years. In the final section the paper will present some of the activities VNU, Hanoi has carried out in response to borderless education to maintain its status as a leading tertiary institution in Vietnam and a prestigious partner of the universities in the world.

In this paper, we have been concerned with how VNU, Hanoi has responded to borderless education. We have provided an overview of VNU, Hanoi. We have also presented some main problems which VNU, Hanoi has experienced during the past few years and some of the key activities it has carried out in response to this ‘fact of life’ to maintain and strengthen its status as a leading university in the Vietnamese education system. It can be said that in this changing world, all tertiary institutions are living in the state of uncertainty and in order to survive in this flux, the only way for each institution is to build its internal capacity and to expand its cooperation with as many institutions, both in its own country and in the world, as possible.

A Brief Overview of VNU, Hanoi

Vietnam National University, Hanoi (VNU, Hanoi) is the first modern university ever established and one of the two national universities in Vietnam. VNU, Hanoi, has undergone various stages of development: from the University of Indochina established on May 16, 1906, to Vietnam National University established in November 1945, to Hanoi University established in June, 1956, and Vietnam National University, Hanoi, established in December 1993 on the basis of amalgamating the Hanoi University and other universities in Hanoi.

VNU, Hanoi is the largest comprehensive higher education and research center in Vietnam. It has been assigned with the task of producing highly qualified human resources and talent for the industrialization and modernization of the country. VNU, Hanoi holds a special position in the Vietnam higher education system, operating according to a special regulation promulgated by the Prime Minister of Vietnam. VNU, Hanoi reports directly to the Prime Minister and enjoys very high autonomy in organization such as personnel, training programmes, research & development, planning and finance, international relations, and other fields. VNU, Hanoi is entitled to work directly with ministries, ministerial level organizations, government bodies, people's committees of central cities and provinces concerning affairs related to VNU, Hanoi. VNU, Hanoi's colleges, faculties, institutes, and centers maintain their juridical person status as a higher education and scientific research institution as regulated by the Law on Education and the Law on Science & Technology.

The establishment of VNU, Hanoi is to fulfill the following missions:

- To develop into the nation's leading comprehensive and most prestigious institution to excellence for higher education, science and technology, gradually achieving the international standards;
- To participate in the preparation of national policies and strategies on socio-economic development especially education, science and technology;
- To play a key and leading role in Vietnam's higher education system; and
- To serve as a pivot for international scientific, educational and cultural exchanges of the whole community.

Problems Experienced by VNU, Hanoi in face of the Movement of Borderless Education

At the moment, Vietnam has a population of over 80 million people. The number of colleges and universities are still modest (about 200). This number suggests the asymmetry between supply and demand (demand is much higher than supply). Apart from this, the university has had to compete with the "invasion" of foreign tertiary institutions, opening their branches in Vietnam. In face of these, quality seems to be the most acute problem to be solved for VNU, Hanoi. In addition to this, the problems the VNU, Hanoi has experienced during the past few years are shortage of high quality staff, conservative curriculum, and poor teaching methodology.

Some of the Activities Carried out by VNU, Hanoi in Response to the Movement of Borderless Education

To solve the problem of quality and In response to the movement of borderless education, VNU, Hanoi has carried out a number of activities. The first activity is the promotion of the use of the Credit Point System throughout the whole university. For other universities in the world, the Credit Point System is not a new thing, but for VNU, Hanoi, it is a very important achievement because the application of this system allows students' mobility, transfer of credits among the institutions under VNU, Hanoi and among other tertiary institutions in Vietnam and in the world. After a year's application the work has proved to be very promising and fruitful. Many people who are involved in this process believe that VNU, Hanoi's experience provides a national exemplar for the process seeking towards international standards in higher education.

Together with renewal in curricula, VNU, Hanoi has focused on high-quality honors and international programmes in order to make a breakthrough in approaching regional and international standards. The honors programmes have been successfully piloted in the fundamental sciences, high-tech branches, key economic fields and foreign languages. The quality of these programmes has been recognized world-wide, particularly by leading universities in the world.

To raise the quality of training to international standards, VNU, Hanoi has carried out a number of joint training programmes with prestigious foreign universities in which the role and participation by the Vietnamese side is becoming more and more dominant. Up till now, VNU, Hanoi has cooperated with over 30 universities in the world to train masters and doctors in key fundamental, technological and economic areas.

To create talented resources for the undergraduate and graduate programmes, VNU, Hanoi has developed the system of schools for gifted pupils in natural sciences and foreign languages. The quality of the gifted pupils has been recognized world-wide.

Recently, in response to the needs of Vietnam for high quality labor resources, VNU, Hanoi has developed an important project called Project 16 -23. The aim of this project is to invest in 16 undergraduate programmes and 23 graduate programmes to raise them up to international standards. This Project is now running well and has gained positive achievements.

Over the past few years, VNU, Hanoi has taken an active role in the internationalization of higher education. It has developed cooperative links with over 100 higher education institutions and research institutes and international organizations all over the world. Apart form this, VNU, Hanoi has actively participated in staff and student exchange programmes with prestigious around the world. With its prestigious as a leading and research university in Vietnam, VNU, Hanoi has become a member of international and regional organizations and association like UMAP, AUF, AUN, AUAP, ASAIHIL, ACEID, CONFRASIE, BESETOHA, … . A great number of faculties working in the institutions under VNU, Hanoi have actively joined the networks with researchers and businesses in the region and the world. This activity has marked off the university's major contribution to the development of VNU, Hanoi in the Vietnam, in the region, and in the world.

To create favourable conditions for Vietnamese academics to have a chance to work with their foreign counterparts and for Vietnamese Ph.D students to work under the supervision of foreign supervisors, since 2003 VNU, Hanoi has initiated a Sandwich Ph.D programme, using the Vietnamese Government's Scholarship Project 322. The selection process is very strict and the selected Ph.D candidates work under the co-supervision of two supervisors, one Vietnamese and one foreign counterpart from the cooperative university.

To maintain its leading status in Vietnamese higher education, VNU, Hanoi has carried out an active policy on head hunting to attract foreign prominent academics, constantly inviting Vietnamese overseas academics to come and work at the university. Top students who graduated from the university are always the focus of this plan.

Conclusion

In this paper, we have been concerned with how VNU, Hanoi has responded to borderless education. We have provided an overview of VNU, Hanoi. We have also presented some main problems which VNU, Hanoi has experienced during the past few years and some of the key activities it has carried out in response to this 'fact of life' to maintain and strengthen its status as a leading university in the Vietnamese education system. It can be said that in this changing world, all tertiary institutions are living in the state of uncertainty and in order to survive in this flux, the only way for each institution is to build its internal capacity and to expand its cooperation with as many institutions, both in its own country and in the world, as possible.

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Parallel Session I

Toward a Collaborative University System, Government Roles: A Case of Indonesia

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Abstract

In the era of borderless education that comes with new challenges and opportunities, a collaborative system between universities is indispensable. Therefore for the sake of innovations, a university better join in such a system.

For a university in a developing country, its challenges and opportunities cannot be separated from political policies of its government. In fact, from diffusion theory in educational innovations, not only geographical proximity is important, but also is cultural and political proximity. (*See* [1])

With respect to government roles mainly for the case of Indonesian government and using a simple research methodology, a literature study from various kinds of sources including those in Indonesian, we provide potential challenges and opportunities faced by a developing country in building a collaborative system that could be established regionally, e.g. a system of some Asian universities that runs a joint distance learning.

Since most universities in developing countries share common constraint and some extent of authoritative power when they deal with their own government, the case of Indonesia can provide general descriptions of common challenges and opportunities in building such a system in a developing country.

The general conclusion is in order to meet the increased demands for higher education with relatively lower operational cost, distance education and open universities are the best alternatives for a collaborative system of universities. Moreover, a set of policies that provides a framework and guiding principles for the collaborative university system is needed.

It is recommended that the known difficulties in assessing the quality of a degree, especially when it is awarded concurrently from institutions that form a collaborative system and that are from different governments, must be addressed in both the framework and the guiding principles. In the system, each university ideally promotes its foremost local subject matter and learning material in supporting overall performances.

Keywords: DGHE, MONE.

1. Introduction

There are many intrinsic differences between higher education (HE) system in developed and in developing countries, in Asian and in African countries, in English-speaking and in non-English ones, even between two neighboring developing countries. Accordingly, there are many factors contributing to these differences, e.g. historical, cultural and many other factors and some of these differences together may contribute to multiple consequences.

From historical point of view, for example, most universities in Malaysia, Singapore and India were built during the British occupation whereas most the 'best' universities in Indonesia were originated from the Dutch education system. From this perspective, it is not surprising that more people in the first group of three countries read and speak English than those in Indonesia. Consequently, educated people in these three countries access learning materials in mathematics and in various sciences more than educated Indonesians do. This is one disadvantage of educated Indonesian in the past as the majority of the materials are in English.

As pointed out in [1], cultural differences certainly affect the way people interacting to each other, including the way they teach and learn something inside and outside classrooms and the way they accept or reject new information and new values that are seemingly conflicting with their traditional values.

The above factors do not take account another factor on which most developing countries are still struggling in promoting basic education, instead of higher education, for their people. This is why the UN has Millenium Development Goals (MDG) for it and why in Dakar in 2000, the World Education Forum re-affirmed the vision of Education For All, and adopted a *Framework for Action* that emphasized the need for quality in basic education as well as access to it.

In the era of borderless education, some of these factors become stronger and some others become weaker in affecting the quality of higher education. Other than the mentioned factors, there is another factor caused by the interplay between the development of ICT (information and communication technology) and government policies. Not only do political will and budget allocations put by the government, for the development of higher education include, but it must also include the extent of the government in empowering private and industrial sectors to build a better system of higher education.

In the context of the interplay, this paper will elaborate some government policies that are very likely affecting the current system of higher education. In particular, it provides some collaborative systems formed by a group of Indonesian universities with financial support from the Indonesian government regardless their existences: whether the systems still exist, have been abolished or replaced by another system.

The case of Indonesia where education system have been changed drastically since the fall of Soeharto administration could be a good lesson as there are still many universities in developing countries depend too much on financial and political support from their governments.

In the sequel, we simply write 'a university' for an HE institution, regardless the fact whether the institution is indeed a university or an HE institute or a college.

2. Indonesian Higher Education System: Its Roles and Functions

The Directorate General of Higher Education (DGHE) is a direct subordinate of the Ministry of National Education (MONE). Representing the Indonesian government, DGHE is responsible in managing higher education affairs. The role of DGHE is very crucial until now as most universities in Indonesia are state-owned universities.

Private universities have been greatly affected by DGHE for decades, although the influence of DGHE to them becomes less and less right now. In fact, since the period of 1960s until now, DGHE has nine direct subordinates called KOPERTIS that are responsible and that have government's mandated power in 'taking care' and 'up-grading' the quality of private universities under their domain of authority. Notice that any state university is also a direct subordinat of DGHE, i.e. it is at the same level with any regional KOPERTIS.

DGHE is the only institution that has the authority in recognizing any independent accreditation board in higher education. At this moment, BAN (Badan Akreditasi Negara) is the only DGHE-recognized accreditation board. DGHE also establishes formal guidance procedures that must be followed by a university to be accredited by BAN. In this respect, the role of the fourteen KOPERTIS is very important in helping BAN to accredit private universities. In the next three paragraphs, we slightly distract from discussion on DGHE to discussion on changes in the Indonesian government because the changes have greatly affected all state institutions, including DGHE.

A significant paradigm shift in educational sector and in other sectors in Indonesia started not so long ago, after the fall of Soeharto administration. Euphoria of changes from authoritarian, opaque and centralized policies to democratic, transparent and autonomous policies together with freedom of expressions, unfortunately, does not always followed by attitude changes of many people who support, or even responsible for initiating the changes.

It is interesting to observe a related phenomena in which 'new' terms like "conflict of interests", "constituents", "stake holders", "self evaluation" increasingly used by the government's formal statements and media news in the following years. The emerging of these new terms in formal statements and in the news, notably in many newspapers, reflected the spirits of democratization, autonomy and other similar spirits for educational reform after the passing era of Soeharto.

Similar spirits can also be observed the Indonesian legal system. E.g. in the sector of education, the amendment of constitution resulted in a constitutional mandate to put at least 20% of government budget into its educational sector. This minimal education budget, however, has never been implemented. In the economic sector, money laundering bill has passed although in the past the word "money laundering" was hardly ever heard.

DGHE responded the euphoria and the spirits by issuing new laws and policies that support a better system in higher education. In the next paragraph, we provide some strategic issues of DGHE that reflect shift of paradigms in DGHE, except possibly at the formal philosophical aspect.

The DGHE, as a subordinate of MONE, must agree with the vision and mission of MONE stated in the national education law called SISDIKNAS law. In particular, DGHE must put a set of values, including national, ethnic and religious values, as the first priority to be followed or honored.

Some important educational policies issued or conducted by DGHE can be found in the Higher Education Long Term Strategy (HELTS) document file [D1], which is available upon a request to the authors. Essentially, HELTS elaborates three big steps of DGHE's strategy: good framework, identified strategic issues in HE and implementation of the strategy. Some of parts of them: a brief historical perspective, Vision 2010, some strategic issues of DGHE and its future strategy; will be represented or quoted as follows.

In 1975 DGHE introduced new systems and laws for student evaluation and faculty career in every higher education institutions in Indonesia: credit system, student academic evaluation, student load, and staff promotion system. Moreover, the Vision 2010 reflects the trend of democratization that decentralizes the authority of the central government and provides more autonomy coupled with accountability to institutions.

DGHE views broadly that challenges in higher education arise from

> " … the convergent impacts of globalization, the increasing importance of knowledge as an engine of growth, and the ICT revolution. The nation's competitiveness is defined in terms of country's share of world markets for its products…"

although the defined nation's competitiveness may not be directly related to some quantitative measurements of educational outputs.

The document also states a more specific responsibility and some challenges faced by DGHE:

> " DGHE, has a responsibility to put in place an enabling framework and infrastructure to encourage institutions to be more innovative and responsive to the needs of improving the nation's competitiveness. It should also nourish and promote community and local government participation in developing institutions in synergistic manner. It is realized, however, [the existence of some challenges] that the higher education system as well as the individual institution are not adequately prepared to play this role and meet such high demands. "

In DGHE's strategic plan, it says

> " In a healthy institution, a strategic plan, which is developed based on self evaluation, becomes essential. The institutional top management should be fully committed in the process of developing the strategic plan, including the involvement of internal community and stakeholders."

According to HELTS document and other sources (e.g.[6]), compared to many of its neighbor countries, the Indonesian budget allocation for education is very low. On quality assurance, the document says

> " Quality assurance should be internally driven, institutionalized within each organization's standard procedure, and could also involve external parties. However,

since quality is also a concern of all stakeholders, quality improvement should aim at producing quality outputs and outcomes as part of public accountability."

Although HELTS document says

" BAN, professional associations, and other independent agencies, could play a key role in conducting an objective external control and audit based on certain standards …",

but due to conditions imposed by DGHE on any proposed accreditation board, in practice BAN is the only accreditation board in Indonesian higher education.

The last but not the least is the formal commitment of DGHE in helping Indonesian universities to form a collaboration

" 84. Greater collaboration between institutions in teaching and research is also needed. In this regard, each institution has to compete and at the same time cooperate, treating its competitor as partner. It has to extend its networking and strategic alliance beyond national and geographical boundaries. Mechanisms must be found to ensure that qualified staff and students, irrespective of location, to get involve in the collaboration and provided access to the necessary facilities. Sharing of facilities, skills and expertise should be encouraged and given incentives through new initiatives …"

A further illustration of DGHE's roles in empowering (or setting a limit to) a collaborative system is illustrated in Section 4.

3. Ranking as a Measurement of Quality?

An observation of the ranking is crucial because most universities in Indonesia are only able to have a lasting collaborative with relatively low rank 'world class' universities. Moreover, there is no general agreement among ranks received by 'world class' universities that belong to these low ranks, as we shall point out at the end parts of this section. In this context, we are comparing the ranks issued by two leading institutions - Shanghai Jiaotong University (SJU) and the Times Higher Education Supplement (THES) - in conducting the international ranking of world universities based on [2], besides the 'ranking of Indonesian universities' perceived by Indonesians that we are about to discuss.

We are stressing here the fact that the above perception of 'Indonesian university ranking' is partially a result of policies held by the government, which is represented by the Ministry of National Education (MONE). It is also partially due to the lack of independent accreditation board for higher education institutions in Indonesia for a long period of time. We are also stressing the fact that in the period before 1990, practically there was no private TV-station, which is the most popular source of information in Indonesia. The only government-control TV-station (TVRI) in that period certainly shaped the way public perceived how good a (state) university is, as the next paragraphs are about to illustrate.

In the past, the oldest universities – the 'best three': Institut Teknologi Bandung (ITB), Universitas Gadjah Mada (UGM) and Universitas Indonesia (UI) – had previleges to be the only universities having academic activities and events most covered by media news and TV-news. It should be mentioned the role of the only public,

government-control radio station (RRI) during Soekarno administration (1945-1966)[1)], long before the existence of TVRI, in promoting these 'oldest universities and institutes'. This practices created a 'ranking' among Indonesian universities that had been perceived by people who had very restricted information, if it is not controlled by government.

Considering international ranking, there are interesting points addressed by Levin et al (*See* [2]) which questioned the criteria used by SJU and THES - in conducting the 2006 international ranking of world universities. In particular, [2] cited some sources that indicate a potential bias toward English-speaking countries on the scores.

In addition, Levin et al have been critical on the ways and methods of the institutions in placing weights on the scores of their surveys, e.g. putting the greatest weight on the peer assessment of academic excellence. Although it is often argued there is a strong correlation between the quality of faculty research and the quality of education, the measures of faculty research do not tell us how well an educational program is structured and directly affected the faculty research.

The only common agreement in both universities rankings is at the top 11 best US universities. But the first conclusion derived in [2] implies that this agreement is likely to be a result of another agreement in their criteria: both put reputations (*See* [1], p.110) – in contrast with the actual quality – as the dominant criterion in their scores. In their latest 2007 international rankings, the agreement becomes lessening. In general, there is no direct evidence or indicators shown or implied that the selected reputation indicators used by both institutions do show the actual quality of education in a university.

4. A Joint Admission Test

In Indonesia, joint admission test could be the only collaborative works among state universities that lasts for more than 30 years, although the number of universities joining the admission tests varies - from 5 universities to 56 universities now - and the name of the associated project was changed for several times – from SKALU to SPMB now. One feature of this project is that the fund collected from registration fees of candidates who are applying for a university does not directly go to the university bank account.

However, the spirit that came in the first admission test, SKALU, was probably right. At that time, the government wanted all candidates not wasting their money, times and energy to make a long journey from their homes traveling to different cities, that could be located over the sea, for just registering an admission test of their favorit university in that city and later they return to the same city at date of the admission test. Since most 'best' universities are located in Java island, the next admission test projects included more and more universities from outside Java.

From the very first joint admission test, DGHE could have lifted the 'ranking' of five state universities in Indonesia in leading and in pioneering some national projects, e.g. performing national admission test for state universities, i.e. SKALU (Secretary of Joint Work of Five Universities: ITB, UI, UGM, IPB and Unair), in 1976. Indirectly, DGHE has created a public perception that these five universities are the best universities in Indonesia. This project was extended and transformed with different names, e.g. Perintis I & II, SIPENMARU, UMPTN and SPMB, to allow more universities joining the projects.

[1)] The starting time of airing private radio stations varied from city to city in Indonesia, but it was mostly at the end of 1960. Private radio stations used to air in higher frequency waves before a new regulation forced them moving to frequency of modulation (FM) waves.

Most recently, four of the 'big five' universities have received a prestige status called BHMN. In this status, a university is supposedly to be more independent and have a greater autonomy in running their programs. This university is also supposedly get less financial support from the government as more and more 'high ranking' universities, including BHMN-universities are allowed to accept a student without going through an admission test as long as the student can afford a certain amount of admission fee.

A BHMN university, however, is allegedly getting more funds from DGHE and from its students as it can raise its student tuition higher than the tuition from non-BHMN university. Having learned this controversial issue caused by the BHMN 'model', the Indonesian government (represented by MONE) is issuing a bill for replacing BHMN status with a different one, a BHP status. This bill is not only applied to more 'high rank' state universities, but also to all levels of 'high rank' state schools. At current stage, the bill has been put open for public examination.

The above fact does not necessarily imply that the 'big five' Indonesian universities would internationally be the five top leading universities in Indonesia. In fact in the last three years, Hasanuddin University - which never belonged to the 'big five' - was internationally ranked better than several of those in the 'big five'. E.g. according to 2008 4INTERNATIONAL COLLEGES & UNIVERSITIES and based on web 'popularity' – a similar word to 'people perception' (*See* [4]) – the best top ten Indonesian universities are:

1. Institut Teknologi Bandung (ITB, former member of SKALU)
2. Universitas Indonesia (UI, former member of SKALU)
3. Universitas Gadjah Mada (UGM, former member of SKALU)
4. Universitas Bina Nusantara
5. Universitas Brawijaya
6. Institut Teknologi Sepuluh November
7. Universitas Kristen Petra
8. Universitas Gunadarma
9. Universitas Hasanuddin
10. Bogor Agricultural University (IPB, former member of SKALU)

With few exceptions, state universities in Indonesia – especially outside Java island – had always been considered 'better' than private universities. Actually before the education reform, almost all private universities in a province in Indonesia had been put in second priorities behind state universities.

E.g. final exams for students of a private university who were going to graduate had to follow some procedures issued by the local KOPERTIS and had been conducted by examiners from a 'better' university, which was always a state university in the same province. The examiners are representing the KOPERTIS. In particular, those 'big five' state universities had authority and government funds to assist many other state universities.

Currently, the DGHE is coordinating about 56 state universities to conduct the joint admission test, now called SPMB. Recent news on media (March 2008) revealed that about 41 out of these state universities have a plan to step out from SPMB and they are going to conduct their own joint admission test.

Their reason for the stepping-out plan looks simple. The current joint admission test has financial management that does not follow a taxation law issued in 2001 by the Indonesian government. It should be mentioned that the Vision 2010 of DGHE states the need of legal infrastructure, financing structure, and management processes that encourage innovation, efficiency, and excellence as part of autonomy in higher education.

5. Some Indonesian Collaborative Systems

A 2005 mandatory law for teachers and lectures requires minimal qualification S1 (bachelor degree) for every teacher and minimal qualification S2 (master degree) for every lecturer. This leads to a collaborative project called HYLITE between DGHE, SEAMEO SEAMOLEC and 23 LPTKs. An LPTK is a state university having either education department or faculty of education. For the moment, the HYLITE project provides education only for teachers in an elementary school who do not have the minimal qualification. These 23 LPTK-universities make up a consortium called PJJ PGSD.

HYLYTE project is financially supported by DGHE whereas SEAMOLEC, the Indonesian representative of SEAMEO, is responsible in providing learning materials, facilitating and coordinating the distance education in HYLITE. All teachers under HYLITE project have scheduled face-to-face meetings in their local LPTK and they supposedly have access to the ICT center of the LPTK.

DGHE does not recommend any university other than the Indonesian Open University to run distance education without adequate ICT centers that can be used by both learning provider and the learners. However, most top universities and institute already have their own 'distance' education although most of the core learning materials are reading materials which were sent by mail. Many of this distance learning are at graduate level. Prompting by this fact, DGHE and SEAMOLEC setup a plan for another consortium of about 50 universities to run a joint distance learning program with more available access and ICT centers.

There were many bilateral works between a Indonesian university and a foreign institution of university or a consortium of international universities. But usually, such a work is self-benfit oriented and took a risk of being uphold or even failed caused by a big technology gap between the International learning provider or consortium and the Indonesian university, besides comunication gap caused by the primitive ICTs that were available in Indonesia at that time.

Data from the Indonesian joint admission test since 1976 until now show that ITB has the lowest ratio between admitted aplicants and total aplicants. This does not say that ITB is the best university in Indonesia but it does say that ITB has the best students in Indonesia. This fact strengthens the public perception that ITB is the 'best' in Indonesia and possibly makes ITB more independent from government (DGHE) scenario in developing future scheme of Indonesian higher education.

Unlike many other universities that had to wait a helping hand from DGHE, ITB has pioneered some big programs or projects with or without financial support from DGHE. E.g. with supports from DGHE, many first graduate programs in engineering and in mathematics were introduced or started by ITB. Also, when distance education is still new in Indonesia, ITB was one of twenty universities from eleven Asian countries that launch the newest (at that time) generation of platform distance learning. In 2001, these twenty universities made up the SoI (School of Internet) ASIA.

Since the launch of Asian Internet Connection Initiative (AI3) network in 1996, the platform is the first one that applies multicast technology Ipv6 to develop distance education using an internet satellite. Many other Indonesian universities (e.g. Universitas Brawijaya, Universitas Hasanudin, Universitas Sam Ratulangi and Universitas Syiah Kuala) later join this SoI ASIA/AI3 program.

Now we discuss a collaboration that involves Hasanuddin University, the largest university in Eastern Indonesia. At the end of 80s, Hasanuddin University represented by SISDIKSAT (Distance Education via Satellite) coordinates a 'distance' education for all eastern universities belonging to BKS PTN INTIM, an association of some eastern unversities.

Without internet infrastructure that was not available at that time, the distance education only offer a candidate a *free-choice* in choosing which university he/she take for the same course offered by different universities belonging to BKS PTN INTIM. There was a little progress when SISDIKSAT with IptekNet have internet access having speed 14400 bps (!). The problem was, other BKS PTN INTIM universities must go through a complex procedure, compare to the current procedure, for accessing the the same internet channel provided by SISDIKSAT and Ipteknet.

This collaboration in BKS PTN INTIM lasted only about 10 years. In 2000, BKS PTN INTIM was formally abolished as a new consortium of Eastern Indonesian universities was established. At the same time, SISDIKSAT submerged in a new ICT center of Unhas, PIU (Pusat Informasi Universitas). Under PIU, Hasanuddin is running a big national project on ICT, the INHERENT (**In**donesian **H**igh**e**r **E**ducation **N**e**t**work) network.

Together with Jardiknas (National Education Network), DGHE INHERENT network was first established in 2006 (source [D2]). Its main objective is connecting as many as possible universities in Indonesia. Due to limited budget, however, at its first stage DGHE is constructing only 33 nodes of network. Each node represents a state university in a province (there are 33 provinces at 2006). One of the node is represented by Hasanuddin University, in South Sulawesi Province.

Any university can use a connection to IIX (Indonesia Internet eXchange) via an INHERENT university under one condition that the university must allows connections from the INHERENT university to IIX via other university having IIX connection. Although the INHERENT project cannot be said as collaboration right now, its future outcomes clearly will motivate such collaboration, as expected by DGHE's statement mentioned at the end of Section 2.

6. Discussion

For DGHE, financially supporting 56 state universities in the ICT era is a very heavy burden, if it is not impossible to be continued in the future. In order to overcome this situation, DGHE firstly rewarded BHMN status to top four state universities: ITB, UI, UGM, IPB. Later Unair (Universitas Airlangga) hold the status and other state universities that satisfying certain conditions will follow.

A bill introduced by government represented by MONE – that would change the BHMN status into BHP status – is being proposed. Being alleged that both status are a cover up of a transition from state universities to full privatization of these BHMN universities (or a transition from the best state schools to private schools, in BHP case, excluding the BHP case for private universities), the government put the bill on an URL (*Click* [5]) for public examination.

The heavy dependencies of state universities, except the BHMN-universities, on DGHE can be indicated from the discontinuation many collaborative works between state universities. As fundings from DGHE or from other financial resources (e.g. soft loans or grants from foreign countries via DGHE) stop, the collaboration tends to collapse. For example, there was fund from a Canada-based organization, CIDA, for HE education that aims to increase the quality of higher education in Eastern Indonesia, especially in Papua. But until now, there is no perception among many Indonesian that the universities in Papua are in good progress or in the 'same rank' with most universities in other parts of Indonesia, especially with those in Java. The current CIDA programs tend to be humanitarian or woman-empowering in Indonesian remote areas.

It is no surprising that the joint admission test conducted almost silmutaneously in a huge number of big cities, where an SPMB university resides, has lasted so long until now. The most likely reason for its success is that this joint admission test have not created a financial burden for the Indonesia government as the projects have been financially supported by candidates' registration fees.

In the past, many collaborative projects under government funds, in particular those under DGHE's coordinations, were planned as reactive responses to political or superficial changes, which are short term considerations. For example, the MONE's project called the 9-Year Compulsory Basic Education was not as successful as expected by MONE.

Today, DGHE has already launched the Higher Education Long Term Strategy 2003 -2010 for five year. HELTS 2003 - 2010 is a good design for modeling some parts of the Indonesian HE education scheme in the future, at least in the paper. But we should always be aware that any design is at conceptual – not at implementation – level. The ability to find gaps between concepts and implementation has been part of some disciplines, e.g. in object-oriented software-engineering modeling there is a modeling language called UML. In this kind of model, the first step is identifying a problem, the requirements needed to build the solutions, the requirements needed by the customers, all kinds of relationship that exists among some (classes of) objects.

Without going deeply to the above complicated model for non-human objects, the essential idea is finding and formulating universal and general needs and requirements of the problems in which DGHE has already started in HELTS 2003-2010. Different educational problems and requirements may need different models. The model differences for different problems are in the methods and ways in fulfilling the problem needs and requirement, and also in the language (including charts and diagrams) that mimics the phenomena of the problem. E.g. how we will overcome a potential pitfall, the emerging of a credential society in distance education? How we can know learning hours of a student every day? How are we able to obejectively measure relationships between the development in our ICT center with the progress of distance education?

Quality Assurance in a collaborative system is another problem. Most supporters of distance education give simple reasons, e.g. distance education gives education opportunities to more people, especially those living in rural or remote areas. This group consists of individuals that have the most benefits from their existences and educational services for those people. On the other hand, its opponents also have simple reasons, e.g. the longer distant between a teacher and his/her students, the more difficult the teacher to asses his/her students. Maybe, an additional word '*collaborative'* would make (*collaborative*) distance education becoming more succesful.

In short, it is a general demand everywhere. The only way to assure that this idea will be happened is in the framework (of the model) and in the guiding principles. The same way should be done for any identified problem, including those belonging to qualitative assurance.

7. General Conclusion

In the following, we derive some conclusions that are not in the specific Indonesian-domain, which are not in the interest of most readers. This is the reason why the authors call it 'general conclusion'.

In order to meet the increased demands for higher education with relatively lower operational cost, distance education and open universities are the best alternatives for a collaborative system of universities. Moreover, a set of policies that provides a framework and guiding principles for the collaborative university system is needed.

It is recommended that the known difficulties in assessing the quality of a degree, especially when it is awarded concurrently from institutions that form a collaborative system and that are from different governments, must be addressed in both the framework and the guiding principles. In the system, each university ideally promotes its foremost local subject matter and learning material in supporting overall performances.

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Off-Shore Outsourcing in Wawasan Open University

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Abstract

The need for business efficiency within a university is growing at a faster pace with global competition. Wawasan Open University (WOU) as a newly open distance learning institution in Malaysia is narrowing down their field of business to its core-business. This is done by turning over activities performed internally in the university to an external party in which they are paid for the services in a stipulated period of time (Chowdhary, 2008). The term used to describe this action is outsourcing.

WOU requires developers for various study materials used by distance learners. With a limited number of faculty members and time constraint, one of the ways to develop the study materials is by outsourcing off-shore and locally. Since its inception in 2006 until early 2008, the institution has successfully developed 48 course materials; twenty-one outsourced off-shore and twenty-seven outsourced locally.

In the world of "borderless education", off-shore outsourcing of courses is the norm practiced by universities worldwide, especially a new start-up institution. At WOU, there are two ways of off-shore outsourcing: i.) working with academic members from foreign institutions and ii.) purchase of adaptation rights from other institutions.

From the past 3 years of experiences in course development, WOU has encountered various issues in the process of outsourcing of courses. Among the issues faced are managing of course writers in distant locations, time management, training of writers in distant locations, lowering costs, copyright issues, quality control and cultural differences/localisation of context.

This paper first introduces the outsourcing process in WOU. Then, it continues with a discussion on the legality aspect of the outsourcing process followed by a presentation of some difficulties and issues faced by the university while working with the off-shore developers and the adaptation of study materials. Lastly, this paper also shows the future direction of the WOU in this perspective.

The off-shore outsourcing process

The decision for outsourcing was planned carefully by the respective schools in WOU. Currently, the university has three schools which are responsible for the design and development of individual programmes. In WOU, a programme is a group courses that are put together to obtain a particular qualification. Meanwhile, a course refers to a defined area of study for learners in a programme. For instance, the School of Science and Technology has designed a Bachelor of Technology in Computer Systems and Network (CSN) programme. As illustrated in **Figure 1**, in the detailed design of the CSN programme, a list of courses was designed and developed based on their specific content or syllabus. Learners are required to learn those specific areas of knowledge in the syllabus based on the definition of their respective learning outcomes. Learning outcomes are the specific intentions of a programme or course, which are written in specific terms. They describe what a learner should know, understand or be able to do at the end of that programme or course.

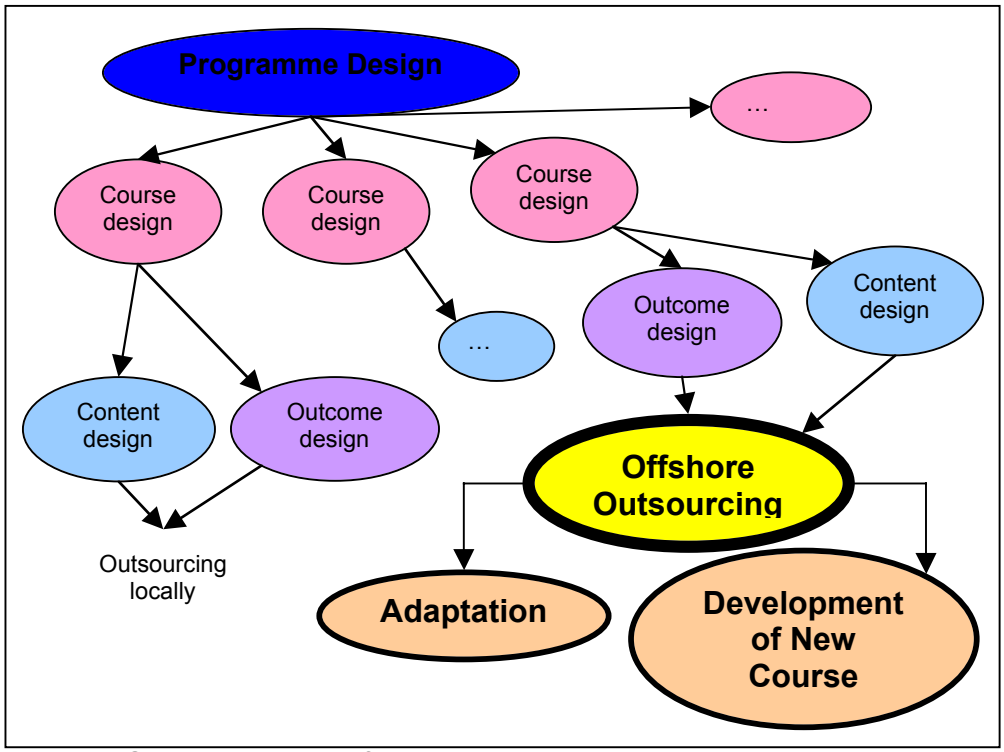

Figure 1: General planning of outsourcing

In each course, a self-contained study material or sometimes referred as course material comprises units to be covered in a course. Thus, a unit is a portion of the study material and they are broken into sub-topics or sections. In each course, a credit value will be assigned with a numerical symbol representing the number of hours a learner spends on a course during a semester. In WOU, one course credit is equivalent to 40 hours of learning. Thus, course material comprises a course guide and printed material (divided into 5 units and sections) with self-tests (which could be delivered via learning management system and limited face-to-face tutorial sessions).

After the content and learning outcomes have been designed in the schools, the consideration to outsource will take place. Two major reasons that promote off-shore outsourcing are to gain access to world-class capabilities and to access resources that are not easily found internally. Referring to the bold circle in **Figure 1**, the two ways of off-shore outsourcing include working with academic members from foreign institutions to develop new courses (development of a new course), and the purchase of adaptation rights for existing course materials from other institutions (adaptation).

Working with academic members from foreign institutions

After the WOU has signed an agreement with the off-shore partner, a standard workflow will be started as shown in **Figure 2**. In the development of a new course, one or a team of course developers will be appointed in the development of the course. A common pattern of this cooperation is to go through a middle man or an organisation that will be responsible to find a team of experts to produce the course material. Another possible mode of cooperation is to interact directly with the course developer.

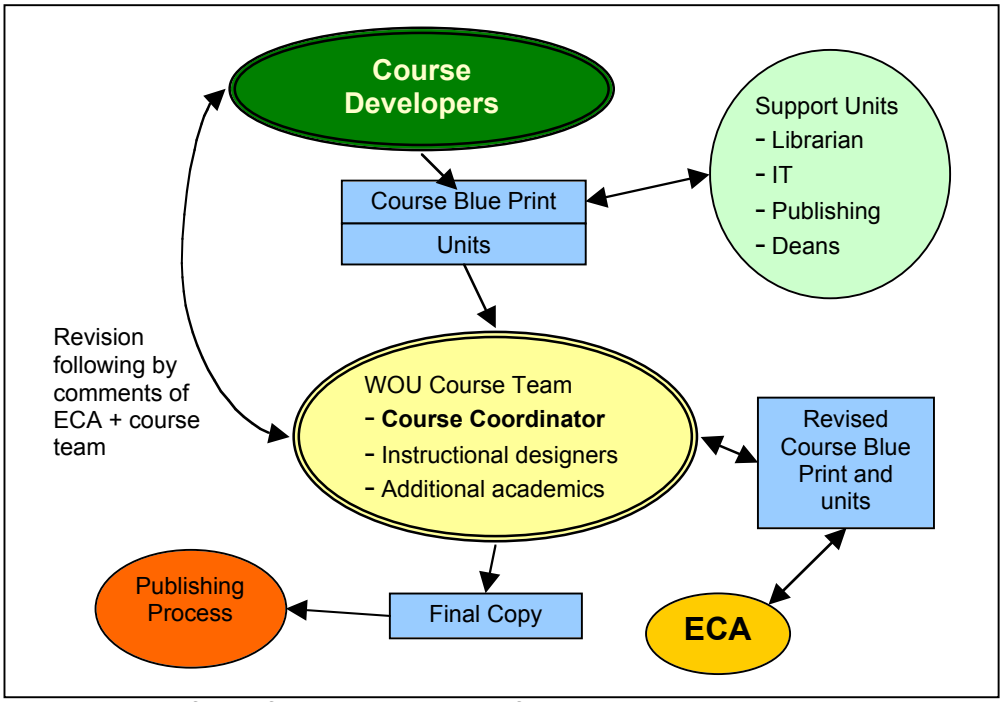

Figure 2: Workflow of the development of a new course

In the process of developing a new course, course developers are required to produce a course blueprint based on the syllabus provided by WOU. In the course blueprint, the design of a course will be more or less fix with the preliminary template or guidelines. A textbook and other source of references will be identified.

In the revision of the course blueprint, the WOU course team, led by a course team leader or sometimes called the Course Coordinator will contribute their expert knowledge wherever necessary. After the course blueprint has been finalised, the course developers will start writing the units. Units of the study material will be revised several times based on the exchange of content knowledge between the content experts from the internal party of WOU and course developers. Besides that, the instructional designers from WOU will ensure the course material is developed based on WOU house style. In addition, an external input through a named external course assessor (ECA) is also incorporated into the mechanism to ensure quality control in the overall development of the course.

Purchase of adaptation rights from offshore partner

In the case of a course adaptation, before the outsourcing process commences, WOU and the offshore partner have to negotiate and sign a license agreement where all terms and conditions including the royalty payment are agreed upon.

With this agreement, WOU's Course Coordinators are given access to request and review course materials before the purchase of adaptation rights. The Course Coordinator plays an important role in reviewing and assessing the suitability of the course material identified for adaptation. If a course material is appropriate and adheres to WOU syllabus, the Publishing Unit will purchase the rights from the offshore partner.

Following the purchase, the Course Coordinator will source for a writer to adapt and localised the course material contents to learners' requirements. The whole process of adaptation might take up to 6 months. The writer's job scope includes providing new case studies, local examples, assignments, examination questions, course guide, etc.

The subsequent process of course development is similar to the work-flow depicted in **Figure 3**. The exception is the ECA report provided by an outsourced institution.

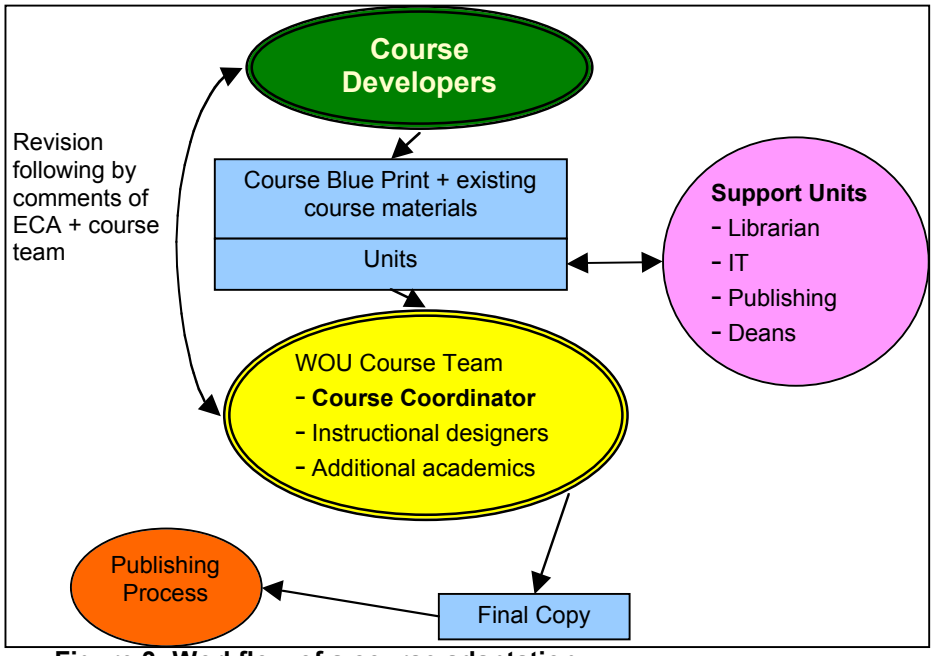

Figure 3: Workflow of a course adaptation

Legality

For both purchasing of adaptation rights and development of new courses by foreign academic members, a license agreement needs to be drawn between two working parties.

a.) Agreement between WOU and the offshore partner for adaptation

As mentioned above, before the purchase of adaptation rights, WOU and the outsourced institution have to sign an agreement which describes the grant of reproduction and modification rights, royalty payment (amount and frequency), termination clause and intellectual property rights of the owner.

Adherence to the agreement is an important aspect of the success of the collaboration. Mutual trust and frequent communications are also important as the two parties have to work with each other.

b.) Agreement between WOU and local writer or foreign institution for development of new course

Agreement between local writer and foreign institution also includes the usual terms and conditions listed in (a). However, the essential elements that determine the accomplishment of the project are the timeline of course development, job specifications and copyright issues that need to be identified clearly.

The writer will be provided with a schedule or timeline to assist him/her to meet the deadline. An example of a course development timeline is presented in **Table 1**. The schedule assists the Course Coordinator in monitoring the progress of course developments. This enables the Course Coordinator to mediate and assist the writer if he/she has difficulty in fulfilling his/her commitment.

Category of Work	Estimated Pages	Commencement Date	First Draft Submission*	Final Draft Submission*
Convert Course Contents to Blueprint Develop Unit One (3-5 lessons)	Approx. 5-10 pages Approx. 60-80 pages	July 1, 2006 July 15, 2006	July 10, 2006 Aug. 15, 2006	July 15, 2006 Oct. 1, 2006
Develop Unit Two (3-5 lessons) Develop Unit Three (3-5 lessons)	Approx. 60-80 pages Approx. 60-80 pages	Aug. 15, 2006 Sep. 15, 2006	Sep. 15, 2006 Oct. 14, 2006	Nov. 1, 2006 Dec. 1, 2006
Develop Unit Four (3-5 lessons) Develop Unit Five (3-5 lessons)	Approx. 60-80 pages Approx. 60-80 pages	Oct. 14, 2006 Nov. 15, 2006	Nov. 15, 2006 Dec. 15, 2006	Dec. 31, 2006 Feb. 1, 2007
Course Guide, Specimen Examination Paper, Answer Key and Marking Schemes, Assignment Files, PowerPoint Slides for each unit etc.	Approx. 50-100 pages	Dec. 15, 2006	Jan. 15, 2007	Mar. 1, 2007

Table 1: Course development timeline

Categories of works are also listed clearly in the Annexure of the contract which specifies the work relevant to the development of the course.

WOU respects and observes the Intellectual Property Rights of all individuals. As such, copyright is strictly observed in the university. The course developer is responsible and liable to identify and obtain all items that require copyright clearance. If the course developer is unable to obtain the copyright clearance, the university shall endeavour to seek clearances for such items identified. If copyright is unobtainable, these materials have to be omitted and replaced with others by the course developer.

Issues related to off-shore outsourcing

Similar to the definition used by Backman, Holmberg and Tonnby (2007), the success of the off-shore project is defined by satisfaction with the benefits from outsourcing gained by WOU as a result of deploying the outsourcing strategy. This can be measured in terms of how well it reduces cost, the satisfactory level of learners or level of quality measurement. In the process of offshore outsourcing to achieve the success of the project, several issues have been encountered and are highlighted as below:

1. Copyright

One of the major problems that we have encountered with foreign writers is infringement of Intellectual Property Rights (IPR), either intentionally or unintentionally. Surprisingly some writers assumed that information from websites are copyright free and can be used liberally.

There have been incidents where writers copied from textbooks or journals without citing references and giving credits where it is due. It is the university policy to acknowledge and respect IPR. Plagiarism is not allowed and must be avoided at all costs.

Under the Publishing Unit of WOU, there is a copyright page that serves as the gatekeeper to ensure that all course materials published by the university is free from copyright infringement. It is the university practice to write to all copyright owners to request for permission and make any payment to use the material whenever necessary. The materials will not be used if we failed to obtain the consent from the owners.

2. Managing of course developers in distant locations

Training of course developers is required especially at the beginning of the outsourcing project. Understanding of WOU learners is important as it relates to the satisfaction of the target reader of the course material. As WOU imposes a set of house style onto the course material, WOU needs to ensure that this style is well delivered to the course developers and adaptors. Characteristics of a good course material has to be defined at the very beginning and must be stated clearly to them to ensure that they are able to match WOU's expectations. The sharing of possible methods used to design an effective course material and its preferred language or assessment types are also important to course developers and adaptors.

Offshoring of university study material should be regarded as a dynamic process that evolves over time (Jesen and Pedersen, 2007). Therefore, bridging the gap between the two parties is extremely important. Universities that embark on an outsourcing strategy would do well to first establish a structured approach to close the gap that often exists between two parties. Maintaining the relationship between WOU and course developers/adapters will ensure the success of the collaboration. Nevertheless, the support team must also be keen to provide the feedback that the other parties need. Communication between the two parties need to be predictable, interactive and proactive (Fuchs, 2007). WOU needs to appoint one or several members of a team for in-house and offshore locations to be responsible for communication exchange and to monitor the development of course materials. There must be also one person who is responsible for supporting and monitoring the knowledge delivery process during the training process. The person will also be the main contact person for the offshore team members and general queries will be dealt by this person.

3. Meeting Deadlines

The average time for course development in WOU is between eight to twelve months. Any delay in submission of manuscript will affect the course presentation scheduled. Meeting the deadline of submission is crucial to the Course Coordinator as there are still many level of preparations required before the course can be presented to the students. This ranges from several revisions from the CC, ID and ECA before the work is considered ready for publishing process.

As most of the course developers have other work, social and family commitments, they might not be able to meet the manuscript submission deadlines. Among the consequences are delay of course presentation, termination of writers and re-looking into the reserve pool of other writers. As a result, the university is burdened with additional cost and lost of time.

The importance of deadline is highlighted during the training and it is also explained in detail in the agreement. The role of the Course Coordinator as the mediator is significant in monitoring the progress of the course developer. Ample reminder should be given if there is any delay from the very beginning.

4. Cultural differences/localisation of context

Due to the course developers' backgrounds and cultural differences, the course materials developed require editing and amendments to suit Malaysian needs. The case studies used, examples given and the language style need to be changed and localised.

This is more apparent in developing business and management courses when foreign course developers do not understand our business and economic environment and hence, not able to provide examples that students can comprehend.

Course Coordinators and Instruction Designers need to put in extra effort to substitute the facts and even do their own research to compliment the course materials submitted by foreign course developers.

Future trend

WOU has a good track record in off-shore outsourcing with a moderate success rate. Off-shore outsourcing assists in fast-tracking the University's course presentation and fills the gap when local expertise is not available. It also makes it possible for the schools to manage the development of a number of courses concurrently. Sharing of information and exchanging of ideas between academics from different background and experience is also a healthy trend in promoting intellectual knowledge.

We believe all the issues mentioned above could be resolved if more training is provided to appointed course developers and ongoing communication channel is maintained between them and the appointed Course Coordinator. Mutual trust and respect of working ethics between two groups of working community helps during discussions. Both parties need to make an effort to be more tolerant with the request or demand from each other. Off-shore outsourcing is not just a business transaction in a globalised world but it involves inculcating a good relationship between two institutions.

WOU as a new ODL institution will continue to outsource either locally or offshore in meeting the demand of the fast changing intellectual environment. We will source for collaboration opportunities with different partners in fulfilling our future academic needs.

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Towards Unified Communication: The Polytechnic University of the Philippines (PUP) Inter-Campus Connectivity

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Abstract

This research paper proposes an infrastructure framework for interconnecting the fourteen satellite campuses of the Polytechnic University of the Philippines (PUP) for a reliable, faster and cost-effective communication, collaboration and administration through a converged data and voice network. The proposed design will provide the PUP community members access to information, systems and databases within and outside the University. The design will enhance the capability of the University to deliver its educational services on a distance learning mode. Descriptive research was employed in the study as it examines the PUP satellite campuses' administration. Data were collected on information and communications technology (ICT) facilities and equipment of the different campuses. Different telecommunications and network providers, as well as network product vendors were interviewed in order to determine the effective and efficient network design and the appropriate implementation strategies. The phases in the system development life cycle (SDLC) were adopted as research framework. The ICT survey done revealed that most of the campuses were found to have the basic ICT infrastructure and can be interconnected to the Main Campus through a wide area network implementation. Communication and collaboration tools like email, messaging and videoconferencing can be extended to the satellite campuses through the proposed framework. Voice application like VOIP

can be integrated with the data network to establish telephone communication through the PUP private network. With interconnectivity, expenses on communication and travel can be reduced at the end of the third year by at least forty percent using the private network and at least eighty percent using the public Internet. This research output can be recommended as a model for inter-connectivity of state universities and colleges (SUCs) throughout the Philippines to facilitate the administration by Commission on Higher Education (CHED) of these institutions through improved communication and collaboration between and among them.

Keywords: Unified communication, inter-campus connectivity, ICT-enabled educational transformation, videoconference, distance learning

Introduction

This research paper proposes a framework interconnecting the fourteen (14) satellite campuses of the Polytechnic University of the Philippines (PUP) for a reliable, faster and cost-effective communication, collaboration and administration through a converged data and voice network. This will also provide the PUP Community access to information, systems and databases within and outside the University.

Through the years, the educational service of the university has reached even the remote areas of the Philippines for it has established its satellite campuses throughout the country. PUP has been operating for a hundred and four (104) years with a student population of more than fifty-two thousand, 1483 full-time and part-time faculty members and 707 administrative employees. The number of PUP satellite campuses is expected to grow in the years to come as the university continues its commitment to give quality education to a greater number of economically challenged Filipinos including those in the countryside.

With the growing number of PUP satellite campuses scattered throughout the country, administration and management becomes complex. Administering the whole PUP education system including its campuses, which altogether function as one university requires the need for close coordination and collaboration in carrying out its administrative and academic functions. The administration and governance of the satellite campuses which are located in some distant places is under one organizational body, which is in PUP Main Campus. In the same way, all policies, guidelines and school year activities implemented at PUP Main Campus are also executed in the other PUP campuses. Documents are being transported physically to the campuses. Meetings and events are personally attended by selected representatives from different campuses. Almost every activity is being coordinated physically, thus, implementation becomes complex, costly and most frequently delayed.

Research Objectives

The goal of this research is to determine how the fourteen satellite campuses can be closely and timely administered and the traditional ways of communication and collaboration be improved while upbringing the quality of education through the deployment of ICT services in all of its campuses through a converged data and voice network. The network infrastructure that will be put up can be used as a medium for the unified communications system. *Unified communications,* as defined by Wikipedia, is a commonly used term for the integration of disparate communications systems, media, devices and applications.

The primary problem that this research seeks to address is how can a multi-campus university like the PUP integrate ICT in its instructional, administrative, financial, and research and extension undertakings to enhance the quality of its graduates, research and public services and, thus, contribute more significantly in the national goal of economic and social development, in general, and in the poverty alleviation program of the government, in particular.

This research aims to contribute to achieving significant improvement in administration, communication and collaboration between and among the institution's community members and stakeholders at a reduced cost. Moreover, the University will be able to deliver its educational services on a distance learning mode, utilizing online and e-learning materials to run through the infrastructure that will be built through this research. This research aims to upgrade and expand the capability of the existing ICT resources of PUP Main Campus and the other campuses.

Specifically, the study aims to address the following:

1. What are the existing ICT resources of the campuses?
2. How will the campuses of PUP be interconnected?
3. What are the communication and collaboration tools that can be integrated in the network to extend the usage of the ICT services to the campuses?
4. How information resources like files, information systems, and Internet access can be shared or accessed from one campus to another?
5. How much cost reduction particularly on communication expenses the university can realize from the proposed interconnectivity?

Methodology

Descriptive method was the methodology used as it answers the question "what exists?" (Zulueta, F. M. & Costales, Jr. N. B., 2006). This research studies how the Polytechnic University of the Philippines satellite campuses are administered. It also analyzes the present condition of PUP campuses in terms of information and communications technology resources.

An inventory of information and communications technology (ICT) facilities and equipment in the different campuses and gathering of data from different telecommunications and network providers, as well as network product vendors were conducted in order to determine the effective and efficient network design and appropriate implementation strategies to be used.

In the network design, the phases in the system development life cycle (SDLC) were adopted as the research framework. These include analysis, planning, design, implementation and evaluation.

Under the analysis phase, the steps undertaken include: (1) studying the current network setup and inventory of existing IT infrastructure; (2) determining the types of messages that will be transmitted through the network; and (3) identifying the size and scope of the proposed network.

The next phase is the planning which is concerned with the identification of the needed materials and manpower. Parts of the planning phase are: (1) identifying the needed hardware requirements and network devices; (2) determining networking software requirements needed to be installed; (3) identifying the bandwidth allocation for the campuses; (4) determining the IT manpower for network administration and support; (5) determining how the network services like Internet, PUP WebMail, PUP Website, instant messaging and Voice over Internet Protocol (VoIP) can be shared in the network; and (6) analyzing how much the proposed interconnectivity will cost based on the current market price and maintenance operating expense.

The third phase focused on designing the proposed converged data and voice network architecture including the physical and logical connections. The design of the network security scheme was also a part of this phase.

For the implementation phase, the actual complete setup of connecting all fourteen campuses requires adequate amount of budget and time. Thus, a pilot testing was conducted connecting the Main Campus to a nearby satellite campus, to a distant campus and to a node in Singapore, all at the same time, using the public Internet. Data transfer, communication via VoIP and videoconferencing were set up to test the formulated network design.

Technical and users evaluations followed the implementation.

Main Findings/Results

The following findings were arrived at by the researchers:

1. The ICT survey done revealed that most of the campuses were found to have the basic ICT infrastructure like computers, printers and manpower. The only missing part is their link to the University information systems and databases as well as the public Internet. The PUP Main Campus, on the other hand, already has the established local area network where information systems are deployed and computers have access to the Internet.

2. The campuses can be interconnected by establishing a private network through the IPVPN (Internet Protocol Virtual Private Network) which was mostly recommended by the service providers or through the public Internet in which campuses need to acquire its own Internet access. The information systems, databases, network services and communication servers can be housed at the Main Campus and can be made accessible to other campuses.

3. The existing separate networks for voice and data can be converged into a single network by integrating the IP based communication systems into the data network. Before, voice application has a separate infrastructure from the data applications. It required a separate hardware, software, maintenance and manpower. But with the emergence of technology, voice and data applications can be converged into a single network. Voice applications can now pass through the data network. Voice and data resides in one network system. This gives a single point of access for the different types of messages like emails, data, voice, fax and others. This is an implementation of a unified messaging, where different message types can be accessed through a single application. Security measures like firewalls can be used to protect the network from unauthorized access.

4. The University spends millions of pesos for the communication particularly on telephone and travel expenses each year. Each campus is installed with direct telephone lines. A traditional private branch exchange (PBX) is installed for the use of the Main Campus with two hundred locals and fifteen trunk lines and sixty more direct lines for different offices. A ratio of 1:14 is the chance of getting a direct line using the PBX. With the interconnectivity, expenses on communication and travel can be reduced at the end of the third year by at least forty percent using the private network and at least eighty percent using the public Internet.

Discussion

The PUP Main Campus maintains a network infrastructure that connects the three nearby extensions. The connectivity for these extensions is bundled in the service of the existing Internet service provider using the Internet Protocol Virtual Private Network (IP-VPN) technology. PUP also has three core switches for managing the local area network of its Information and Communications Technology Center (ICTC) and the Main Building. The proposed network design for the interconnectivity extends the scope of the PUP existing network infrastructure to the other satellite campuses.

The pilot testing of inter-campus connectivity that was conducted to show how the network will work proved that information resources like files, information systems and applications can be easily shared through the network interconnectivity. File servers, database servers and other applications servers can be integrated into the network which then can be accessed by other campuses. There is no need to have individual information systems for each campus. Thus, there will be savings on resources and maximizing what already exists. With the implementation of the interconnectivity, the network can also be a passageway for the implementation of information systems in the campuses so as to have centralized databases and quick access to data.

Videoconferencing tools can be used as alternative to face-to-face meetings that save time and reduce transportation cost. From the result of the pilot testing, using the Internet as the medium for the connectivity, an adequate bandwidth of at least 256Kbps committed information rate is needed to get a good quality of voice and video.

PUP and its government and industry partners can easily establish linkages with other educational institutions and research agencies in other countries and engage in collaborative instructional and research endeavors. For example, a foreign-based expert in the field of environmental management can deliver a speech and interact (from his station abroad) with his audience who are scattered in the different campuses of PUP through the videoconferencing facility that this research intends to put up. This facility can also be used in forums on critical cross-country educational issues between top leaders of institutions of higher learning, say, in the Southeast Asian (SEA) Region, without the need for these leaders to physically converge or be all present in one place, provided they have videoconferencing facilities. Communication and collaboration among strategic partners become faster, efficient and effective.

PUP can also expand its reach through distance education for instructors and experts need not be physically present in the classroom for interaction with students. Electronic communication and collaboration tools can be used while supported with online learning modules.

As alternative to the traditional telephone communication system over a Public Switch Telephone Network (PSTN), Internet protocol (IP) phones were installed, configured and used at the three satellite campuses during the pilot testing. This gave an experience of how the VoIP works through the interconnectivity. It was found out that like videoconferencing, the quality of voice and timing depend on the bandwidth used. Thus, traditional communication tools like the postal mail, physical transit of data and the costly telephone expenses can be minimized through email, instant messenger and phone communication via the IP network.

Conclusions and Recommendations

The following conclusions were derived from the foregoing findings and discussions:

1. Access to global information and resources through the interconnectivity can make the satellite campuses offer same quality of education as the Main Campus and other advanced universities in the country. This research can help bridge the digital divide in the areas of the country where technology is limited, especially in the education sector.

2. The satellite campuses of PUP already have the existing stand alone ICT resources. For an academic institution, these ICT resources should not only be used as productivity tools but also as a source of information and a way of communication. With the existing ICT resources of the other campuses and the current network infrastructure of the PUP Main Campus, satellite campuses can also be interconnected to the Main Campus through a computer network specifically a wide area network implementation.

3. Communication and collaboration tools like email and messaging can be extended to the satellite campuses through the interconnectivity. Voice application like voice over IP can be integrated with the data network to establish telephone communication through the PUP private network.

4. With the interconnectivity that provides sharing of information resources and IP based communication through a single network infrastructure, PUP can reduce cost on communication and travel expenses from at least 40% (using private network) up to at least 80% (using the public Internet) .

5. The facilities that will be put up if the research is implemented can be used to put up income generating projects (like internet cafes and business centers) of the University. Earnings and savings from the proposed network facilities can then be used to support the operations of the university as it strives to provide quality education to its target clients.

Finally, on the basis of the above conclusions, the researchers recommend the following:

1. PUP has spent millions of pesos for traditional communication systems in so many years. It is high time that the university looks for alternative ways of lowering the cost of communication by taking advantage of the emerging technologies for communication and collaboration. Employment of these new technologies will not only lead to financial gains for the University but will also improve employees' work efficiency and productivity and enhance the competence of the institution and its graduates.

2. Internet access will no longer be an option for PUP. It is the gateway for a vast source of information which is needed by the other satellite campuses especially with those limited hardbound resources.

3. If this network design will be implemented, the university should maintain a continuous service from the network provider so as not to disrupt the delivery of the services that run through the interconnectivity.

4. The output of this research can be used as a model for inter-connectivity of state universities and colleges (SUCs) throughout the Philippines in order to facilitate the administration by Commission on Higher Education (CHED) of these institutions through improved communication and collaboration between and among these SUCs. Through the infrastructure to be built, there will be more and better opportunities for collaborative efforts on training, research and extension among national government agencies, LGUs, industries, and higher education institutions. The PUP can have linkages with other research agencies and other universities for better and faster conduct of researches as well as tie ups with different potential industry users of the research outputs of the academe.

5. The infrastructure can also be utilized by CHED (and even Department of Education) in its training and development programs for teachers and higher education officials and staff scattered in different places in Luzon. They just have to go to the PUP Satellite Campuses to attend these programs and do not need to converge in Metro Manila.

6. Extension studies can be conducted to validate the findings of the research.

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Hong Kong as a Regional Education Hub

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Abstract

The Hong Kong government has a policy objective to become a regional education hub. There may not have been thorough analysis of the current realities concerning offshore education in Hong Kong and the region.

The research objective was to evaluate the factors that would lead to success or failure of the education hub policy.

The research methodology was principally qualitative in nature and involved data collection, policy analysis, a questionnaire survey and in depth interviews.

Hong Kong is an importer of education programmes, well over 1,000 programmes are offered by overseas institutions. Data from annual reports provided by these institutions under the Non-local Ordinance shows the scale of student numbers involved. Overseas providers supply about half as many graduates as the government funded sector.

Numbers of overseas students in Hong Kong are growing from a very low base but are small compared to China Mainland, Singapore and Malaysia. Hong Kong institutions do provide a significant proportion of the overseas education provision in China Mainland where Hong Kong is treated in the same way as any foreign institution.

Hong Kong has a number of advantages in terms of education hub development and scores well in the context of the "global university city index" drawn up by researchers at RMIT. Hong Kong may find it difficult to develop as a major education hub given that it does not meet local demand. Funding policies for the local universities do not provide significant incentives for them to expand overseas numbers. Hong Kong also has a private sector that comprises both self-

financed continuing education arms of the local universities as well as private companies and agencies. This sector has more capability to respond to the education hub policy but there are barriers in place in terms of the ability of students to enter Hong Kong to study. The capability to export programmes may also be limited.

The conclusions are that the policy may be more rhetoric than reality in the context of the real world situation in the trade in educational services.

Introduction

The study sets out to consider the development of Hong Kong as a Regional Education Hub, the effectiveness of government policy to that end and the implications for lifelong learning. A number of specific research questions were identified and these will be dealt with in turn below. In addressing these questions a qualitative approach was adopted, obtaining information through questionnaire surveys of leading providers from overseas and from local operators, through interviews with key informants who are leading practitioners and through the collection of factual documentary data on overseas programmes offered in Hong Kong. The development of the policy has also been analysed. Key issues and concepts from the social sciences underpinning the study include human capital theory, social capital theory, globalisation and trade in educational services, marketization versus regulation and policy analysis. This paper will assess the extent to which these questions have been answered and what contributions the study can offer to our knowledge and understanding of the effects of government policy on lifelong learning in Hong Kong. The conference presentation will focus on the factual documentary data that was collected

The Research Questions

1. Why and how was the policy developed?

It was identified that the genesis of the policy lay with a University Grants Committee report in 1996, this report, *Higher Education in Hong Kong*, surveyed the whole sector, including Continuing and Professional Education, and concluded, *inter alia ,* that Hong Kong should aim to become a regional centre for higher education, recognising that it had advantages as a place where East and West met but also that it would face competition in developing this role (UGC, 1996). Judged purely by developments in the funded university sector there has been some success given that the numbers of overseas students in Hong Kong's universities had risen to some 9% of total funded student enrolment from a low base in the eleven years from 1996. Further reports in 2002 and 2004 supplemented the aim to increase non-local numbers and the hub term was first used by the University Grants Committee in the 2004 report. Generally, the term came into wider use in 2004 being quoted in speeches by the Secretary for Education and used by the Education Bureau in its briefings and on its website from 2005.

As is clear from the interviews and the responses to the questionnaire survey, there is widespread agreement that the education hub policy is a sensible one. If anything, there is surprise that more has not been achieved in making it a reality. Perhaps it is because the policy is a self-evident one that there has been little public debate on how it can be achieved. The Hong Kong government approach of *laissez-faire* or *positive non-intervention* may also be responsible for the lack of

debate or consultation since it is likely that it is a policy that would not involve public resources or funding. Hence, government support would be exhortatory rather than concrete. On the other hand, there are aspects of the policy that government may not wish to highlight given that an increase in non-local student numbers may draw attention to the relative lack of funded tertiary education places which are still limited for local students.

The pressure on this aspect has somewhat eased in recent years with the significant expansion of post-secondary places and the fact that of the new 20% quota from 2008 for non-local students the vast majority (80%) are not funded places. Even so, the expansion of post-secondary places is fuelling further demand for senior tertiary places which may cause tension if local students perceive that the non-local proportion is expanding at their expense. The vague pronouncement therefore of the regional education hub policy as a good thing serves both to avoid potential commitments on government and to avoid potential controversy. To the extent that there is progress, government can claim success, to the extent that there is a lack of progress it can be blamed on the institutions.
This may be a too cynical reading of the situation but it is certainly the case that the formulation and development of the policy has to date not followed the usual routes and has lacked specificity. The 2007 pronouncements in the Chief Executive's Policy Address are somewhat more concrete and it will be interesting to evaluate whether they have any impact.

2. How does it impact on the lifelong learning sector in particular?

As stated above, the policy emanated from the universities funding body in a 1996 report and was conceived of in terms of expanding full time undergraduate and postgraduate numbers. The report also covered the work of what has been defined in this study as the lifelong learning sector or the *fourth estate* but this was seen as principally Hong Kong focused. Since that time the lifelong learning sector has played a significant role within some of the UGC funded institutions in developing community colleges to meet the government's post-secondary expansion targets. In addition, this expansion to Associate Degree and Higher Diploma level has generated more demand for tertiary places to first degree level which can only be fully met through self-financed degrees, offered in Hong Kong by local or overseas institutions. This expansion of full time provision has given the sector enhanced capability to offer places to non-local students and, as the sector is both competitive and entrepreneurial, there is a willingness to do so if possible. Moreover, some institutions within the sector, particularly HKUSPACE, the Open University of Hong Kong and Baptist University's School of Continuing Education, are involved in developments in China Mainland and so also have an interest in the export of programmes. In this context the latest policy announcements, which do not mention the export of programmes in contrast to the 2006 policy statements, are somewhat confusing as to whether priorities have changed. A feature of the vagueness of government policy announcements and speeches on the regional education hub is that there is some confusion in interpretation of priorities as these are not clearly stated and have not been debated with the stakeholders.

There is a strong financial pressure on the lifelong learning sector that is not only derived from the self-financing nature of the operations. The community college development that has produced a capacity of over 25,000 places since 2000 has been supported indirectly by government through the provision of land grants and ten-year interest free loans to assist campus development. Five sites have been developed and some institutions have taken loans to acquire

and convert commercial premises for teaching. In total, about HK$4 billion of an available fund of HK$5 billion has been taken up by the sector in loans meaning that the sector has to ensure the repayment of HK$400 million each year over the ten year period. This can only be recovered through student fees or bridge financing from banks if the loan is to be spread over a longer period. The twenty community colleges thus compete for students and already two have failed, others may be marginal. The possibility therefore of attracting students from overseas, especially from China Mainland, is important in order to ensure that operations are financially viable. Although such recruitment is now possible the restraining factor of student accommodation is a factor as parents from China generally expect this to be provided. There is therefore some urgency for government to act in respect of the accommodation issue and in parallel some institutions seek to extend the loan repayment period to twenty years. The hub policy is thus a matter of some importance if this time extension is not granted as some institutions will be at financial risk if student numbers cannot be increased. Given the competitive environment there is little scope to raise fees as a means of increasing income.

Those institutions that export programmes to China had also hoped for more assistance from government in facilitating operations in the mainland. This would take the form of seeking permission to be treated as a Chinese rather than an overseas institution and in seeking eligibility for government matching funds to support exchange programmes since active institutions could benefit from this, notably the operations in Zhuhai (Baptist University) and Suzhou (HKUSPACE) which both offer full time studies. The policy does therefore have implications for the sector.

3. What are the factors that will affect the policy becoming a reality?

In terms of students being attracted to Hong Kong the city can offer a number of advantages. The city itself is a lively and attractive location and the policy seeks to capitalise on this - A*sia's world city* – as well as it being a gateway to China and a place where East and West meet. It can therefore attract students from the Mainland as well as from the rest of the world and this in itself would be one of its attractions. For students it is not expensive in terms of living costs or fee levels but there is the critical issue of affordable accommodation. The expansion of overseas student numbers has been rapid in the past two years to reach the present total of just over 6,000 in the mainstream universities but further growth (the current quota allows this number to double) will not be possible without government action on student accommodation. There is scepticism in the institutions that this can be solved by one massive development as this would risk becoming an overseas student ghetto and, in any event, one location is unlikely to suit all the institutions.

The situation in Hong Kong can be contrasted with Singapore which has over 90,000 overseas students in a territory with a smaller population than Hong Kong and a smaller land area (about two thirds the size in both cases). How Singapore has achieved this may be instructive but such a study is outside the scope of this paper. A negative factor in Hong Kong may be the lack of financial incentive and financial pressure for the mainstream institutions to expand overseas student numbers significantly. There is also the constraint of the strictly controlled number of funded places and the reluctance to create a perception that places are being offered to overseas students rather than local students. Student exchange may solve this potential problem but may not result in a large scale of activity.

3. To what extent is the policy based on a realistic assessment of the higher education provision in Hong Kong?

The data collection exercise undertaken in the study has demonstrated the extent of overseas degree provision in Hong Kong as far as student numbers, graduates and fees paid are concerned for the years 1999 and 2005. This is publicly available information but as far as is known has not previously been collated and presented. It shows that the local institutions fail to meet local demand by a significant margin. By 2005 there was an equivalent number of Masters level students and half the number of bachelors graduates each year as compared with the funded sector. The fees generated by these students exceeded those paid in the funded sector. This begs the question that a higher education system that cannot meet its local demand is unlikely to be in any position to develop as an education hub as it suggests that there is no spare capacity. This may be a false conclusion given that the capacity of the local funded system is artificially capped by government policy. Government might also wish to justify its position as being in line with its *laissez-faire* philosophy and that the market mechanism has come into play to meet demand. Whilst this may be the case there is no evidence that government takes statistics on the market-led provision into account in its planning for higher education provision. Nowhere does government publish statistics on the overseas registrations and nor does it report figures on the extent of lifelong learning provision in its annual reports.

The education hub policy was generated from the university funding body and makes sense in the context of that sector. The permitted scale, at a 20% quota of funded numbers, is not excessive in comparison to practices in other countries. The financial incentives are not pronounced but this has the advantage that institutions are driven more by motives of internationalisation *per se* more than by the desire to attract additional resources. On the other hand, the lifelong learning sector, which would be prepared to react more entrepreneurially in promoting the hub concept, both onshore and offshore, has not really been taken into account in the policy pronouncements. This is partly because the activities of the sector are not well understood by government. The success of the sector in meeting government targets for the doubling of the post-secondary opportunities has made government more aware and the introduction of the Qualifications Framework and more overt quality assurance mechanisms (the reformed Hong Kong Council for Accreditation of Academic and Vocational Qualifications, the Joint Quality Review Committee and the Quality Assurance Council respectively) indicates that marketization and regulation are being employed to bring in more control.

4. Is there a tension between the operation of a free market and the inclination of the Hong Kong government to regulate (especially in education) and how does this affect the policy?

The traditional education sectors funded by government, primary, secondary and tertiary, are highly controlled in Hong Kong. What has emerged in recent years as the lifelong learning sector or *fourth estate,* has not been so regulated. The expansion of the sector during the 1990s made its activities more visible and the Open University of Hong Kong argued that the subsidised activities of the funded universities were unfairly competitive to its self financed operation. In typical fashion, to create a level playing field, government decreed that all continuing education activities become self-funded from the mid-1990s (Cribbin, 2002). In 1998, in terms of overseas programmes, the Non-Local Ordinance came into effect and was designed as consumer protection against rogue institutions. It applied to all providers, quasi-public and private. These

were still relatively light touch measures. The establishment of community colleges from 2000 to deliver on government's aspirations to double the intake to post secondary education brought the sector into even more prominence and highlighted the different treatment accorded to the self-accrediting sector (the universities) and the non self-accrediting sector which had to seek approval from the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ). This process was both time consuming and costly.

Once again, government felt obliged to ensure a level playing field. Accordingly, the Qualifications Framework was introduced to regulate the sector more closely. Vetting of programmes to appear on the Register is to be done by HKCAAVQ which is the Registrar of the framework but for the self-accrediting sector a universities owned body, the Joint Quality Review Committee, has been created. The processes for the two sectors will be similar as is the case for the operation of the Non-local Ordinance. A further factor is the government's provision of funding for students in the expanded provision and also for institutions in the form of land grants and development loans. These also bring with them stringent reporting conditions and obligations so that the market led provision is increasingly regulated. It is against this backdrop therefore that the education hub policy has developed. It has been demonstrated that there appears to have been little discussion of the policy and certainly no detailed analysis of its implications. Yet, it is widely regarded as a good thing. For the lifelong learning sector it represents opportunity but there are still barriers to be overcome while the tide of creeping regulation that has caught up with the sector's other activities suggests that if government does involve itself actively in the promotion of the policy then there will inevitably be controls involved.

5. What is the significance of the policy for Hong Kong and for China Mainland respectively (particularly the Greater Pearl River Delta region, including Macao)?

The significance for Hong Kong of the policy is related firstly to the attraction of talent – *brain gain.* The expert interviews touched on this theme which is related to government's perception of remaining competitive in the knowledge economy and as part of Hong Kong's ethos as *Asia's World City.* There are also the advantages of Hong Kong as a gateway to China and as a window on the west for China, as a part of China while yet an international or global city and attracting talents and students from both China and the rest of the world. Hong Kong can also claim facility in both Putonghua and English although both need to be, and would be strengthened through more engagement of overseas and mainland students.

For the tertiary institutions the attractions are related to internationalisation generally and in attracting high quality students in the belief that both local and international students benefit from such a mixed learning environment. Indeed, the genesis of the policy emanated from the universities funding body and it has supported implementation such that nearly 10% of numbers are from overseas and a target of 20% is accepted. At the institutional level this is sufficient to make a difference and compares with practices elsewhere, for example, Stanford has a limit of 6%, Bristol of 15% (Thomas, 2007). There is no strong financial imperative for the Hong Kong tertiary institutions to internationalise because funding is not threatened and the fee differentials are not as wide as in some other jurisdictions. However, the lifelong learning sector, being self-financed and entrepreneurial, would be more driven by the fiscal returns that might be made from the education hub development. As has been demonstrated, resources are already stretched through borrowing to meet government's expansion targets and there is now more than enough capacity to meet the local demand. Hence expansion of overseas numbers or export of programmes overseas would be welcome.

China Mainland is the most likely area where Hong Kong may aspire to be an exporter of education programmes. Indeed, there are already a number of programmes offered in the mainland and two campus developments. In this context Hong Kong compares well with the major players (Young and Lee, 2007). This is in spite of the fact that Hong Kong is treated in the same way as any other overseas provider and, in fact, it could be said that this is in spite of the education hub policy since it has been of little assistance in respect of developments that have taken place. For example, some institutional links pre-date the policy and calls for government to extend the Closer Economic Partnership Agreement to education or to include education more actively under the Greater Pearl River Development Council's work have not thus far borne fruit. There may be reluctance by the mainland government to open up more to overseas provision in view of concerns on quality and in the context of very rapid expansion of domestic provision, graduate unemployment and the need to attract specific expertise rather than expansion of opportunity *per se*. On the other hand there is significant pressure because of rising prosperity and the one child policy for parents to seek maximum opportunity for that one child to acquire a university qualification. Lifelong learning and continuing education at higher academic levels are only just beginning to emerge as priorities after traditionally being associated with adult remedial work. It is interesting also to note the view expressed in one of the interviews that Hong Kong may be regarded as one of three education hubs in China along with Shanghai and Beijing. The notion of cities as education hubs may be one that has some resonance for Hong Kong This concept has been developed by the Higher Education Task Force for Melbourne as the "Global University City Index" based on a number of factors and Hong Kong is ranked 14 in this context (Gardner, 2006).

It is certainly somewhat surprising that there has not been more development in the Pearl River Delta area. It appears that a number of factors may be involved. First, the cities of the region are competitive and would not necessarily welcome Hong Kong initiatives or leadership. Secondly, Hong Kong institutions prefer to collaborate with top universities and these are concentrated in Shanghai and Beijing. Thirdly, the general barriers to working in the mainland also apply to the Pearl River Delta area and the geographical links are not markedly easier than with other parts of China as rail links are limited as is convenient road access. This is not to say there are not links as the major initiative in Zhuhai demonstrates although this is a partnership with a renowned Beijing institution. There are also links with Zhongshan University, the leading national university in Southern China. That there are not extensive links in Shenzhen, physically adjoining Hong Kong, is surprising and these may yet develop as there have been numerous explorations of such possibilities and there are established research links. As for Macao, the developments have also been limited and this may partly be a feature of demand since the population is only some half a million and there are established local institutions. The rapid development of the gaming industry in recent years has increased the number of service jobs so there are signs that a demand for continuing education may increase. Nevertheless, for there to be a significant expansion of provision by Hong Kong institutions in the immediate region some help from government to promote such 'export' may be required.

6. How do Hong Kong's ambitions to become a regional education hub fit in the regional and global context of trade in educational services?

The current scale of Hong Kong's education hub activities can only be described as modest, some 6,000 overseas students in Hong Kong and about the same number in China Mainland. Both these numbers are overshadowed by the number of students taking overseas programmes in Hong Kong -50,000 (established by this research) and by the number of Hong Kong students studying overseas and in China Mainland - 66,700 (Wong, 2005). The numbers are also modest set against the scale of the major hubs in the USA, UK and Australia. Even within the region they are overshadowed by Singapore (an estimated 90,000) and tiny Macao (14,000). In terms of resources to support the hub policy there is also only a modest provision via matching funds for donations to universities which may in part be used to fund overseas student scholarships. The UK and Australian governments in contrast spend very heavily on the promotion of their higher education sectors to overseas students and Hong Kong is unlikely to be able to compete on this scale.

It may also be unrealistic to expect that it should be able to compete on this scale. It would be more realistic to compare with Singapore and New Zealand and perhaps with other city hubs. It should also be emphasised that Hong Kong has started from a small base and that its development in terms of the limited ambitions set by the University Grants Committee as the progenitor of the hub policy has been reasonably successful. To return to one of the interview comments, it may be that Hong Kong should concentrate on niche roles rather than harbouring ambitions to compete with the heavyweights.

In fact the Trade Development Council's Study (TDC, 2005) gives an analysis of Hong Kong's strengths and weaknesses (the latter mainly being relatively unknown outside Hong Kong and current restrictions) and proposed the 20% quota for universities that has now been adopted for 2008/9 with no limits for the self funded sector where restrictions still apply. For inbound students, growth to a target of around 20,000 was suggested as realistic including both the funded and self-funded sectors. The Council was willing to assist in this promotion and has recently worked with the universities in promotion in South Asia. This is one of the few concrete references to what might be achievable and none of the policy pronouncements by government mention specific targets, apart from the 20% quota figure for 2008/9. Indeed, as mentioned above, it is difficult to follow priorities within the policy and to know, for example, whether omission of a specific reference to the export of education and the encouragement of private overseas universities in the 2007 Policy Address supplement heralds a change of policy or whether it has no particular significance. The conclusion would be that consideration of realistic targets and how to achieve these would be a helpful initiative by government rather than the somewhat vague formulations to date.

7. How effective is Government Policy and what are the implications for Lifelong Learning?

The development of Hong Kong as a regional education hub has become a government policy almost by stealth in that its policy context and implications have not, apparently, been fully debated. The idea of the internationalisation of the city's university campuses was the basis of the policy. This was articulated by the university funding body in a forward looking review in 1996 and, in the following twelve years has in many respects been implemented since it was never envisaged as a large scale activity. Such would have been impossible given that government funds university places for only 18% of the age cohort and shows no sign of changing that policy. Providing 4% of that 18% provision for overseas students is probably acceptable to the Hong

Kong taxpayer but anything beyond that would be seen as unacceptably denying places to local students. Since the additional overseas quota is at a fee level much closer to marginal cost than full cost it is evident that there is some cross-subsidy but this does not seem to have become a public policy issue.

At about the same time, in 1996, the continuing education provision within universities was determined by government to become self-financing. The sector was already growing in response to community demand during the 1990s and so this move did not have a serious impact on the volume of activity. Arguably it may have led to the provision of courses to become rather more instrumental than it would have been without this reduction of resources. The sector has emerged as a distinctive one within the education field and has been characterised as a *fourth estate* in addition to the primary, secondary and tertiary sectors. It is from this sector that much of the growth in China Mainland has emanated, particularly Baptist University and HKUSPACE. The sector has also been pivotally involved in the growth of the community college sector since 2000 that has delivered on government's policy to double the provision of post-secondary education from 30% to 60% of the age group. The baseline 30% included the 18% in funded universities, funded sub-degree programmes (for which funding is now progressively being removed) and subsidised overseas students. This growth has delivered on government policy five years ahead of schedule and at little cost to the public purse other than via support of students, interest free loans and land grants. Nevertheless, a number of institutions are understood to be struggling with loan payments as these are over a ten year period and it is difficult to charge fees at too high a level to recoup this entirely from the students in this period. Moreover, the falling demographics at secondary age groups means that supply and demand are in equilibrium and in fact demand may fall. For this sector therefore the ability to attract overseas students would in fact be important but the constraints, first of visa policies (which have now been relaxed) and secondly of being able to offer student residential accommodation, have militated against significant growth in overseas numbers.

The policy is therefore at an impasse; those self-financed institutions with the motivation to expand cannot easily do so while the established institutions have probably expanded as much as they wish to – although even then the constraint on accommodation is a serious one. The policy does not help because it is affected by other policies. For inbound students there have been visa restrictions and even now, for the lifelong learning sector there is a 10% quota, continuing restrictions on part time students coming to Hong Kong and restrictions on students being able to study non-local courses in Hong Kong. As we have seen this latter provision does not apply in Singapore and given the heavy import penetration of overseas courses in Hong Kong this is not a helpful restriction since it would be a simple matter to expand numbers on these courses as they already exist. Partly, government thinking on non-local courses has been conflated with concerns on quality. Rightly, government has placed an emphasis on assuring the quality of private sector programmes. That sector has complained that the university sector has unfair advantages in being self-accrediting and so government has felt obliged to provide something of a level playing field and has imposed a Qualifications Framework to regulate both sectors with parallel mechanisms to ensure this. At first this will apply only to local awards but in time should extend also to non-local awards at which stage the development of what has been termed a 'secondary hub' may be feasible.

Conclusions

To conclude, this study has shown the extent of non-local provision of higher education in Hong Kong by the lifelong learning sector in association with overseas institutions and that this is a significant proportion of the total in Hong Kong. It has also been demonstrated that this factor does not appear to have been taken into account by government in developing its education hub policy. It has to be questioned whether a territory that is a net importer can have a capacity to export. The questionnaire survey has shown the range of motivating factors for overseas institutions that are not only financial but related to internationalisation – an attitude shared by Hong Kong higher education institutions. It has also shown that most institutions are very active world-wide and not just in their own region so that Hong Kong is quite mono-directional in this respect as it offers programmes elsewhere only in China Mainland. Having said that, it is reasonably successful at so doing compared to the big players and the low base it starts from. All those surveyed consider that Hong Kong is well placed to develop as an education hub and seem surprised that more has not been done.

The policy analysis has demonstrated that the policy has not been fully discussed as to implications and represents exhortation by government rather than a blueprint for implementation. The contributions from the interviews have given a number of insights into the policy process and its limitations. The policy has not been very effective because it has lacked substantive engagement with those who might deliver it so as to ensure success. It has also been rather vague rather than establishing achievable targets other than in the full time, funded university sector where some expansion has been achieved. The contrasts with the leading providers in terms of scale are stark and even in the region Hong Kong is well behind leaders such as Singapore. However, the policy levers open to the Hong Kong Government are more limited than Singapore given the latter is strongly a 'developmental state' in which government strongly steers and directs policy in contrast to Hong Kong's *laissez-faire* approach which eschews direct intervention and seeks a minimal; role to ensure a level playing field and let the market decide. In the case of education, however, there is some ambiguity as to what the market is and the dimensions of the playing field.

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The Forming of Attitude and Behavior Based on Information Technology Through Curriculum of Information System Within Education

A Case Study in the Subject of Curriculum Development at Master's Degree, Indonesia University of Education

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Abstract

This research is concerned with the use of blended & e-learning to develop of attitude and behaviour based on information technology at Master Program in Curriculum Development. On one hand, the curriculum of Master Program in Curriculum Development requires the achievement of mastering the information technology, but on the other hand majority of students feel unfamiliar with information technology itself and they don't feel the urge to learn since at where they come from internet technology hasn't been improved thus doesn't have an ideal infrastructure yet. The basic of this research is the usage of blended & e-learning, combining knowledge of information technology, skill in seeking for learning source and in developing learning based on information technology, enable this research to be qualitatively measured whether attitude and behavior based on information technology is forming within students.

The purpose of this study was to observe the forming of attitude and behavior based on information technology after doing the learning using blended and e-learning model. In order to achieve our goal, this research is done by using qualitative case study approach. The type of learning used in this research is blended & e-learning, combining face to face model (conventional), internet usage in class (synchronous), and distance learning (asynchronous). The proportion in learning activity is 40% knowledge and 60% skill. The knowledge learning is focused on direct knowledge which connected with information technology usage, while skill learning is focused on source finding and developing information technology based learning model. The research's design use naturalistic inquiry approach, where aspects of students' behavior toward learning by using information technology, students' behavior toward information technology usage, students' skill in seeking information sources in the internet (browsing), student's skill in developing learning based on information technology, measured by

the implementation of blended and e-learning model. The subjects for this research are 18 students who register Information System within Education subject. The instruments used are observation sheets, test, and structured tasks. Data is collected during research and analyzed through qualitative approach.

The achieved result through this research is the forming of students' attitude and behavior which based on information technology. This can be proven by students' need toward internet, whether to find learning source, communicate, or developing various learning model. The forming of this attitude changes students' mindset from depending on transfer of knowledge (one way from lecturer to students) to transaction of knowledge, where when students feel necessary they will seek to the source themselves. It describes the constructive learning pattern.

In summary, students' attitude and behavior toward information technology will change along with knowledge and experience they get through blended & e-learning. With the changes of their attitude and behavior toward information technology, the spread of information technology will be easier and meaningful since learning pattern will happen in two ways. The result of this research recommends us in considering the usage of blended & e-learning model within a school subject as an alternative if we want to transform learning pattern into transaction pattern.

Keyword: Attitude and behavior, experience, information technology, blended and e-learning

Introduction

The economic progress phenomenon in East Asia basically reconciles toward achievement factors in doing product diversification based on market demand, skill of mastering fast technology through reverse engineering (e.g. computer clone), the amount of people's saving, good education, and work ethos (Ade Cahyana, 1998). People, company, or countries who own education, skill, creation, and efficiently spread education will gain first chance within global competition nowadays (Cisco, 2001). This shows that education oriented in mastering technology is a must.

Along with development of innovation in information technology area, education and learning sources have become very accessible. This innovation has changed the paradigm of education from constant gain of knowledge and skill after education stage toward the paradigm of fast changing knowledge and skill. The progress of instructional technology supported by development in information technology and communication accelerates education to develop faster according to the need of education in achieving knowledge base society.

In globalization era, the chance of a country to own high and continuity growth will get higher if supported by human resources who own knowledge and basic skill to adapt themselves with demands in progress, higher education, background skill in knowledge and technology, and the ability to produce products which are capable to compete in global scale, both in quality and price.

Indonesian will have difficulties to use the chance as explain above if they don't give better attention in education. Education crisis in Indonesia, seen from the quality, spreading, or other efficiency in handling, has been going on for too long. Objectively, education system in Indonesia has been through quality crisis since mid 1970, when pattern in education development were done in bureaucracy and centralize, which endanger the human resources (Ace Suryadi, 1998). One visible example is the student's achievement that far behind international standard. One of the factors causes low education level is the lack of development in education facilities. This has caused student's lack of experience. Beside limitation in facilities, teachers' urge to develop innovation within education is still low (Hansiswany Kamarga, 2007). Based on the condition mentioned, it is necessary to fix the

education in Indonesia, and one aspect has potential to be developed is through information technology base education.

There are several reasons why it necessary to develop information technology base education in Indonesia. *First*, the fact that education is a media to develop human resources is fully aware, nevertheless without the availability of ideal facilities the statement above will be nothing but just a statement on paper. Physical education facilities in Indonesia are very limited, while the number of human resources who need education development is increasing which makes information technology base education development (e.g. the development in long distance education) has become a highly necessity. *Second*, industrial development needs fixing in human resources, which causes the demand of more variation in education facilities. The limitation in physical conventional education facilities and the lack of possibility to achieve a more variation in education according to market's need has caused Indonesian education quality left behind. *Third*, the development of information technology base education system will accelerate the chance to gain education beside the fixing of education quality itself. *Forth*, Indonesia's various geographic condition, ranging from cities to deserted area divided by many straits and seas, seriously needs to consider development in education base on information technology, since that kind of education system's development will be very helpful in spreading and fixing education in Indonesia.

Although it has been identified that information technology base education development is needed in Indonesia, in real life it's on the contrary. In majority, master students come from many areas in Indonesia, and most of them are still lack in knowledge and skill of information technology, some are even still unfamiliar in using computer. In one hand, curriculum in magisterial program Curriculum Development demands students' skill to use information technology and develop learning that base on information technology, but in reality there are still many students who know nothing about technology itself. This has been seen as an obstacle, which delivers a problem of how to shape attitude and behavior base on information technology through learning in order to achieve students' need in information technology skill.

Problem and Purpose

To overcome the identified problem mentioned in background, it is necessary to digest on how to design a learning that capable to guide students in mastering information technology. Going deeper, mastering the information technology is more than simply mastering the skill, but must based on the changing of mind set in information base thinking. That kind of mind set can be observed through the forming of behavior and attitude which based on information technology. Based on description above, this research is focused on *How implementation of curriculum Information System in Education is designed to achieve behavior and attitude of information technology students?* The research's focus is developed in research questions as followed.

Is learning through blended & e-learning can form information technology base behavior and attitude?

a. What kind of blended & e-learning learning model used in this research?
b. How is the achieved result?
c. How is the identified forming of information technology base behavior and attitude through out this research?

In general, the research aims to answer problem which integrated with the forming of information technology base behavior and attitude. Specifically, the research aims to:

a. Describing the model of blended & e-learning learning used in this research
b. Getting the achieved learning result
c. Getting the overall view of information technology base behavior and attitude that has been formed through this research.

Research Method

To achieve the objective, the research is being done by using an approach of qualitative study case. Learning model used in this research is blended & e-learning model, integrated between:

- face to face model in class (conventional)
- using internet in class (synchronous), and
- using distance learning (asynchronous).

Learning proportion are 40% knowledge and 60% skill. Knowledge learning is focused on direct knowledge connected to information technology usage, while skill learning is focused on finding sources and developing information technology base learning model.

The design of this research is using inquiry naturalistic approach where aspects of students' attitude toward learning by using information technology, students' behavior toward information technology usage, students' skill in finding information resources in the internet (browsing), and students' skill in developing technology base learning are measured through implementing blended & e-learning model. The subject of this research (respondent) is a class of 17 students who are taking Information System within Education curriculum.

In this research, the instruments being used are observation sheets, structured tasks, result test, and data are being collected throughout research and analyzed by using qualitative approach, meaning incoming data are straightly being analyzed. Describing the result of class observation and students' tasks are being done through continuous qualitative analysis enable us to see the happening changes. Data of learning result are generated by using profile technique which enable us to describe overall result from students' learning.

Research Outcomes

1. Blended & e-learning that is being used

The design of blended & e-learning model that is being used is the combination of 40% theory and 60% practice. Students take classes in computer lab, where each student face computer with internet access. The first five times is used by lecture to give theory.

The way the lecture is designed is the following activity would be a presentation where the topic is about understanding computer as learning tool, multimedia, distance education, and online learning. These four topics are given in order to make the students think and find their own understanding toward information technology base thinking concepts. Although main elements of these topics are taken from resource book (Heinich, et al, *Instruction Technology and Media for Learning*, 2005), students are still being asked to complete the rest of the elements by looking for the sources through the internet. The strategy used in this part of learning is by using the internet in class (synchronous).

After mid semester, lecture is designed by students' paper presentation which, discussing about various learning model that can be improved through information technology base learning such as webpage, chatting, newsgroup, learning by using e-book, e-news, e-dictionary, e-laboratory. In this part students are asked to develop their ability to design an information technology base learning form.

From three forms of approached used for one semester lecture, we can see a form that describe these learning steps (a) the transfer of information technology knowledge in a face to face conventional way done in class, (b) inquiry learning by giving the students task to search for a broader information about concepts that are necessary to be understood in information technology by internet browsing, and transaction learning with the pattern of students' presentation which shows their capability to develop information technology base education.

Learning Process

For theory introduction, a lecture method is given in class with following topics: The Basic Concept of Information, The Basic Concept of System and Information System, The Development of Internet Technology and Problems found in scientific writing in the internet, E-education and electronic education system.

For practice introduction about things are used when accessing the internet, by using practice method of internet access the students are requested to make email account, develop mailing list whose members are the whole students in class so they can communicate at the same time.

Skills being developed during internet usage in class are (a) communicating through email, (b) communicating through mailing list, (c) internet browsing in order to find articles related to the task of making annotated bibliography, task of making presentation about information base technology thinking concepts, (d) developing a model or an information technology base learning approach.

2. The achieved learning result

The achieved result throughout one semester lecture is showing an increasing graphic for students' learning result. (a) Annotated bibliography is the achieved result on the beginning of class where students are asked to do browsing in searching articles related to their annotated bibliography elements. (b) Presentation is the result gained through students achievement toward understanding topic to information technology base thinking concepts. (c) Storyboard is the result of students' development toward information base technology learning model. (d) Final Semester Exam is final exam achieved by students. Overall the result is shown in the following table.

Table 1. Output Learning Result

(a) Annotated bibliography

range	frequencies	%
61 - 70	12	70.59
71 - 80	4	23.53
81 - 90	1	5.88
Σ	17	100

(b) Presentation

range	frequencies	%
61 - 70	10	58.83
71 - 80	5	29.42
81 - 90	2	11.75
Σ	17	100

(c) Storyboard model of learning

range	frequencies	%
61 - 70	6	35.29
71 - 80	5	29.42
81 - 90	6	35.29
Σ	17	100

(d) Examination

range	Frequencies	%
61 - 70	2	11.75
71 - 80	6	35.29
81 - 90	9	52.96
Σ	17	100

If is described the entire acquirement, we can see the existence of improvement as show in the following tables

Table 2. The Whole Output Learning Result

range	A	P	S	E
61 - 70	12	10	6	2
71 - 80	4	5	5	6
81 - 90	1	2	6	9
Σ	17	17	17	17

A = annotated bibliography
P = presentation
S = storyboard
E = Examination

Judging from the timing of marking where the aspects of annotated bibliography, presentation, storyboard, and final exam are tasks given in chronological orders since beginning until end of semester, we can see the decreasing of mark within the score range of 61-70 and the increasing of mark within score range 81-90.

3. The forming of attitude and behavior based on information technology

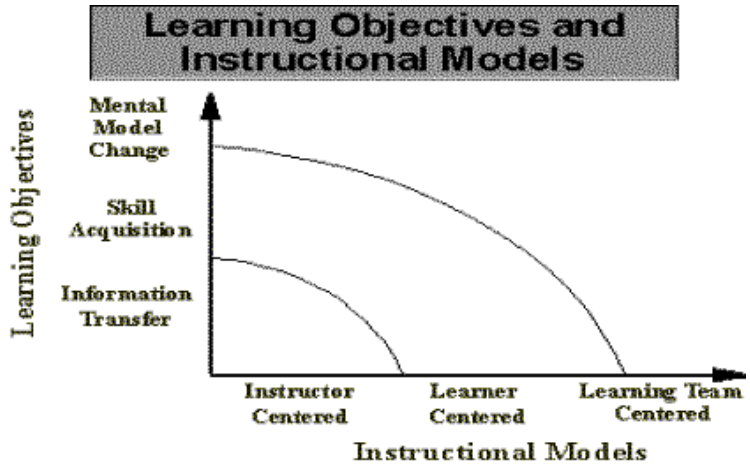
Attitude and behavior based on Information technology is being judged from observation during the lecture. Assuming that on the beginning there are very few students have the ability to use information technology, after one semester lecture period the following result shows.

- The aspects of students' behavior toward learning by using information technology
  - Every student uses laptop during lectures outside the lecture of information system within education
  - Every time they find concept/ phrase that is not understood after finding for themselves through wikipedia.com or internet
  - They access lecture materials through lecturer's website
  - Communication is built through mailing list
- The students' behavior toward the usage of information technology
  - Distribution of tasks are done by using mailing list instead of photo copying
  - Communication with lecturer is built through email
  - Students that are out of town is sending their test answers through email
- The students' skill in finding information resources in the internet (browsing)
  - Completing annotated bibliography through sources in the internet
  - More than 50% of the reference used for task came from the sources in the internet
- The students' skill in developing internet technology base learning
  - Using webquest.com (interactive)
  - Developing virtual magazine
  - Developing learning site using pbwiki.com
  - Developing dictionary for local language

Discussion

Introducing the Information Technology to student is not only to train them in using Information Technology, but the first and main are to change their mind set to make them want to use Information Technology in academic life. It is easy to train the student in using computer and internet, but to form attitude and behavior (alter mind set) that base on Information Technology is not easy. For example, in training student for opening mail box, writing and delivering email is not difficult, but form attitude and student behavior in order to open their mail box everyday, conducted communication through email, is not easy.

Ari Wibowo (2006 : 1) explain that the result of a study is Information Transfer, Skill Acquisition, Change of mental model, whereas in designing a lesson or curriculum require correspondence between target learn and instruction model. Study model can be classified into Instructor Centered, Learner Centered, Learning Team Centered. Furthermore it is described the relation between target learn and model as follows



Base on the picture above, mental change (in this case mind set) can be conducted if study far from models teacher centered and more develop learner centered or learning team. This Idea is based on the philosophy of constructivist that have a notion that learners are not empty vessels waiting to be filled, but rather as active organisms seeking meaning (Driscoll, 1994 in Chang Chew Hungs, 2007). In this case Sherry (1996) give emphasis at study strategy that guided practice, media based challenges, inquiry learning, and teamwork, that make proper developed to reach target the student makes sense and constructs new knowledge from the information which is presented. That is can be told that study that its centre on acquirement, the student is not only transfer knowledge but more than that, they can alter mental or mind set study.

Model blended & e-learning is designed to fulfill the need of mastering Information Technology and form attitude and behavior base on Information Technology. In general, the term blended learning is used to describe a solution that combines several different delivery methods. These can be a mix of various even-based activities such as face to face classrooms, live e-learning and sharing software, and self-paced learning. Some people consider blended e-learning to be the use of a variety of online delivery methods to present content and activities to learners. Thus with this approach, the entire course still remains online, but uses a blend of materials to present the content. (Nicholson, 2003). Because of this model gathers various of methods, so it give a chance to student to expand more optimal, either through structured study or through the study with inquiry approach.

Research Result shows that with structured steps and continual, beginning from recognition in theoretic then continued with recognition in practice, and accustomed use Information Technology, then will be formed attitude and student behavior that base on Information Technology. This research Result shows compatibility between what Ari Wibowo said with the theory of constructivist, it means that study which is designed with student centre on and developed through inquiry approach will give affects to attitude forming and behavior.

This attitude Forming is change the student way of thinking from that initially expect transfer of knowledge (from lecturer to student in one way) become transaction knowledge, that is if student feel that it is important for them to search its source, as the same manner as that told Chang Chew Hung (2007 : 8), constructivism resides the fundamental premise that learners actively construct their knowledge. Besides that, by study model blended & e-learning, student not only have a skill to use Information Technology but more than that, they can think, behave, and have the behavior that base on Information Technology, as expressed by Chang Chew Hung (2007 : 8), learners develop critical insight into how they think, and what they know about the world develops, as their understanding increases in depth and detail.

Conclusions

That can be concluded that attitude and student behavior toward Information Technology will be change along with knowledge and experience that they have through blended & learning study. With the change of attitude and student behavior toward Information Technology, the Information Technology dissemination will be easier and have a meaning because study pattern that happening is two directions pattern. This research Result recommends that if we want to change/alter study pattern into transaction pattern, the usage of model blended & e-learning through one of course becomes justifiable alternative.

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Challenges and Opportunities for Thai Universities in a Changing Educational Environment: A case study "Searching for Buffalo Tracks in Thung Ruang Thong Village to Create Profit to Thai Rice through a Sustainable Sufficiency Economy"

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Abstract

The progress of effective technology is a change that brings both positive and negative effects on the development of education in Thailand. Universities, in their role as institutions of higher education, must adjust to these changes by adopting the benefits of information communication technology in order to make the opportunities of developing education available to every locality. At the same time the universities have to limit the weakness of using technology in place of instructors, in order to decrease the problems in educational quality.

Applying His Majesty's philosophy of sufficiency economy to develop education is an option for Thai universities. The philosophy involves 3 main issues. They are (1) adequate living in moderation, (2) seeking rational solutions to sustainable self-reliance, and (3) the immunity from physical and psychological effects on cultural trends that are unsuitable for particular locales. These three aspects of the philosophy are based on two conditions which are morality and knowledge.

The educational study "Searching for buffalo tracks in Thung Ruang Thong village to create profit to Thai Rice through a sustainable Sufficiency Economy" was a project undertaken by Payap University and the Thailand Management Association (TMA). Students were supported to develop their home village, using the sufficiency economy, in Thung Ruang Thong Village, Tambol Wiang Ka Long, Amphur Wiang Pa Pao, Chiang Rai Province. The project resulted in cooperative effort between all sectors of the community, including the development of consciousness, awareness of problems, and search for solutions by the community itself. They discovered that the villagers had pride in their native lore and in their self-reliance being able to appreciate the value of their abundant resources of rice and water at their disposal to do rice farming and in the clay which was the best raw material to produce their emerald colored pottery.

This study suggests an alternative for universities in developing their educational programs in the midst of global change and expanded borderless education. This alternative is based on the philosophy of "Sufficiency Economy" utilizing an educational alliance combining modern high technology and local lore to apply the philosophy to particular locales.

The educational objectives of the study

On June 13, 1975 His Majesty King Bhumibol Adulyadej addressed the subject of educational objectives. His Majesty's conclusions were that the most important aspects of education were both physical and mental. But the key root is the ability to accept responsibility appropriately, to be able to think and make decisions creatively, well, and ethically. Educational administrators must proceed toward acquiring values in this direction if their endeavors are to be called correct and complete and for them to be called valid educators.

The United Nations' Educational, Scientific and Cultural Organization (UNESCO) has a vision for education that education should be for the maximum number of people with equal access to educational opportunities. The emphasis is on good results, including enhancement of the learning environment so the students' physical and mental health might be improved. UNESCO states that among their objectives are to provide quality education to eradicate poverty, and create quality of life leading to democracy and good governance, including maintenance of sustainable natural resources.

The Thailand Research Fund has analyzed the Thai educational vision and concluded that in the future Thai society must have efficacy, peace and security, and balanced development. People are at the center of development, so they must be nurtured effectively, so students can learn and can be engaged in life-long learning, and so that they can maintain their Thai identities in these times of change and globalization.

Therefore, the educational task in each region must include local material in the lessons in order to produce the results at each level and to enable the students to adjust to the changes necessary to face the future.

Changing education from traditional to borderless education

Mike Sandbother, an educational philosopher, said that traditional education was exclusively done in both schools and university in the same way, through face-to-face exchanges. The teacher was the center of the educational process, dispensing the information through face-to-face communication. The teacher was the educational resource, a living encyclopedia, and the one who should be able to answer all questions, and had the criteria to evaluate all aspects of the educational undertaking from their own widely-accepted fund of knowledge, dispensed systematically.

Later, after technology had begun to rapidly develop, the dissemination of knowledge was able to be done electronically to the students, without limitations as to content, time, or venue. Technology had an important role in development of education, leading to improving the teaching and learning, making it faster, more convenient, and unlimited in scope. This has implemented the transformation of education from traditional to borderless instruction.

This educational change is an aspect of Anicca, the natural condition of change incumbent upon everything. In as much as change is a cause and effect result of Etap-pa-ca-ya-ta, if we can analyze the cause of educational change, we can understand the change. The change is in a chain of causality. Thus, if we can control the causes of educational change in the future, we can control the trends of change in the future. (Kasem Wattanachai, 2006)

This educational change points to the increased role and importance of information technology in support of the goals of expanding educational opportunities. Therefore, all parties should keep in mind the management of the change in each locale by studying the strengths and weaknesses of the educational changes involved. And they should work for increasing the factors leading to strengths and reducing the factors leading to weaknesses. This will be help the growth and sustainability of education.

Weaknesses of borderless education: challenges waiting for improvement

Since borderless education transfer knowledge by electronic, the student is not able to seek advice and exchange ideas with the instructor or other students. There is no face-to-face communication possible. Thus there is no personal relationship between teachers and students, and between the students themselves. The role of the teacher who bequeaths the subject in the ethical aspects of living and in giving counsel about what is likely to lead to pain and pleasure is reduced.

For example, the traditional rite of "Wai Kru" (ceremony for honoring the teachers) has been demoted, leading to students diminished attitudes and to a reduction of the student's concern to apply their learning to be productive of significant and effective results. This has led to problems of effectiveness, since the students have failed to derive the essential matters of the subjects they have studied, from the textbooks and from the experiences of the instructors. After they have completed their educations, the students are weak in reflective and analytical abilities, and lack conscientiousness, and are unable to create and innovate. So when the students have to face problems, they cannot find solutions or create attractive options that will lead to social happiness.

Moreover, the dissemination of the same lessons and educational information to all educational localities is unable to respond to the needs, and is inconsistent with the unique requirements, of disparate places. These differ in micro-environment, including lifestyles of the populace, knowledge, and natural resources, and in macro-environment, including culture, society, politics, and technology. Thus the development of human resources will be inconsistent with the requirements of the local areas. The use of uniform lessons leads to the wasting of education, when it is unable to lay educational foundations and to develop particular localities in diverse ways as needed, and will not keep up with changes in the world.

Furthermore, the establishment of advanced communication infrastructure that is necessary for borderless education, for example, the installation of telephones, thermo-fax and internet facilities are not universal throughout the country. Some educational institutions still do not have electricity. This results in an inequality in utilization of electronic communication throughout the country, as some localities still do not have this capacity. Students who live far away are still not able to use these conveniences for education. This has an impact on the educational achievement levels of Thailand, and in the educational competitiveness. The International Institute for Management Development (IMD) conducted research in 2006 that revealed that the educational competitiveness and the basic infrastructures are highly related to a level of 0.914. If the basic infrastructure and advanced infrastructures of the country are improved and are extended everywhere it would have an impact on the country's competitiveness.

Table 1: Thailand's Educational Competitive Rank

Year	Number of Countries Compared	Thailand's Rank
2002	49	41
2003	30	21
2004	60	48
2005	60	46
2006	61	48

Source: The Secretary General of the Education Council, 2006

Although the production of computer hardware is a major export item for Thailand, the nation still lacks experts in the production of software. This leads to the nation having to expend a great deal of money to import software. In addition, the nation still does not have borderless education legislation to protect education consumers, to insure safety in the storage of information, and in keeping personal records of students. Dr. Molly Lee, an academic from Malaysia, speaks derisively of borderless education saying that it is possible that students will be deceived by their diplomas and about the quality of their educational accomplishments.

Therefore, in order to reduce the weaknesses of borderless education, universities in Thailand should reaffirm the importance of the roles of the instructors, because the teachers are the stimulators, supporters and critics in helping students realize the truths in the material they study, and to progress toward the greater knowledge they can acquire. The roles of the instructors must be strengthened both in terms of content and ethics. Essentially, by nature, human beings will develop well from the instruction of other people and from nature. So teachers need to continually do research to develop their knowledge base and to transfer their knowledge and experience. And students must study, search and practice analyzing unstintingly.

The strengths of borderless education: opportunities that should be continued and increased

Since borderless education involves electronic communication with students and is not encumbered by limitations of schedule or location, it has been widely adopted by both public and private institutions of higher education. The educational institutions need only set up on-line facilities with collections of subjects that can be sent by the Internet from involved units to the target groups of students, researchers, academics, and the public at large.

Universities can set up on-line educational programs using various electronic media. E-training can be used to develop organizations and can support them in continuing their own education. In addition, universities can support use of computers in educational programs using the networks and systems of the universities for faculty, staff and other interested parties by using CD training, along with manuals, whereby they can select the subjects they wish along with the texts and multimedia. Furthermore, universities can help faculty create e-courseware modules themselves. Donald Lien (2006) discovered that graduates from universities that had on-line learning capacities had greater chances of employment and earned larger salaries than students graduating from institutions that did not have this choice.

Borderless education is a new option in developing education that gives students the capacity to learn for themselves, to innovate, and to solve problems without being tied to schedules or venues. Borderless education enhances academic cooperation between universities, creating educational alliances, and this expands the horizons of education, as well as increases the universities' roles in building understanding between nationalities, religions, and social classes, so they can live together respecting their diversity and co-existing in peace. (Pornchai Mangkasombat, 2002)

Sippanon Ket-tat (1997) declares that it is incumbent on universities to work together to establish the limits of change. They must determine the levels of ability of the students and the appropriateness of the lessons in order to promote the strengths of society, to encourage students to find Thai ways of sharing that leads to warm families. The public sector is unable to do everything in an increasingly complex society. Universities should not exclusively emphasize bodies of knowledge that are already well known, but should stress study that can be applied in real life, ability to think is the mother of wisdom.

Increasing the strengths should involve building on acquired learning, as if we were standing on the shoulders of a giant, in order to be able to complement the good we have and to make it better, without starting all over. Universities should collaborate in their study and should build on each other's discoveries, combining Thai classical ways in contemporary contexts, and go on to find simplified modes for living moderately, with freedom to administer education, expanding revenue from various sources, and using appropriate technology. This is the way to develop a sustainable educational system.

The educational study: "Searching for buffalo tracks in Thung Ruang Thong village to create profit from Thai rice through a sustainable Sufficiency Economy"

Thung Ruang Thong village is on the plain on the left side of the Mae Lao River. There is a main street through the village and a road connecting it to another village running alongside rice fields. Boonyong Temple is the spiritual center of the populace and Thung Man Village School is the educational institution of the village.

From the interviews in a survey of 70 households, it was found that the majority of the villagers were engaged in agriculture. Eighty percent planted rice. In the year 2006 each family harvested 332 buckets of rice. Sixty percent was retained for family consumption, the remainder was sold. Each family had an average monthly income of 5,938 baht, and was able to save approximately 118 baht per month.

Villagers formerly utilized natural forms of agriculture, and by old tradition cooperated in their work. They used animal power, natural fertilizers, and selected seeds from their own harvest to plant the next crops, which were the best for their particular location, and they used a shared labor method. All of which led to a balance in nature.

In any case, at present, villagers have received assistance from the government in order to modernize their rice agriculture and increase yields. This includes the introduction of modern technology, for example, irrigation, tractors, chemical fertilizers, and herbicides and insecticides, which are highly effective in reducing the weeds and insect pests. These have been widely adopted and utilized. But, owing to the villagers' limited understanding and lack of discipline in using these modern methods correctly, environmental problems have resulted, such as depleted soil fertility and polluted water, along with increased production costs. Moreover, social problems have followed in the wake of the use of cultural influences that are inappropriate for the people, for example lavish consumerism, failure to save for future needs, and the lack of an adequate labor force.

Uncle Tan Tijittang, a learned man who gave up employment in Bangkok to return to be a potter producing emerald colored stoneware, told of the experience of elderly people living in the village who decline and die in the village without any relatives to look after them. Ninety-two percent of the younger generation has gone for further study and to take employment in the metropolitan areas of Chiang Rai, Chiang Mai and Bangkok.

Students from the Management Department of the Faculty of Business Administration, Payap University, submitted a proposal for a project entitled, "Searching for Buffalo Tracks in Thung Ruang Thong Village to Create Profit from Thai Rice through a Sustainable Sufficiency Economy." They received support for the project from Payap University and the Thailand Management Association (TMA) to develop their home village, Thung Ruang Thong, Tambol Wiang Ka Long, Amphur Wiang Pa Pao, Chiang Rai Province by incorporating His Majesty's philosophy of a Sufficiency Economy and by applying their business knowledge. The project generated support within sectors of the community itself and from government agencies.

This raised the students' consciousness about utilizing their education from the university classrooms by applying it in appropriate ways in local settings. It was an exercise in thinking for themselves. The students were able to use their knowledge to increase the

farmers' profits; instead of selling their rice in the fields and their grain to middlemen, they were helped to see the benefits of selling their rice through a cooperative. They also developed ways of using the straw as a raw material in the production of mushrooms.

The students were able to help the villagers know about and understand the philosophy of the Sufficiency Economy, from the computer. Many of the villagers were intensely interested in listening to their own younger generation's presentations using modern technology, which they had never seen before. This produced a sense of pride of leadership in the young people, and created a cooperative spirit in solving the problem of expenses in excess of income by setting up a monthly accounting system. The results were that families reduced unnecessary expenses and reduced their indebtedness.

Moreover, the students engaged in the practice of Buddhist studies along with the villagers, in the village Buddhist practice center. The practice involved the three-fold method of training in morality, concentration (meditation) and wisdom; it was taught by the elder monk from the village temple. The students participated in the practice and developed increased understanding of their duties and were better able to conduct their lives with their elders on the "harmonious middle way".

The students received advice from the village head, the housewives association, the administration of the school, and the learned people in the village about how to pass their knowledge on to youth in the village. The suggestion was that the knowledge about the production of emerald colored glazed pottery be included in the classroom work of the school, to increase consciousness about maintaining and managing their cultural heritage, along with rejuvenating pottery making as a productive venture for everyday life, creating work opportunities and income using the wisdom of the elders and local natural resources.

This raising of consciousness about utilizing classroom knowledge to apply it in local settings encouraged the students to "be able to think for themselves." They achieved success in combining modern technology with traditional ways of life in a local setting based on the foundation of the philosophy of the Sufficiency Economy. The project called, "Searching for buffalo tracks in Thung Ruang Thong village to create profit from Thai rice through a sustainable Sufficiency Economy" was evidence that using local wisdom in appropriating natural resources and in conducting life in harmony with nature as in the past was able to help people in the past co-exist with nature in more sustainable ways than at present.

Conclusion

Mr. Kofi Annan's remarks, when the Secretary General of the United Nations made his presentation of a "Lifetime Achievement in Human Development" award to His Majesty King Bhumibol Adulyadej on May 26, 2006, emphasized the success of applying the philosophy of a Sufficiency Economy in reforming education in Thailand and was a basic insurance against crises caused by continuous change.

Neglecting technology in the process of developing education is to destroy the usefulness of technology. But to use technology in place of instructors in each and every step of teaching and learning will lead to missing the educational goals of developing both the physical and mental capacities of students. The most important issue is to create a sense of responsibility, so students are able to think creatively and correctly. Otherwise the educational results might lead simply to the creating of robots, which is contrary to the advanced educational objectives in every society.

The Sufficiency Economy philosophy, which is composed of concepts of moderation, rationality and inoculation against negative effects of radical change, is an additional educational option for Thai universities. In this, universities need to develop their educational programs in educational alliances and which share potentialities, cooperate and provide mutual assistance, utilizing the traditional strengths of a teacher performing an instructional

role together with the advantages of modern technology. Universities must apply both strengths to produce results that are consistent with the needs of people and in accordance with local conditions, and which build regional strengths.

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Weblog and University Learning: Experience from Managing Class of Marketing Subject

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Abstract

Weblog, sometimes written as web log or weblog, is a website that consists of a series of entries arranged in reverse chronological order, often updated on frequently with new information about particular topics. It is a simple way for technologically illiterate people to make and use website for any purpose. Weblog can be used as a vehicle for learning process at university, particularly for non IT based lecturer.

Study on blog as learning medium has been conducted by a limited number of researchers. Williams and Jacobs (2004), on their paper, exploring the potential uses of blogs as learning spaces for students in the university courses (e.g. Harvard Law School), and records the experience of the Brisbane Graduate School of Business at Queensland University of Technology, with its 'MBA blog'. They conclude that blogging has the potential to be a transformational technology for teaching and learning. On the other view, Technology provides degrees of freedom that enable the creation of a wide range of learning activities for different learning styles (Shroff & Lee 2007).

The objective of this paper is to elaborate the experience of using weblog in lecturing. The lecturing subject is marketing management. The name of blog is www.ysutarso.wordpress.com. This blog is using bahasa (Indonesian language). The paper would like to answer questions on how to communicate to the students, how the students participate in the blog learning, and how the others contribute in the blog and learning. The outcome of the method is, as medium of lecturing, that blog can help stakeholders in the class to improve communication, participation and class management.

Based on the experience, particularly in Indonesia, blog will be a simple medium to manage courses. Although the other medium can be used (e.g. Moodle), the simplicity of the blog provides some advantages as the medium of learning in higher education.

Keywords: weblog, blended learning, marketing learning, CRM, university learning

A. INTRODUCTION

The development of information technology has changed the teaching and learning method. The advance of computer technology and the improvement of people access to computer and communication create opportunities and challenges to higher education institutions to change their approaches and techniques in teaching and learning. The improvement of internet services provided by internet providers, such as email services, weblog, moodle and most recently google offers google apps that support learning transformation, facilitates teaching and learning process to lecturer and students. Although there are some questions regarding its quality, for example Smith and Mitry (2008), online learning is still to be one of the main development program in higher education.

Weblog is one of the most common software that facilitates learning process. Weblog enables people to express their ideas and knowledge and share them to others (Gupta & Pitt, 2004). Weblog facilitates students to share their ideas more effectively and manage their time more efficiently (Flatley, 2005). More importantly, weblog enables the readers to give comments, puts the user in the central of interaction, facilitates additional class for further discussion, and provides equal opportunities to all student to involve in the discussion. It allows to collaborate many ideas to produce new ideas. As a microwebsite, weblog is useful to widen the means of learning at university.

The purpose of this paper is to describe the experience of using weblog for marketing subject at STIE Perbanas Surabaya, one of higher education institution is Indonesia. The first section of this paper discusses the theoretical background, mainly research on weblog, followed by the lecturing process of marketing management, the outcome of this project and finally the conclusion

B. THEORETICAL FOUNDATION.

There are some researches devoted to explore the use of weblog as a medium of learning. Williams ans Yacobs (2004) explore the potential uses of weblog as a tool of learning in higher education. They states that weblog is generally recognized as an effective medium of teaching and learning. Weblog that used to be a simple on line medium of personal publication or a diary is now becoming a usefull medium enabling the users to share and collabaorate their ideas with others.

The use of weblog is not limited for personal purposes. It provides oppurtunities to the users make profit. Charlene Li, a senior researcher at Forrester, predicted that weblog would be an important factor of determining the way an institution produces profit (Bill Orr, 2004). Many institutions is now struggling to improve and optimize their relationship models – the personal networks that are relatively idle in their business. These social networks can be integrated in a system that enables the firms to manage their relationship with their customers and selling activities.

Jung, Youn and McClung (2007) study the purposes and strateges of using weblog in Korea. They identify five factors that motivate people to manage weblog, namely entertainment, self-expression, professional advancement, passing time, communication with family and friend and trend. They find that entertainment is the only factor that is significant in all models proposed in their research. Related to the strateges of managing weblog, they identify five strategies, namely competence, suplification, examplification, and integatitation.

C. DETAILS OF THE PROJECT & EXPERIENCE

Marketing management is a compulsory subject for all accounting and management students. The main aim of this subject is to enable students explaining the basic concepts of marketing, consisted of segmentation, targeting, positioning, product, pricing, distribution dan promotion. The students are expected to be able to use information technology, such as email, weblog and website, in teaching and learning process of marketing managememt. The existing teaching method of this subject mainly uses traditional approach. All teaching materials and assignments are given in a class with a minor participation from students. This traditioal approach causes difficulties for students, especially related teaching and learning administration such as submission of assignments, communication with lecturers, etc. These problems hamper students to achieve an optimal teaching and learning result. This problems may be solved by applying information technology in teaching and learning process.

The purposes and benefits of teaching and learning activities are to enable students to: 1) understand and explain the basic concepts of marketing management comprehensively, 2) properly understand any current issues from the view point of marketing management, 3) understand the development in accounting profession based on marketing management principles, 4) use information technology in teaching and learning process of marketing management.

The IT profile of students of marketing management subject can be seen from the intial survey to the students conducted at the beginning of semester. The result shows that the average GPA of students is 3 and the majority of students come from the generation of 2006. They use computer once in 2-5 days and spend less than 3.9 hours a day. In terms of internet usege, most students use internet once a week and spend less than four hours a week.

The implementation of teaching and learning activities in marketing management subject is based on the guidance prepared in advance, consisting of four components. First, syllabus that explains the design of teaching and learning process, covering the topics, the relationship between topics, the aims of teaching and learning, etc. Second, learning contract that provides a practical guidance for implementing the teaching and learning. This contract reflects a joint commitment between the lecturer and students, covering course regulation, course outline, teaching method, etc. Third, grading guidance that explains the way student progress evaluated, covering components of grading and the proportion of each component in total grade. This guidance is very important to lecturers in determining the performance of students in marketing management subject. Fourth, presentation guidance that explains the way students present their works or assignments in

classes. Student participation in class discussion is an important aspect in teaching and learning process. Class discussion provides opportunities to students to express their ideas orally and may improve their self-confidence.

The development of teaching and learning materials are conducted in two forms, namely power point presentation and material development on weblog. The development of power point presentation is based on the standard power point slides accompanying the text book used in this subject, with some modifications and development. This standard power point slides is supported by additional slides developed by the lecturers. The development of discussion materials on weblog is based on the topics and activities covered in this subject. The materials are uploaded regularly on the weblog. The students can read the materials and shares their ideas on the weblog. All of the marketing management course materials developed can be accessed at www.ysutarso.wordpress.com.

D. OUTCOME(S) OF THE PROJECT/EXPERIENCE

The aim of this project is to achieve the following outcomes:

a. Capabilty of creating and using email
   The capability to create and use email is the basic skill required in marketing management subject. During implementation of project, there are 40 students of 50 students taking marketing management (80 percent of total) create and use email. Students who do not submit their emails usually pay less attention to teaching and learning process as well as less active in the class and less attracted in communicating via email. The use of email in this subject is mainly as a medium of teaching and learning communication and submitting their individual and group assignments. It is also the medium of communication between the head of class and lecturers. Students use email mainly for submitting the assignments, giving suggestion and asking questions related to the subject. During a half semester of implementation, there are big number of emails sent by students and this requires special attention.

b. Capability of sharing ideas on weblog
   Most students are capable to share ideas using weblog by writing their comments on marketing management subject weblog. At least, this shows that students of marketing management subject have tried to utilize internet as a medium of sharing their ideas. In most of sessions, a specific topic is chosen and students are required to discuss the topic on the weblog. Although some comments posted by some students are simple, their active involvement in weblog shows their eagerness to use weblog as medium of teaching and learning.

c. Capability of mastering teaching materials
   Student capability of mastering the teaching materials can be seen from two aspects, namely their capability in responding issues posted in the weblog and the capability to answers questions given during exams. Based on the comments posted in weblog, it can be concluded that the student marketing management literacy is quite low. It is reflected in terminologies of marketing principles used by students. Most of them tend to use common language, although some of them use marketing management terminologies quite well. An observation on class discussion also shows the same result. Students rarely use marketing management terminologies in asking questions and responding to other student questions and comments, or they are unable to use the terminologies spontaneously. In terms of mid-term exam, the result is not conclusive. Some student shows a good understanding on the topics discussed while the others need more attention.

d. Respond to using weblog.
   Related to the use of weblog as a teaching and learning method of marketing management course, students give their critical opinions orally, or post them via email or weblog. Based on their comments, it can be concluded that most students support the use of weblog as a teaching and learning tool. The merely concern of some students is related to the cost of internet access. The student critical opinions are published in weblog and some of them responded by other students. This shows that students are able to discuss and share ideas via weblog.

b. Student attendance
   The report on student attendance shows that on average students of marketing management course attend 89 percent of total class meeting. There are 22 students attend all the scheduled class meetings, 12 students attend 89 percent of scheduled meetings, 12 students attend 78 percent of scheduled meetings, and 4 students 67 percent of scheduled meetings. It means that the student attendance is relatively high.

E. CONCLUSION

From the above description, we can draw some conclusions. Firstly, weblog can be used as an alternative medium of teaching and learning, supplementing the existing tools. Secondly, the use of weblog as an online-based teaching and learning medium offers some advantages. It is simple and easy to manage. It can be utilized by lecturers and students with a very basic literacy in web-based information technology. Finally, in Indonesian case, weblog will become a teaching and learning medium that can be developed cheaply and easily.

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A Proposed Model for the GMSVU Pilot Project

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Abstract

An initial meeting was held to explore the feasibility of establishing a GMSVU in August 2001 by UNESCO. Three areas of common interest covers ICT, Tourism and Mekong studies identified as the components of a pilot project. Therefore, in 2004 Sukhothai Thammathirat Open University (STOU) had proposed a pre pilot project to establish the Greater Mekong Subregion Virtual University or GMSVU.

Objectives of the project were to develop a prototype model on fundamentals of ICT in preparation for the formal pilot phase of the ICT component of the GMSVU projec Moreover, to evaluate the effectiveness of the course content and the proposed Learning Management System (LMS) called V Class. Furthermore, to access the readiness for eLearning of participating university and to serve as a basis for further collaboration. Detail of the project plan, STOU, under the support of the Dr. Tong-In Wongsothorn former president of STOU, developed a work plan consisting of four main stages as follows: 1. Project management involving project planning and setting up of a team to implement the project; 2. Analysis and design of virtual campus model; 3. Development of prototype virtual campus and 4. Evaluation of the project

Outcomes of the project had follows: 1. A virtual campus model; 2. a prototype eLearning module focusing in Computer Software; 3. An evaluation of the prototype eLearning module as well as recommendations.

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1. Project Background

For a number of years, the nations of the Greater Mekong Subregion (GMS) have recognized the value of cooperation and the sharing of resources in achieving self-reliance and sustainable economic and social development. The need and potential for collaboration has been identified in various sectors, such as infrastructure, communications, electricity generation, transportation and tourism. Another crucial area, essential for national and regional development, is education and the upgrading of human resources.

Advances in information and communication technology (ICT) have opened up significant opportunities to the education sector, especially for universities employing the distance learning mode. Many institutions have begun to utilize e-learning platforms, enabling students to study at their convenience through a 'virtual classroom'.

However, the evolution of ICT has also presented a number of problems and challenges for policy-makers and administrators in the higher education field. A particularly important issue is the existence of 'digital divides', both among and within nations.

In response to such issues, UNESCO with the support of Prof. Wang Yibing (Specialist in Higher Education) initiated a project for the establishment of a Greater Mekong Subregion Virtual University (GMSVU). The initial workshop on Feasibility study for Establishment of Greater Mekong Subregion Virtual University (GMS-VU), held at STOU in August 2001, identified Toruism, ICT and Mekong Studies as the first three fields of common interest that would form the components of a pilot project.

2. Project Objective

The GMS-VU pilot project has the following objectives:

1) Develop a prototype model on fundamentals of ICT in preparation for the formal pilot phase of the ICT component of the GMSVU project.

2) Evaluate the effectiveness of the course content and the proposed on-line learning system (VClass).

3) Assess the readiness for e-learning of participating universities and serve as a basis for further collaboration.

3. Plan of Action

In order to fulfill its role in the pre-pilot phase of the GMSVU project, Sukhothai Thammathirat Open University (STOU), under the support of Dr.Tong-In Wongsothorn, President of STOU, developed a detailed work plan, consisting of four main stages, as follows:

1) Project Management, involving project planning and the setting up of a team to implement the project.

2) Analysis and Design of Virtual Campus Model, designing a virtual university model to be presented at the Workshop for the Establishment of the GMS Virtual University at the Asian Institute of Technology (AIT) on October 9-10, 2003.

3) Development of Prototype Virtual Campus, involving the installation of the VClass system, creation of a storyboard on Module 2: Computer Software, and design of questionnaire/pre and post-tests for students to assess the on-line learning system and evaluate module effectiveness.

4. Expected Outcomes

The GMS-VU pre-pilot project conducted by Sukhothai Thammathirat Open University will have the following outcomes:

1) A virtual campus model adapted to the national context, including descriptions of organizational, functional and technical aspects.

2) A Prototype e-learning module installed on the VClass system and a method for evaluating the module for the GMS-VU pre-pilot project.

3) An evaluation of the prototype e-learning module and the VClass platform

With recommendations for further actions.

5. Organization of study

The GMS-VU employs the distance learning system to transfer knowledge and experience to students, with curriculum contents arranged into self-instructional packages in both on-line and offline format. The University operates on a semester basis with each semester comprising at least 15 weeks (12 weeks for special semester). Students must enroll in at least one course per semester, with a maximum of three courses per semester for certificate and bachelor's degree, and two for master's degree. They must complete all the required courses within a timeframe of no more than three times the period of study laid down in the curriculum.

6. Media structure

6.1 Core Media. A dual-track of computer-based media and print-based media is employed.

(1) Track 1: Computer_based Media. It offers both on-line and off-line media. On-line media includes media on demand, web-based instruction, teleconferencing, and interactive learning via satellite. Due to limits in time usage and internet infrastructure, GMS-VU also provides off-line media in the format of CD-ROM which contains various kinds of interactive content to help students study by themselves.

(2) Track 2: Print-based Approach. Alternative tracks are also provided for member countries whose ICT infrastructure may be limited by providing the print-based approach as core media comprising textbooks and workbooks/study guides.

6.2 Supplementary Media. These may includes radio programs **,** television programs, satellite programs via the Distance Learning Foundation, Computer-Assisted Instruction (CAI)**,** Media on demand, Webcasting.

7. Registration

In a semester, a student must register via the following steps:

(1) Choose the subject, which he/she wishes to register for.

(2) Calculate the payment amount including: registration fee, university fee, subject fee, and supply fee.

(3) Write the details of subject for which he/she is registering for on the registration form, or submit the details via on-line registration form.

(4) Choose on method of payment and registration from the following:

- by on-line payment
- by post
- by counter bank
- by bank transfer

Students can also enroll simultaneously in other institutions, as being an open university, students

do not have to enter conventional classrooms but may study by themselves.

8. Examinations

Examinations are arranged as outlined below:

(1) Examination Centers. Examination centers are located in all provinces, each having at least one examination center. Regional universities and provincial schools may serve as the sites for examination centers.

(2) Examination Schedule. In order that students are not required to give up their work or leave aside their official duties, examinations are organized on weekends or public holidays, and are arranged in such a way that they can be completed in two days. Two or three examination sessions are held in one day.

(3) Examination System. Examinations are held twice each semester, once for the final examinations, and one for re-examination for students who fail or miss the final examinations. In addition, the University organizes a special semester during which students are able to register for one course. Registration for the special semester is optional. Final examinations for the special semester are at the same time as the make-up examinations for students who fail the examinations for the regular semester.

(4) Examination Results. Approximately 30-45 days after each examination, students will be mailed a list of the examination results. Students may also seek details of their results through the university website.

9. Grading System

In evaluation courses at all levels, the following grading system is employed:

Grade	Points per credit	Meaning
A	4	Excellent
B+	3.5	Very Good
B	3	Good
C+	2.5	Fairly Good
C	2	Fair
D	1	Poor
F	0	Failed

10. Educational Services

(1) Study Centers. Three types of study center, established with the cooperation of central and regional educational institutions and other government agencies, provide educational services to students in every region of the country.

- **Regional Distance Education Centers.** Regional Distance Education Centers serve as academic service centers for GMS-VU students and the general public, providing library, educational media and student registration services. Each Regional Distance Education Center may serve an area covering 5-10 provinces.
- **Provincial Study Centers.** These centers may be located at the main provincial high school. They are to serve as centers for university academic activities, including orientation, tutorials, examinations, counseling, educational programs, and other activities that will benefit students. They may serve as local GMS-VU branches for university news and public relations. In addition, Provincial Study Centers coordinate communications between students and GMS-Vu when students are unable to contact the University directly.

- **Special Study Centers.** Special Study Centers, in cooperation with relevant government agencies, provide specialist practical training for students. This includes such as practical experience programs laboratory training and fieldwork.

(2) Academic Guidance for Current Students. Guidance is provided both on-line and offline through the following activities:

- Orientation for Newly Enrolled Students.
- Educational and Vocational Guidance.
- Student Activities.

Post-graduation Guidance Service.

(3) Library Services. Library and information services are offered at three levels: central, regional and provincial. At the central level, a library is located at the university campus, whilst at the regional level, library services are provided at Regional Distance Education Centers. At the provincial level, library services are provided through GMS-VU Corners at provincial libraries in cooperation with the relevant government departments in each country. In addition to conventional 'on-site' library services, digital library services are provided to enable students to search for information from anywhere. The services include on-line catalogs, e-Learning-Reference, e-Learning-Thesis, e-Learning-Journal, as well as various outside on-line library service sources that are linked to the digital library

(4) Tutorial System. Tutorials are provided in two formats: face-to-face tutorials; and on-line tutorials**.**

(5) Professional Experience and Enrichment Programs.

a) To enable students to realize the important of their professions.
b) To enable students to apply the principles and theories acquired through their studies to actual practice
c) To provide students with additional experiences they are otherwise unable to receive effectively through the media employed in the distance education system
d) To promote various characteristics essential to the efficient establishment of a career
e) To provide students with the opportunity to exchange professional experiences.

11. Instructional Model

GMS-VU employs an instructional model called 'GMS-VU Plan' consisting of nine (9) steps:

11.1 Philosophy and Visions. Defining philosophy, vision and the organization of distance/on-line learning, including planning, administration, regulations, coordination, support, reporting, resource management and budgeting.

11.2 Social Problems and Needs. Surveying, analyzing and summarizing social needs and problems to determine the student target group and the weaknesses that should be addressed.

11.3 Students' Nature and Graduate Standards. Analyzing students' nature includes surveying basic information such as, age, profession, social status, readiness to receive media, and student expectations. This will help the university to organize its programs of study and develop suitable media for students.

11.4 Context and Scenario. Defining the learning environment and setting scenarios for students to face that will assist them to improve their experience and knowledge.

11.5 DE Curriculum. Curriculum development and training program is under the supervision of curriculum development committees which have the following activities: defining experience, defining context and defining method of study.

11.6 Multi-media DE Courseware. Courseware is developed by integrating experience

from each curriculum to prepare and produce multi-media courseware for both on-line and offline distance education. All media are produced systematically and have passed quality assurance to enable students to study by themselves without requiring assistance from any other person.

11.7 Delivery System: Knowledge and Experience. Course content is transferred to learners through a variety of print-based and web-based media

11.8 Evaluation. Evaluation will audit quality and efficiency relating to both student performance and the distance education system employed by the University.

11.9 Quality Assurance. The Quality Assurance board will set regulations, criteria, educational standards and method of quality assurance.

12. Learning Management System

The LMS Structure for GMS-VU comprises:

12.1 Portal. The portal provides a single point of entry, which is the gateway for users to get into the learning environment. The users can access the system via standard web browsers. The portal has components to ensure the credential sign-on such as user-id logon and password to authorize users of the system. Moreover, it links to the external environment and other related recourses such as digital library and other on-line services.

12.2 Common Services. This component will activate after user sign-on into the system. It serves as a common service manager of the system for communication and collaboration functions.

- Communication Functions give general information to communicate, facilitate and guide the learners such as announcements, FAQ, schedule, calendar, reminders etc.
- Collaboration Functions serve learners in both synchronous and asynchronous mode.

12.3 Learning Services. This component plays a major role in the model, serving as a learning resource. It comprises: Course Orientation, Course Module, Course Bulletin, Virtual Classroom and Personal Information.

12.4 Repository. This component comprises: Data Base and Knowledge Base serving as a digital resources of information and knowledge used in the system.

- Data Base. The data or information used to manage, control and communicate is stored in the Data Base.
- Knowledge Base. Material and media of courses is stored in the Knowledge Base.

13. GMS-VU Platform

13.1 Hardware. The system can be implemented on an open standard platform. The servers connect to the Internet so courseware can be delivered among the GMS countries as well as the other parts of the world. The server provides a single point of entry for learners using standard web browsers.

13.2 Software. There are two alternatives for software to run the learning management system: customized software and ready-made software.

- **Customized Software.** The first alternative is to develop a customized learning management system.
- **Ready-made Software.** The second alternative is ready-made open source learning management software such as ATutor, Moodle, V_Class etc.

14. Communication and Networks

Communication and Networking of the learning environment is via the Internet, a worldwide

network. To access the GMSVU learning system, learners of the system can connect by:

- **Dial-up.** The learners can use a computer at their home to dial up to the Internet via modern and home telephone.
- **Permanent network connection.** The learners can use computers and facilities of the GMSVU at the designated sites in each country.

15. Evaluation of Learners

The evaluation of the learners can be conducted both on-site and on-line.

(1) On-site evaluation follows the conventional system as the learner will be assigned a specific location for the exam.

(2) On-line evaluation uses computers and networks to evaluate learners. Generally, this alternative is used for learners' self-assessment and self-evaluation.

16. A Prototype Evaluation

16.1 Evaluation Objective. The objective of the GMS-VU prototype evaluation was to assure the quality of the GMS-VU Model in terms of the efficiency of the platform, the effectiveness of the learning management system, the quality and validity of the module content, and the user opinions to ward the GMS-VU.

16.2 Evaluation Methodology. The methodology applied for the prototype evaluation covered three aspects: Population and sample; Evaluation instruments and data collection; and Analysis of data.

16.3 Population and sample. The population for the GMS-VU ICT program should include anyone interested in the program which consist of two groups. One was a center-based population and the other was a home-based population. The center-based population was represented by a group of learners who were students of any institutions using GMS-VU e-learning modules at any designated centers, while the home-based population was represented by a group of learners who self-studied at home. The sample of the project to evaluate the prototype was, therefore, based on the idea of the population group mentioned above as a center-bases and a home-based sample. The sample units to assess the prototype were randomly selected from STOU's personnel in both academic and non-academic staffs.

16.4 Evaluation instrument and data collection

(1) Evaluation instrument. The evaluation instrument consisted of a questionnaire in both multiple choice and open ended questions

(2) Data collection. A two-stage evaluation was conducted. The first stage, a center-based evaluation, was an on-site evaluation carried out at STOU's computer center under the supervision of members of the e-campus project team, in which the objective was to simulate use of the module and e-learning system, and observe learning behavior. This allowed any shortcomings or faults in the prototype to be revised prior to the evaluation in the second stage. The feedback gained also led to improvements in the evaluation questionnaires. From this stage, it was found that the participants encountered difficulties in understanding the various technical terms in English language contained in the questionnaires. Explanations in Thai language were therefore added in order to elicit the best possible feedback from participants in the subsequent evaluation stage. The second stage evaluation, a home-based evaluation, was an on-line evaluation designed to try out self-directed learning methods by a diverse range of participants, consisting of academic staff and non-academic staff/students. In both stages, participants had a basic knowledge of IT. It was expected that the second stage would provide the most accurate and comprehensive feedback on the effectiveness of the course content and the V_Class system.

In both the center-based and home-based evaluation, participants were required to proceed through four steps: Firstly, the would complete the pre-test. Secondly, they would study the prototype module. Thirdly, they would complete the post-test, and finally, they would complete the evaluation questionnaire.

(3) Analysis of Data. The statistics employed in data analysis were percentage and average score which were applied for multiple choice questions while analytical description was used for the open ended questions and comments of the sample.

(3) Evaluation Results. In the first stage evaluation, the sample for the initial center-based evaluation consisted of 15 persons, of whom 80.0% were employed as non-academic staff at STOU, 13.3% were members of academic staff at STOU, and 6.7% were STOU students. In terms of gender and age, 86.6% were female and 13.3% were male, with 6.7% aged 20-25, 33.3% aged 26-30, 33.3% aged 31-*35, 13.3% aged 36-40, and 13.3% aged over 40. As for educational background, 80.0% possessed a bachelor's degree, 13.3% possessed a qualification higher than a bachelor's degree and 6.7% held a qualification lower than a bachelor's degree. In the second stage evaluation, the sample consisted of 22 persons, of whom 54.5% were members of academic staff at STOU, 27.3% were employed as non-academic staff at STOU, and 18.2% were STOU students. In terms of gender and age, 63.6% of the group were female and 36.4% were male, with 4.5% aged 26-30, 27.3% aged 36-40, and 68.2% aged over 40. As for educational background, 68.2% possessed a qualification higher than a bachelor's degree and 31.8% possessed a bachelor's degree.

(4) Evaluation of Learning Progress. In the first stage, the center-based evaluation, the average score achieved by the group in the pre-Test was 6.53 points (out of a maximum of 10). The average score achieved in the Post-Test was 7.40 points, representing an improvement in performance of 13.3% in comparison to the Pre-Test. In the second stage, the home-based evaluation, the average time taken by the group in completing the module was 55 minutes. The average score achieved in the Pre-Test was 7.14 points, whilst the average score achieved in the Post-Test was 8.05 points, representing an improvement in performance of 12.7% in comparison to the Pre-Test.

(5) Evaluation of Module. In both evaluation stages, participants were asked to rate three main aspects of the prototype module: Platform; Learning Management System (LMS) – V_ Class; and Content Management System (CMS).

(6) Evaluation of User Opinions. After the evaluation in both stages, the participants provided a wide range of comments and suggestions for the improvement of the prototype module. Firstly, it was suggested that while the course content was, on the whole, interesting, it was too difficult for an introductory course. It was suggested that there would be difficulties in understanding some subject-specific or technical terms without the inclusion of translations or explanations of these terms in the Thai language. Many participants expressed the view that learners lacking experience in using computers would find the program difficult to use, especially in terms of navigating between previous and new content, and between test and content pages. Furthermore, the module lacked tutorial or guide features to assist the learner. It was also suggested that 'Alert' pop-up boxes should be employed to protect users who click on a certain feature by mistake, most notable the 'log off' button. As regards the content presentation, a number of participants contented that the content appeared too slowly on the screen, probably as a consequence of the program incorporating too many effects. It was very important for the content to be presented in a fast-moving way in order to maintain the interest of the learner. Even if the learner was unable to keep up with the content, this should not pose a problem as he/she was able to view each page as many times as required. In contrast, many participants commented

that the narration accompanying the text and graphics was too fast, and, on some occasions, not well synchronized with the relevant text/graphics. The learners whose computers were not connected to speakers would be unable to listen to the narration and, in the worse case, would not even be aware of its existence. Comments were also made that the module contained too many review questions requiring the participants to give responses in writing. It was suggested that this feature should be used with care as it could otherwise cause the whole lesson to be too predictable or boring. Learners lacking expertise in writing in English would also find in difficult to respond. Finally, it was suggested that in order to assess accurately the potential of the V_Class system as an e-learning tool, more extensive evaluation of the full features of V_Class would be required.

18. Conclusions

The following recommendations for further advancing the GMS-VU project covered:

1) The preparation of a 'master model' for the GMS-VU project should be developed. There is a need to establish and define a central or 'focal' point on the components, logical steps, and the roles and responsibilities of all parties involved. Additionally, a clear timeframe for the various stage of the project needs to be set out for all parties to agree and adhere to. In this regard, STOU recently prepared a draft Agreement of Cooperation for the consideration of participating universities, with the aim of formalizing a GMS-VU network.

2) During the implementation stage, it is strongly recommended that there should be regular communications among project partners, including the GMS universities, UNESCO and other partner institutions/organizations. In particular, once responsibilities have been assigned, progress must be monitored on a regular basis, with the various parties reporting to the project focal point.

3) Since the project is an innovative approach, the strong commitment of all parties is absolutely crucial at both the institutional and governmental levels.

4) The language barrier among the GMS countries since English was not their mother tongue. There should be a tentative plan for the modules to be translated into the native language of each GMS country.

5) As VClass has no features to support self-learning, it is suggested that distance education features such as self-assessment and review questions be added.

6) The complete course in ICT should be developed by integrating all modules produced by the designated institutions in order to show the learning route to be undertaken by the students

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Communication, Leadership, and Teamwork Skills as Core Competencies among Higher Education Students

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Abstract

A holistic view of education commanded that generic skills besides knowledge are pertinent in determining marketable outcomes of university students. All Malaysian universities need to be more sensitive to the development of generic skills as suggested by the Malaysian Qualification Frameworks (MQF) 2006 because these skills are essential in promoting a more global students. As such, there is a need to develop a reliable assessment system or tool to generate data to gauge the generic skills of the students. The purpose of this study is to determine the validity and reliability of Malaysian Generic Skills Instrument (MyGSI) which measures the first three elements of generic skills (communication, leadership and teamwork). Six hundred and thirty-five students studying in UKM participated in this study. The sample was stratified according to faculty, year of study, area of study, race and gender. The respondents aged range between 20 to 35 years old. The data were analyzed using Winsteps version 3.64.2, and a Rasch-based item analysis program. The instrument used (MyGSI) consists of 149 items on a 5-point Likert scale. Mean, standard deviations, t-test and ANOVA were used to analyze the data. Findings from the study show that the levels of communications, leadership and teamwork skills were higher among non-science students as

compared to science students. The study also shows that the levels of communication, leadership and teamwork skills differ among students with different background. The findings imply that there is a gap in core competencies (especially among the science students) that could help increase the marketability of the students. As such, the lecturers need to be more sensitive in upgrading students' generic skills to prepare them to be more confidence in seeking employment locally and internationally.

Keywords: Generic skills, communication, leadership, teamwork skills, student of Higher Education

Introduction

Our graduates are our future leaders. Leaders of tomorrow require generic skills that will enable them to function effectively at the workplace. The generic skills are the skills that students need in order to be more competent as learners while pursuing their academic career, and practitioners in their field of work and other aspects of their life (Havard, Hughes, & Clark, 1998; Bennett, Dunne & Carré 2000; Biggs 2003; Lublin 2003; Lizzio & Wilson 2004; Jager & Nassimbeni 2005; Ballantine & Larres 2007; Allan & Clarke 2007). MQF (2006) has listed the eight generic skills that are needed by all individuals to be more successful in their endeavours: (i) knowledge of discipline areas (ii) practical skills (iii) social skills and responsibilities (iv) value, attitudes and professionalism (v) communication, leadership and teamwork skills (vi) critical thinking, problem solving and scientific skills (vii) information management and lifelong learning skills (viii) managerial and entrepreneurial skills.

Biggs (2003) posited that three levels of skills are required for students to become independent learners: generic skills related to specific content and meta-cognitive learning skills. He defined generic skills as "ways of managing time and space" (Biggs 2003). A holistic view of education suggested that generic skills such as communication, leadership and teamwork skills besides knowledge are important outcomes of university education. These holistic skills cuts across courses irrespective of the subject domain and are taught overtly or covertly by lecturers. The skills mentioned by Biggs (2003) are often referred to as generic or key skills (Oliver, Herrington & McLounghlin 2000; Owen 2002; Lublin 2003; Lizzio & Wilson 2004; Joger & Nassimbeni 2005; Canning 2007).

"Why the local public university graduates are unable to get jobs in private companies?". The question which appeared in the New Straits Times on 20th of April 2005 (Malaysian local newspaper) was supported by the Star on 26th of March 2005 through the following statement "Graduates failed during interview session due to the poor communication in English". According to *Utusan Malaysia* (24th of March 2005), 80,000 unemployed graduates needs extra training to be employable". On the 7th of March 2005, *Harian Metro* suggested that graduates need to have communication skills in order to be marketable". The Times, a London based newspaper reported on 7th of February 2006 that unemployed graduates are poor in their social and generic skills. Concomitantly, regardless of country or regions or even universities, the problems pertaining to students lack of competencies in generic skills seems unequivocal and need to be addressed instantaneously.

Objective

The purpose of the study is to determine the validity and reliability of MyGSI and the levels of communication, leadership and teamwork skills among UKM undergraduate students. The study also provides the University with an overview of the levels of the first three generic skills of the undergraduates.

Methodology

The study was conducted using quantitative survey approach. The sample was clustered according to the faculty. Six hundred and thirty-five samples (158 males and 477 females students) participated in the study. The respondents' age was range from 20 to 35 years old. The data was analyzed using Winsteps version 3.64.2, a Rasch-based item analysis program. The study used MyGSI which consists of 149 items that went through a rigorous inter-rater process by panel of experts. The items consist of 66 communications items, 42 leadership items and 41 teamwork items. Mean, standard deviations, t-test and ANOVA were used in the data analysis.

Results

The data was analyzed using Winsteps version 3.64.2 to determine the validity and reliability of the MyGSI. Rasch Model analysis provided item reliability and construct validity as showed in table 1 to 3. The item reliability index ranged between 0 to 1 whereby 0.8 and above is strongly acceptable (Bond & Fox 2001). A construct with a set of unidimentional items should display a positive *PTMEA Corr* value which means that the items are working together to measure a single underlying construct. This is the basic step in measuring the construct validity (Bond & Fox 2001). Table 1 showed that the item reliability of communication skills is 0.99. Table 2 shows that the item reliability of leadership skills is 0.99, and the item reliability of teamwork skills is 0.98 (table 3)

Table 1 : Item Reliability : Communication Skills

Summary of 66 Measured Items

	RAW SCORE	COUNT	MEASURE	MODEL EROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	2320.3	635.0	.00	.06	1.00	-.2	1.02	.0
S.D	285.9	.0	.80	.01	.25	4.1	.30	4.4
MAX	2699.0	635.0	3.03	.70	1.72	9.9	2.04	9.9
MIN	1078.0	635.0	-1.40	.05	.58	-7.6	.57	-7.9
REAL RMSE .06			Separation 13.14		Item Reliability .99			
MODEL RMSE .06			Separation 13.68		Item Reliability .99			
S.E. OF student MEAN = .10								

Table 2 : Item Reliability : Leadership Skills

Summary of 42 Measured Items

	RAW SCORE	COUNT	MEASURE	MODEL EROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	2527.6	635.0	.00	.07	1.01	-.4	1.03	-.4
S.D	153.0	.0	.64	.00	.30	3.9	.39	4.1
MAX	2738.0	635.0	-1.05	.05	.66	-6.1	.64	-6.7
MIN	1939.0	635.0	-1.05	.05	.66	-6.1	.64	-6.7
REAL RMSE .07			Separation 8.83		Item Reliability .99			
MODEL RMSE .07			Separation 9.20		Item Reliability .99			
S.E. OF student MEAN = .18								

Table 3 : Item Reliability : Teamwork Skills

Summary of 41 Measured Items

	RAW SCORE	COUNT	MEASURE	MODEL EROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	2469.8	633.0	.00	.07	1.00	-.1	1.01	.1
S.D	113.5	.0	.52	.00	.17	2.7	.20	3.0
MAX	2705.0	633.0	1.16	.07	1.37	5.2	1.54	7.2
MIN	2189.0	633.0	-1.18	.06	.70	-5.0	.70	-5.2
REAL RMSE .07			Separation 7.32		Item Reliability .98			
MODEL RMSE .07			Separation 7.57		Item Reliability .99			
S.E. OF student MEAN = .08								

Table 4 shows the responses from each cluster: gender, race, stream, and group. The number of female respondents is 477 (75%) where as males 158 (24.9%). The total of Malay students is 541 (71%), Chinese 152 (23.9%), Indian 19 (3%) and others 13 (2%). Science and non-science students are the respondents in this study. The number of Social Science students is 424 (66.8%) where as science students 211 (33.2%). They were three groups of students in the study: Health Science 92 (14.5%), Science 119 (18.7%) and Social Science 424 (66.8%).

Table 4 : Profile of Respondents

Demography Factor	**N**	**Factor**	**Frequency**	**Percentage**
Gender	635	Male	158	24.9
		Female	477	75.1
Race	635	Malay	451	71.0
		Chinese	152	23.9
		Indian	19	3.0
		Others	13	2.0
Streams	635	Science	211	33.2
		Non Science	424	66.8
Group	635	Health Science	92	14.5
		Science	119	18.7
		Social Science	424	66.8

Table 5 shows that the mean percentage and standard deviation is according to demography factor. The data shows that female score in the three generic skills were higher in all constructs (communication, leadership and teamwork skills) compared to male students (mean percentage =76.48, 75.73). The mean percentage according to race shows that the Malay students' score in the three generic skills are higher in generic skills as compared to Chinese, Indian and others (mean percentage=77.37, 73.11, 76.19, 76.19). Furthermore, the mean percentage score of the students from non-science is higher as compared to science students (mean percentage=76.94, 75.02) and mean percentage score of the students from social science is higher compared to health science and science students (mean percentage=76.94, 75.44, 74.69).

Table 5 : Mean Percentage and Standard Deviation of MyGSI According to Demography Factor

The summary table of the t-test which compares the means percentage according to stream is shown as Table 6. The t-test of all the constructs showed the mean percentage for students from non-science stream were higher compared to students from science stream and the difference was significant: communication skills ($p<0.05$), leadership ($p<0.001$) and teamwork skills ($p<0.001$).

Table 6: t-test to Compare Mean Percentage According to Stream

Construct	Stream	Mean	SD	t	sig
Communication	Science	73.72	5.73	-2.313	.021
	Non-Science	73.34	5.62		
Leadership	Science	78.00	7.24	-3.720	.000
	Non-Science	80.35	7.16		
Teamwork	Science	76.17	7.11	-4.859	.000
	Non-Science	79.06	7.03		

The summary table of t-test which compares the means percentage according to gender is shown as in Table 7. With respect to gender, only the leadership skills construct was significant ($p<0.05$).

Table 7: t-test to Compare Mean Percentage According to Gender

Construct	Factor	Mean	SD	t	sig
Communication	Male	72.78	6.25	-.778	.444
	Female	73.18	5.48		
Leadership	Male	78.50	7.65	-2.209	.028
	Female	79.97	7.10		
Teamwork	Male	77.76	7.34	-.676	.499
	Female	78.21	7.13		

Table 8 shows the One-Way Analysis of Variance (ANOVA) according to races. The ANOVA test reveals that there was a significant difference for all constructs of all difference races. There was significant difference for communication ($F=15.444$, $p<0.001$), leadership ($F=17.488$, $p<0.0001$) and teamwork skills construct ($F=19.904$, $p<0.0001$). The Scheffe test shows (Table 9) the pairs of means that are significantly different were Malay and Chinese students.

Table 8: Analysis One-Way ANOVA According to Race

Construct		Sum of Squares	df	Mean Square	F	Sig.
Communication	Between Groups	1398.821	3	466.274	15.444	.000
	Within Groups	19051.283	631	30.192		
Leadership	Between Groups	2565.448	3	855.149	17.488	.000
	Within Groups	30854.690	631	48.898		
Teamwork	Between Groups	2826.073	3	942.024	19.904	.000
	Within Groups	29864.536	631	47.329		

Table 9 : Mean Comparison Between the Race Using ANOVA

Race	Construct		
	Communication	Leadership	Teamwork
Malay (A) (n=451) Chinese (B) (n=152) Indian (C) (n=19) Others (D) (n=13)	ANOVA: significance at 5% level Scheffe: Pairs of means that are significantly different: A and B	ANOVA: significance at 5% level Scheffe: Pairs of means that are significantly different: A and B	ANOVA: significance at 5% level Scheffe: Pairs of means that are significantly different: A and B

Table 10 shows the One-Way Analysis of Variance (ANOVA) according to groups. The ANOVA test reveals that there was a significant difference for all constructs of all difference groups. There was significant difference for communication ($F=4.086$, $p<0.05$), leadership ($F=7.499$, $p<0.001$) and teamwork skills construct ($F=11.923$, $p<0.0001$). The Scheffe test shows (Table 11) the pairs of means that are significantly different were social science and science students in communication and leadership skills, but the pairs of means that are significantly different between Health Science and Science students, Science and Social Science students in teamwork skills.

Table 10 : Analysis One-Way ANOVA According to Group

Construct		Sum of Squares	df	Mean Square	F	Sig.
Communication	Between Groups	261.031	2	130.516	4.086	.017
	Within Groups	20189.073	632	31.945		
Leadership	Between Groups	774.706	2	387.353	7.499	.001
	Within Groups	32645.432	632	51.654		
Teamwork	Between Groups	1188.566	2	594.283	11.923	.000
	Within Groups	31502.043	632	49.845		

Table 11 : Mean Comparison Between the Group Using ANOVA

Student Group	Construct		
	Communication	Leadership	Teamwork
Health Science (A) (n=92)	ANOVA: significance at 5% level	ANOVA: significance at 5% level	ANOVA: significance at 5% level
Science (B) (n=119)	Scheffe:	Scheffe:	Scheffe:
Social Science (C) (n=424)	Pairs of means that are significantly different:	Pairs of means that are significantly different:	Pairs of means that are significantly different:
	B and C	B and C	A and B, B and C

Discussion

The findings of the study show that the level of communication, leadership and teamwork skills were higher among female students as compared to male students. Previous studies had shown that male and female students are inclined toward different fields of study (David et al. 2000; Maccoby & Jacklin 1974; Wei-Cheng Mau & Lynn 2001). Others studies also found that females had better performance in multiple choice tests (Bellar & Gafini 1995; Wester & Henriksson 2000) and in test that require writing ability (Kleinfeld 1998). Males show better performance in items concerning science, sports, and mechanics (Lawrence & Curley 1989; Wild & Mc Peek 1986), whereas females perform better in items related to social science, humanities, philosophy and human relationships (Wild & Mc Peek 1986; O'Neil et al. 1989). It is also possible that gender may play a role in students' evaluation of generic skills. It might be argued that, consistent with a traditional gender role perspective (Berger & Williams, 1991), female students would place greater value on communal or interpersonally related skills, and male students on agented or problem-solving skills ((Lizzio et al. 2004). In leadership skills, other studies found that female students tend to be more transformational than male student. Males had a tendency to portray transactional leadership skills (Rosenbusch & Townsend 2004). Therefore application of generic skills in discipline subject must emphasize on expertise and ability aspects based on student ability level.

The findings of the study show that the level of communications, leadership and teamwork skills were higher among non-science (social science) students compared to science (health science and science students). Discipline curriculum of social science subject emphasizes more on interaction with other individual, which involves a lot of interpersonal skill. This resulted in better development of communication skills was inscribed directly or indirectly in the subject discipline. This situation can influence and enhance the three related skills. Previous studies conducted by Murphy (2001) at School of Education, University of Nottingham have shown that the auditing of communication skills is linked to a reflective writing task carried out while the students undertake a one week placement in a Primary School just prior to the beginning of their course. Each student completes this task and is provided with feedback on their expression, analysis, reflection, ability to summarize, overall presentation and organization. This exercise also covers some communication skills such as spelling, grammar, punctuation and handwriting. Previous studies had shown that the students in social science-related disciplines might regard interpersonal skills as more relevant to their current study and future professional work. Similarly, management students may appraise teamwork skills as more relevant than student from other streams and group (Lizzio & Wilson 2004).

Subject discipline of science student is more focused on natural fauna, concrete material, laboratorial experiment, animal, plant, chemical, electric and others. They interact less with other group. Their interaction is confined to their own group. This situation is a contributing factor to the level of their communication skill as compared to the social science students. Therefore, assignments that are administered in subject discipline must stress on generic skills, which are related, so that their level of generic skills can be upgraded. The study is suitable as suggested by Bennett, Dunne & Carré (2000) in his paper, "Skills Development in Higher Education and Employment" which states: "A model of generic skills is of limited use in the higher education context unless these skills can be clearly differentiated from disciplinary generic skills and knowledge. This was achieved through an analysis of theories of learning and skills development. Cotterell's (2001); Biggs (2003); Casey (2007) and Canning (2007) suggest that all skills learning or generic skills should be delivered within subjects. In this way learners can relate strategies to the program outcomes and to specific subject learning tasks. This is a perspective that is reflected widely in extant literature (Chalmers & Fuller, 1996; Hadwin & Winne, 1996; Norton & Crowley, 1995; Ramsden, 2003; Ramsden, Beswick & Bowden, 1986; Wade & Reynolds, 1989). Within-subject skill development has been interpreted variously as incorporating study skills as a discrete module into a subject program, integrating them loosely within subject modules, and embedding skills fully into modules to the extent that all lecturers in Higher Education accept and exercise a responsibility to help students to improve their generic skills (Casey 2007; Canning 2007)

The findings of the study showed that the level of communications, leadership and teamwork skills were higher among Malay students compared to other students. This situation shows that background factor and family setting (race, socio-economic status, and parent education level and origin and accommodation environment), teaching style and assessment form shall require those factors (David, Weiner & Arnot 2000; Jackson 2002; Vezeau et al. 2000). Implementation of generic skills among the higher education students must take into account background factors.

Conclusion and Recommendations

The study implied that the lecturers need to be more sensitive to the needs of upgrading the students' generic skills to prepare them to be more competent in the employment skills. In order for all students to achieve a high level of competency there needs to be more opportunities for the development of generic skills (Allan and Clarke 2007). The dislocation between the development of these skills and the context in which they are applied appears to preclude their effective development; suggesting that the embedding of these generic skills within subject discipline and modules might be efficacious (Robley, Whittle & Murdoch-Eaton 2005). The development of generic skills has been motivated by the belief that there are skills which all graduates should possess, and which would be applicable to a wide range of tasks and contexts beyond the university setting (Moore 2004; Moore, Kinnear, Boyce & Bennett 2004; Bennett, Balatti, Turner & Whitehouse 2004; Crebert, Bates, Bell, Patrick, Cragnolini 2004; Bath, Smith, Stein & Swann 2004)

Generic skills needs to be applied in each teaching of subject and it must be exposed during early intake from the first semester. Lecturers need to be more sensitive towards strengths and weaknesses of their students so that teaching and learning strategy would be emphasized on generic skills. Lecturers need to understand which generic skills that require emphasis and always be more creative and innovative in intermingling generic skills in education and learning. Lublin (2003) finding: by their nature the generic skills need a context - you don't just communicate, you communicate something to someone, so there is a good case for saying that they must be embedded in the subject.

All Malaysian universities need more sensitive to generic skills because these skills are essential based on MQF 2006. Enough exposure must be given to every student related to generic skills according to the qualification framework which has been stipulated in MQF 2006 to qualify student based on standard set by Malaysian Accreditation Board (LAN). Other studies have also found that assessment of the generic skills of students at the point of entry to the University was necessary (Murphy 2001; Biggs 2003; Lizzo & Wilson 2004; Allan & Clarke 2007)

The study is an important input for UKM because it gives an overview of the level of generic skills among UKM students. The student ability in the eight generic skills is comprised of different level. If student generic skills level is satisfactory in communication, leadership and teamwork skills then they can concentrate on other generic skills required by MQF 2006. This situation will enable the university, especially to the 11 faculties in UKM to plan intervention program for students who have minimum level of generic skills. Therefore the intervention program shall be implemented orderly and organized systematically.

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The Collaboration between STOU and ICRISAT through Global Distance Education for Developing Graduate Program in Agro-ecology

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Abstract

Sukhothai Thammathirat Open University (STOU) and International Crop Research Institute for Semi Arid Tropics (ICRISAT) have been collaborated and assigned the global responsibility of design and development of the curriculum and courseware for Master Degree Program in Agro-ecology on behalf of Consultative Group on International Agricultural Research – Global Open Food and Agriculture University (CGIAR-GOFAU). The need of trained agriculture and environmental experts at post-graduate and research level is targeted towards developing nations. STOU and ICRISAT, through Global Distance Education initiatives will lead the development of Post Graduate programs in Agro-ecology which shall be offered in distance education mode through partner universities in the Greater Mekong Sub-region (GMS) comprising of Thailand, Cambodia, Lao People's Democratic Republic, Myanmar, Viet Nam, and Yunnan Province of the People's Republic of China and elsewhere. M.S. in Agro-ecology program is designed for mid career professionals who are capable of handling both theoretical and practical components effectively covering international, regional, national and local issues related to agro-ecology. It takes two academic years; however, the distance learner is allowed to complete it within a maximum of five years from the first registration. There are two options for completing M.S. degree program i) Thesis research project or ii) Non-thesis research project. The thesis option is designed for learners planning to pursue further education leading to Ph.D. degree in Agro-ecology and related fields and for those who wish to strengthen their research capabilities. The learners interested in handing jobs in management, administration, consultancy, extension, and support services, can opt for non-thesis research project to suit their career options.

1. Introduction

Sukhothai Thammathirat Open University (STOU) holds to the principle of lifelong education and aims to improve the quality of life of people by providing and promoting academic and professional education to enable them to upgrade their level of knowledge, and expanding the educational opportunities. The university carries out its mission by providing open and distance education and promoting high-level academic and professional courses in order that the people have the chance to increase their level of knowledge in accordance with individual and societal needs. International Crop Research Institute for Semi Arid Tropics (ICRISAT) is an international research organization for science-based agricultural development and works to improve the farming systems of the dry tropics.

STOU and ICRISAT have been collaborated and assigned the global responsibility of design and development of the curriculum and courseware for Master Degree Program in Agro-ecology on behalf of Consultative Group on International Agricultural Research – Global Open Food and Agriculture University (CGIAR-GOFAU). Agro-ecology and agro-ecosystems are the vital component of sustainable agriculture development. Demand for agro-ecosystem services for food, fodder, and fuels are growing. Sound policy and management interventions coupled with building the capacity of stakeholders can reverse ecosystem degradation. Knowing when and how to intervene requires substantial understanding of both the ecological and social systems. However, achieving sustainable growth in agriculture and food production depends on science-based innovations, supportive policies, responsive and efficient institutions and a trained cadre of professionals in agro-ecology and agro-ecosystems management.

Therefore, a critical mass of trained agriculture and environmental experts is needed at post-graduate and research level, targeted towards developing nations. STOU and ICRISAT, through Global Distance Education initiatives will lead the development of a program for a Post Graduate Course in Agro-ecology which shall be offered in distance education mode through partner universities in the Greater Mekong Sub-region (GMS) comprising of Thailand, Cambodia, Lao People's Democratic Republic, Myanmar, Viet Nam, and Yunnan Province of the People's Republic of China and elsewhere.

2. Program Goals

M.S. in Agro-ecology is the post-graduate degree program in applied agricultural sciences that deals with Agro-ecosystem management, Natural resources management, and Agro-eco-technology development for professionals involved in the management of agro-ecosystems. It is aimed to broaden the intellectual and analytical capacity of in-service professionals and equip them with the cutting edge knowledge and skills for a variety of newer and forthcoming innovative jobs such as Agriculture and Environment Extension Specialists, Agro-ecologists, Natural Resources Specialists, Development Managers, Foresters, Eco-tourism Developers and allied development facilitators.

The Master of Science in Agro-ecology is designed with the following goals and objectives:

1. To educate and train pre-service persons, intended to pursue jobs in Agriculture, Environment, and related areas.
2. To improve knowledge and skill of in-service professionals working in the areas of Agriculture, Environment, and related areas.
3. To develop new aspect of individuals, who can create new avenues for self employment while conserving environment.

4. To promote holistic approach in studying Agriculture, Ecology, and Environment for sustainable livelihood system.
5. To conserve Soil, Water, and Environment and ensure sustainable livelihood for future generations.

M.S. in Agro-ecology program is designed for mid career professionals interested in attaining post-graduate education in Agro-ecology in various frontier of knowledge in Agro-ecology and Agro-ecosystem. The program is expected to create individuals who are capable of handling both theoretical and practical components effectively covering international, regional, national and local issues related to agro-ecology.

As STOU employs the distance teaching system to transfer knowledge and experience to learners, curriculum contents are arranged into self-instructional packages, which integrate related material and experience into sets known as course blocks. Each course block is worth at least six university credits for master's degree. The university operates on a semester basis with each semester comprising at least 15 weeks (12 weeks for special semester). Learners must enroll in at least one course block per semester, with a maximum of two course blocks for master's degree. They must complete all the required course blocks within a timeframe of no more than three times the period of study laid down in the curriculum.

M.S. in Agro-ecology program lasts two academic years; however, the distance learner is allowed to complete it within a maximum of five years from the first registration. There are two options for completing M.S. degree program i) Thesis research project or ii) Non-thesis research project. The thesis option is designed for learners planning to pursue further education leading to Ph.D. degree in Agro-ecology and related fields and for those who wish to strengthen their research capabilities. The learners interested in handing jobs in management, administration, consultancy, extension, and support services, can opt for non-thesis research project to suit their career options.

3. Program Structure for M.S. in Agro-ecology

Fundamental Course	Credit Points
Foundation Course in Agriculture	6
Core Courses:	
1. Human Environment and Agro-ecology	6
2. Sustainable and Organic Agriculture	6
3. Research Methodology and Statistics	6
Elective Courses (1 Course):	
1. Natural Resources and Watershed Management	6
2. Bio-Fuels and High Value Crops	6
3. ICT for Agro-Ecological Development	6
4. Selected Topics in Agro-ecology	6
Thesis Research Component OR	12
Independent Study	6

Accommodating Different Learning Style: The Universiti Kebangsaan Malaysia Experience

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Abstract

This study examines the learning style of students at Universiti Kebangsaan Malaysia. A translated version of Grasha-Riechmann (1994) Learning Style Inventory was distributed in July 2006 to students undertaking pure science, social science and professional courses . A total of 545 out of 600 questionnaires were returned. The inventory consists of 60 items using Likert scale of 1-7. Results indicated that students from different field of study did vary in learning style. The natural sciences students were more dependent (Mean =5.17, S.D = .64) , whilst those taking professional courses were least dependent (Mean=4.98, S.D =.63) and the social science students on the other hand were more participative in learning (Mean=5.20, S.D= .87) The male students showed higher inclinations towards Independent (Mean =4.53, S.D = .76) and Avoidance (Mean = 3.57, S.D = .84) learning style while female students were found to be more Participative (Mean =4.60, S.D=.73) and Competitive (Mean =5.15, S.D = .69). The implications of these findings are discussed in terms of university teaching and learning to accommodate different style of students in order to meet the objectives and vision of the national university.

Keywords: learning style, teaching and learning.

INTRODUCTION

Higher education institutions are facing new challenges in the new century. The university is no more look upon as the ivory tower as viewed by Wolf (1969) but rather as a center of mass education and economic-driven body (Hairudin Harun, 2002). In this new structure, the students are the clients while lecturers are the service-provider (Tjeldvoll,1997). Hence, the latter has to meet the ever growing demands of the clientele to a certain extend by adjusting the learning environment. Sternberg (1997) wrote that one of the mistake done by lecturers at higher institutions is failing to recognize learning and thinking styles of students. As a result lectures and learning activities were conducted in a manner that does not match or suits the students. This can only be achieved when lecturers are aware of students learning style and its impact on academic performance. Therefore, there is a need to conduct a survey on students learning preferences in order to improve teaching and learning quality.

Background of The Study

The role of university changes with time (Mirza 1994). In the advent of borderless world today UKM has to meet high expectation from the stakeholders especially the government as the financier, future employer, society and students. In the year 2007 the Malaysian Government announced Universiti Kebangsaan Malaysia as one of the research university (RU) in the country. The changing role from an institution that educate and prepare students for the job market to a teaching and research institution require major adjustments on the part of UKM's governance and most of all the academic staff. Although research, publication and dissemination of knowledge have now become her new agenda, teaching however is still the core business to faculty members. The need to improve delivery method and classroom instruction is a never ending endeavor.

In order to foster quality teaching and learning, actions were taken to overcome the occurrence of unproductive delivery methods by faculty and low performance by the undergraduates. Reports of study by the appointed committee spelled out that teaching and learning activities need to be revised (Robiah Sidin, 2000). High percentages of students were found to be over-dependent on lecture notes and lack of self-regulating study skills. In another report lecturers were found to be either teacher-centered or subject-matter-centered. Grasha (1996) contended that if lecturer were to help students learn, they should teach in a way that matches their students' learning style. Hence this study is conducted to explore UKM students' social learning preferences and suggest necessary measures to improve the teaching and learning environment and to promote students to become life long learner.

Research Questions;

The study intends to answer the following questions:

1. Is there any significant difference in learning style based on gender, age and courses taken?
2. Which learning style is dominant among UKM students?
3. Is there any relationship between learning style and academic performance?

LITERATURE REVIEW

Most educators agreed that quality teaching contributes to quality learning. Effective learning depend on the part of the learner whether one is active, highly motivated and having the right strategy knowledge. In order to help college or higher institution students to learn effectively, instructors need to know and adapt to different styles of learning (Grasha, 1996). Review of literature showed that learning style like most psychological terminology have been addressed differently. As a result learning style varies in definition, models and instruments (Reynolds 1997). This however is not a setback towards understanding different ways on how students acquire, retain and apply knowledge learnt.

Further analysis would show that Pask et al (1977), Cornett (1983), Entwistle dan Ramsden (1983), Grasha (1996) and Sternberg (1997) defined learning style as the different ways or means by which student learn. Keefe (1979) however stressed on the process of learning while Dunn, Dunn and Price (1985) were concentrating on learning procedures and responses.

Many instruments have been developed to determine students' learning style which includes Field dependence/field independence, Jungian Models, Sensory Models, Biggs' Study Process and Grasha-Riechmann Social Interaction Model. For the purpose of this study the latter was selected as it seems ideal for assessing learning preferences at tertiary level.

Grasha, A and Reichman (1974) postulates that learning takes place in social context and therefore learning style can be observed by the way students behaves and responses to the social-learning environment. The six learning styles are categorized as follows;

Independent – Students prefer to work alone and need little direction or attention from lecturer

Avoidant – Students with high rate of absenteeism. Poor work and study organization

Dependent – Students depend heavily on lecturer and friends in learning task.

Collaborative – Students who find group work enjoyable.

Participative – Students who are attentive and responsive to course work requirements.

Competitive – Students emphasize on high grades and attention from leacturer.

RESEARCH METHODOLOGY

The population for the current study is 15, 298 students. This exploratory study uses the survey method by distributing 600 questionnaires to third year students in UKM Bangi. Instrument used was a translated version Grasha-Reichmann (1974) Student Learning Style Inventory. Data were analyzed using SPSS version 11.0. A total of 545 questionnaires were returned of which 205 were male and 340 female students.

RESULTS OF THE STUDY

a. Is there any significant difference in learning style based on gender, age and courses taken?

Table 1 represent the distribution of learning stlyes based on gender, ethnic, age and field of study.

Table 1 Distribution of Learning Stlyes Based on Gender, Ethnic, Age and Field of Study

Learning Style	Gender		Ethnic		Age			Field of Study		
	M	F	B	NB	A1	A2	A3	Sc	SSc	Pro
Independent (5.46)	4.53 .76	4.49 .67	4.51 .70	4.45 .69	4.46 .67	4.51 .79	4.74 .64	4.55 .72	4.59 .72	4.38 .65
Dependent (5.74)	4.91 .75	5.17 .61	5.08 .65	5.02 .80	5.04 .66	5.01 .76	5.40 .52	**5.17 .64**	5.07 .75	4.98 .63
Collaborative (4.90)	4.86 .84	5.06 .73	5.04 .75	4.72 .85	4.93 .73	4.84 .85	5.53 .71	**4.92 .77**	**5.13 .84**	**4.92 .71**
Competetitive (4.06)	4.52 .86	4.60 .73	4.61 .76	4.37 .86	4.60 .74	4.45 .85	4.62 .83	**4.55 .84**	**4.64 .79**	**4.53 .70**
Participative (5.60)	4.90 .87	5.15 .69	5.06 .76	5.01 .83	4.94 .71	5.04 .87	5.70 .59	5.05 .75	5.20 .87	4.93 .68
Avoidant (5.48)	3.57 .84	3.48 .82	3.52 .82	3.47 .87	3.57 .83	3.57 .83	3.12 .69	3.54 .76	3.56 .93	3.45 .79

Legend:

M = male F = female
B = bumis NB = nonbumis
U1 < 22 years U2 = 23 to 26 years
U3 > 27 years Sc = Science
SS = Social Sciences PR = Professional

The present study compared social learning styles of students in UKM from three different area of studies. The average or mean scores of GRSLSS are shown in Table 1. Table 1 reveals that male students showed higher mean than female students in Independent (Mean = 4.53, S.D = .76) and Avoidant (Mean = 3.57, S.D = .84) learning style. Female students showed higher mean on Collaborative (Mean = 4.86, S.D = .84), Dependent (Mean = 4.91, S.D = .75), Competetive (Mean = 4.60, S.D = .73) and Participative (Mean = 5.15, S.D = .69). It is also noted that student's from different age level recorded different mean value for various learning style except for the Avoidant type (Mean = 3.57, S.D .83). It is also noted that student's from different age level recorded different mean value for various learning style except for the Avoidant type (Mean = 3.57, S.D .83). The same table shows that there is only slight different in learning styles between the bumiputera and non bumiputera students in UKM. For example, mean for Independent style of bumiputera were 4.51 while the nonbumiputera were 4.45. This finding reflected that ethnic variable does not contribute much to learning style of students in UKM. Table 1 also shows that pure science students are more dependent (Mean = 5.17, S.D = .64) as compared to social science (Mean = 5.07, S.D = .75) and professional course students' (Mean = 4.98, S.D = .63). Further analysis using the one way MANOVA shows that there was a significant difference $F\{(2, 513) = 5.46, p = 0.05\}$; Wilk's Lambda = .979 ; partial eta = .021 in overall learning style between the male and the female students only.

b. Which learning style is dominant among UKM students ?

Table 2: Comparison Of Mean Learning Style And The Standardized Mean As Proposed By Grasha (1996)

Learning style	Sample mean	Standardized mean	Inference
Independent	4.50	5.46	Not dominant
Avoidant	3.52	5.46	Not dominant
Collaborative	4.98	4.90	Dominant
Dependent	5.07	5.74	Not dominant
Competitive	4.57	4.06	Dominant
Participative	5.27	5.60	Not dominant

* Standarized Mean (suggested by Grasha,A 1996).

Table 2 represents the comparison of mean learning style and the standardized mean as proposed by Grasha (1996). Comparison between the sample mean and the standardized mean shows that Collaborative (mean = 4.98 > 4.90) and Competitive learning style (mean = 4.57 > 4.06) is dominant among UKM students.

The Independent, Avoidant, Participative and Dependent learning style is not dominant.

c. Relationship between learning style and academic perfomance

Table 3 represents the findings from the correlation test between learning style and academic performance. It was found that there was a low relationship between Participative, Collaborative and Competitive learning style and CGPA (r = .246, r = .103 and r = .123 < p = 0.001) respectively.

Table 3: Correlation between learning style and cademic performance.

Learning Style	Independent	Avoidant	Collaborative	Dependent	Competitive	Participative
Academic Performance	.066	-.243	.103**	.123**	.070	.246**

** Significant at p = 0.01

DISCUSSION AND CONCLUSION

Findings of the study shows that students' learning style varies based on gender, age and type of courses. Independent and self-regulated students learn best by doing self study with little guidance. In this case the male students and those in social science would prefer lecturers to give individual task where they can work on their own. Female and students' taking pure science courses on the other hand will benefit more from a well structured lecture, guidance and concrete hands-on experiences. Therefore, faculty should first understand that students use a variety of approaches to learning that may not match their own. This is to cater the diverse learners in lecture halls.

Since Competitive learning style is dominant, the university could encourage students to excel by providing more grants, scholarship or achievement rewards. Lecturers and instructors should use also high-technology academic material and assessment methods to ensure meaningful learning takes place. This study also shows that Participative learning style is also dominant among UKM undergraduates. In order to benefit from Participative learning style faculty should provide more group activities or project in their course evaluation. Working in groups such as cooperative learning have proven to increase individual and team-work performance.

Results show that there was low correlation between Participative, Collaborative and Dependent learning style and academic performance. This shows that to a certain extend that certain learning style does promote better learning and higher academic result.

Results of this study showed that Independent and Participative learning style was not dominant among UKM. This imply that students were not practicing learning style that would make them independent learner and active in class discussion. Playing the role of an observer and passive learning in lecture theatre is not an effective learning strategy. Therefore, assessment method should include individual and group assignments as well. In conclusion, it is imperative that lecturer realized the diverse learning style among students and conduct instruction and evaluation technique that matches the different learner in their class.

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The Medium-of-Instruction Controversy: Bilingual Education and the University

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Abstract

For a long time there have been debates concerning the medium of instruction in secondary schools in Hong Kong. In 2007-08, such debates have spilled over to the tertiary education sector. The recent controversy surrounding one university's decision to increase the courses to be taught in English compels us to rethink the value of a bilingual education. Against the trend toward internationalization, how can we win the fight against the advocates of monolingualism?

Bilingual education is defined as "the use of a second or foreign language in school for the teaching of content courses" (see *Longman Dictionary of Applied Linguistics*; Wu 2005). This is at variance with the generally held (mis)conception that bilingual education involves "the use of two languages at schools," as in the use of mixed-code teaching where the teacher switches from one language to another, a practice common among Anglo-Chinese schools in Hong Kong during its colonial period. Teachers at the time had to use English as the medium of instruction and hence often found it necessary to give explanations, from time to time, of English words not understood by Chinese students in the native tongue, Cantonese. Bilingual education, on the other hand, does not involve translation at the surface level, though processes of translation occur at deep levels when teachers attempt to explain concepts, even cultures, in a language other than his own as well as his students' mother-tongue.

Among the many advantages of such a bilingual education, not the least is the benefits to be accrued when students are introduced to a foreign way of thinking that is foreign and different, something not obtainable via from a monolingual education. In approaching content subjects like History, Literature and Philosophy through their native tongue, students do not have the opportunity to develop an ability to reflect on issues from the foreign perspective embodied in the language (English). Of course it is agreed that the use of the mother tongue in the classroom will enhance students' cognitive development, and it is well understood that high-order and creative thinking will not be easily achieved through a foreign language. The arguments on either side will be discussed in the body of my paper.

However, where student competence is assured—and it is estimated that 32-40% of Secondary 1 students are able to learn effectively in English, according to a research project carried out by the Chinese University (Working Group 2005:66)—the bilingual mode of education can bring about huge rewards, as can be seen in several generations of Hong Kong students who entered the local universities like the University of Hong Kong and the Chinese University of Hong Kong, to graduate eventually and become the force propelling the remarkable growth in the economy in their roles as Government administrators, business executives and community leaders who wield bilingual competence. I will report on the entire debate concerning the "proper" medium of instruction in Hong Kong universities, from the perspectives of the various interest groups concerned, and suggest future directions we can take in pursuing bilingual education in Hong Kong.

Keywords: bilingual education, monolingualism, tertiary education, bicultural, cognitive development, language of instruction

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The Cultural Communication of Instructor in Classroom

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Abstract

A cultural is a framing backdrop against which instructor-student classroom interactions are played out. This cultural backdrop influence how instructors communicate and how this communication is received by students (not to mention the potential effects on, for instance, learning). With this in mind, it is a travesty to assume that communication variables and influences there of will operate the same in all cultures. Communication norms and expectations vary across cultures. Though some communication may operate similarly across cultures, cultural differences may require different instructor communication approaches to promote successful classroom results. Student expectations and communication are likely to vary between cultures as well.

The current study sought to examine the communication of Thai instructors (in Sukhothai Thammathirat Open University) from the perspective of Thai students. Specifically, the study explained Thai instructors in terms of student perceptions of instructor power use, affinity-seeking, and nonverbal immediacy. The relationships between these variables and student outcome variables were examined as well.

Instruction Communication

A large body of research in instructional communication has explored the influence of instructor power and compliance-gaining use in classrooms. McCroskey and Richmond (1983) found differences between student and teacher perceptions of teacher power use. Overall, power and compliance-gaining studies indicate that instructor use of referent and expert power, and of pro- social compliance-gaining are most effective with American and European students. Generally, instructor use of authoritative and anti-social power/ compliance-gaining is not favorably received by American students and is even reflected in negative classroom outcomes. This fits appropriately with the relatively low power distance norms extant in American culture. It also reflects the general expectation and effectiveness of positive, friendly communication and relationship between instructor and student in American culture.

The construct of affinity-seeking has also been explored in classrooms. Bell and Daly (1984) define affinity-seeking as “the social-communicative process by which individuals attempt to get others to like and feel positive toward them” Richmond (1990) found that instructor affinity-seeking is positively linked with student motivatation and learning. Studies have linked instructor

affinity-seeking to student perceptions of instructor credibility and to perceptions of teacher competence.

A third important area of communication research in classroom is that of immediacy. Based on the construct of immediacy refers to the level of psychological and physical distance between two individuals. Research in instructional communication has linked instructor immediacy to student affective and cognitive learning, student motivation to study, and student ratings of instruction. Several theoretical models account for the influence of teacher immediacy on student cognitive and affective learning: the Motivation Model and the Affective Learning Model (Richmond, 1990)

Sample and Data Collection

Participants for this study were 180 students of Creative and Advertising Campaign Skill Practice Program, Communication Arts School, in Sukhothai Thammathirat Open University. Students were given a survey instrument and asked "to report on the instructor/class you have immediately before this one."

Instruments

In the study, student perceptions of instructor power use were assessed with a power base instrument developed by Richmond (1990). This instrument is based on five bases of power and contains twenty items. Responses were recorded on a 5.point Likert-type scale.

Instructor affinity-seeking was measured with Bell and Daly's (1984) affinity-seeking instrument this 25-item measure uses a 5.point Likert-type scale.

Nonverbal immediacy was measured with the McCroskey and Richmond (1993) instrument. Students were asked to indicate their perceptions of the instructor's behaviors by responding to the ten items using a five – point scale.

Student affective learning was measured with Richmond (1990) affect instrument. This instrument assesses student attitude about the content of the course, attitude about the behaviors recommended in this course, attitude about the lecture of this course, likelihood of actually attempting to engage in the behaviors recommended in this course, likelihood of actually enrolling in another course of this type, and likelihood of taking another course with the lecturer of this course. Four 7 – point semantic differential (e.g., good-bad, worthless-valuable, etc.) were included with each item.

Student cognitive learning was measured with two-item instrument (Richmond,1990). This instrument assesses student perceptions of their own cognitive learning. Student ratings of instruction were measured using a 4-item instrument.

The first research question indicated student perceptions of Thai instructors in terms of power use, affinity-seeking, and nonverbal immediacy. Analysis of variance revealed significantly overall power use by Thai instructors. This trend held true for all five individual power base as well. Further analysis revealed that Thai instructors were significantly high in affinity-seeking and nonverbal immediacy.

Research questions two and three explained Thai student perception of affective / cognitive learning and ratings of instruction. Analysis of variance revealed no significant difference in student perceptions of affective learning.

The fourth research question sought to determine if the strength of the relationship between these instructors and outcome variables was significantly different between the Thai contexts. Simple correlations were computed for these variables in Thai contexts. For Thai students, affective learning was negatively related to instructor use of coercive power, and positively related to instructor reward power use, expert power use, affinity-seeking, and nonverbal immediacy. Cognitive learning for these students was negatively related to instructor coercive power use, and positively related to instructor referent power, expert

power, overall power, affinity-seeking, and nonverbal immediacy. Student ratings of instruction were negatively related to instructor coercive power use, and positively related to instructor referent power, expert power, affinity-seeking, and nonverbal immediacy.

Results from this study should be viewed as preliminary findings. Though many have examined the influence of instructor power use, affinity seeking, and nonverbal immediacy in American and European classrooms and have found similar results to those in this study. Results from this study break the ice for needed comparisons of culture in instructional communication and reveal general communication patterns.

Research question one sought to determine if difference exist in how Thai students perceive Thai instructor communication. Results indicated that Thai instructors are significantly high in power use, affinity-seeking, and in nonverbal immediacy. Andersen (1979) notes that a greater power distance may foster greater power use in a culture from the higher power individual.

Result for the second and third research questions in the current study indicated no significant differences in student affective learning or in student ratings of instruction. This finding is interesting because even with less instructor nonverbal immediacy and less use of affinity-seeking, Thai students are similar to American and European students in affective learning and in how they rate instructors.

Research question four examined the relationship strength of instructor communication variable (i.e., power use, affinity-seeking, and nonverbal immediacy) and student outcome variable (i.e., affective/cognitive learning, and ratings of instruction) Results indicate that for the most part, instructor power use does not have much influence on Thai student learning or ratings of instruction.

The influence of instructor affinity-seeking was strong in Thai classrooms results from the current study align with results from other studies in classroom that have linked instructor affinity-seeking to student learning. Many studies have documented the strong influence of teacher nonverbal immediacy in classroom, particularly in the area of student learning. The current study derived similar results for American classrooms but found additionally that the influence of instructor nonverbal immediacy was also strong in German classrooms as well (Richmond, 1990).

Conclusion and Recommendation

This research found that the instructors were seen to be significantly high in power use, affinity-seeking, and nonverbal immediacy. The student reported significantly high perceptions of cognitive learning. The instructor affinity-seeking and nonverbal immediacy. The student reported significantly high perceptions of cognitive learning. The instructor affinity-seeking and nonverbal immediacy were strongly correlated with student affective / cognitive learning and ratings of instructor for student.

The influence of instructor referent power, affinity-seeking, and nonverbal immediacy on student cognitive learning was significantly high for student. Implications of results from this study are three main directions. First educators must realize and adapt to the powerful role that culture plays in the classroom. Ignoring cultural differences and expectations is a recipe for disaster in the classroom and poses as a powerful threat to student learning. Teaching simply must be a culture-centered venture. Secondly, research in instructional communication must have a global perspective rather than a myopic focus only on Thai classrooms. A more global focus in this research will greatly expand the parameters of what is considered to be “good teaching” A third implication can be seen in teacher for training.

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Policies and Practices of Quality Assurance and Qualification Recognition in the University of the East – Philippines

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Abstract

The University of the East is in Manila, Philippines. It used to have 60,000 or more students but due to economic recession in the 1980s, enrollment began to decline leading to a serious financial distress and deteriorating academic quality.

Only two types of company exist, according to World Executive Digest, the quality companies, and the other are companies that will be beaten, eliminated or taken over by the former. Universities also struggle for survival. Sound management practices are an imperative for universities desiring to prevail and remain relevant. Quality as a competitive tool ushered the concept of quality assurance, to guaranty with confidence and certainty that standards are met and quality of educational provisions is continually enhanced.

In 1990, U.E. began a massive rehabilitation of its infrastructure and academics. The Total Student Care policy became its quality assurance mandate underlying the following areas: admission, faculty development, feedback mechanism, community extension/linkages, student support services, instruction, scholarships, research, alumni involvement, infrastructure/facilities, and programs geared for qualification recognition.

After five years of implementing academic and fiscal/operational reforms, U.E.'s enrollment steadily increased, thus curing its financial ills as loans and deficits were eliminated. Faculty performance improved, tangibles abound the campus and U.E. is now enjoying a favorable perception of quality from the stakeholders particularly the students, including upstart competitiveness.

U.E. has regained prominence in national licensure examinations producing topnotchers in all fields, has been granted deregulated status while most of its academic programs have each been accredited. Today, U.E. is "one of the most wired universities in the country".

In the future, U.E. will expand focusing on maritime and agriculture education; become a center for science and technology, a leading health sciences institution, the first choice of foreign students, and a virtual learning hub in Asia.

Keywords: Quality Assurance, Quality Recognition, Quality, Service, Policy, Practice, Reform.

INTRODUCTION

An interesting cover feature of the World's Executive Digest entitled "Quality Means Survival" says in its opening paragraph "*We live in critical times in which there are only two types of company that exist – quality companies and the other are companies that will be beaten, eliminated, or taken over by the former."* (WED,1992). In higher education, this implies that Universities having been organized to perform certain roles in society must also struggle for survival.

Schools that are effective in achieving their operational objectives are most likely to survive. Universities must successfully perform those functions to maintain balance, develop, grow and become dominant. P.O. Domingo (UE Research Bulletin,1999), the CEO of the University of the East has made an observation:

> *The sad fact now, as then, private colleges and universities are largely left to run on their own steam; treated by government as purely business-for-profit establishments. In economic terms, under a free enterprise society, education as an industry has become a buyer's market; meaning, that students can choose from 1,316 tertiary schools which sell products, in the form of academic services and where they can enroll.*

In the Philippines, higher education exhibits severe deficiencies, with the expansion of the tertiary school system as an aggravating factor. The EDCOM Report (1991) reveals that quality of its education is declining continuously due to poor management and inadequate investment in the educational system. Demand for increased access is likely to continue, with public and private sectors seeking to meet it with an array of new higher education institutions increasing at an unprecedented rate. Rapid and chaotic expansion is usually the result, with the public sector generally under funded and the private (for-profit) sector having problems establishing quality programs that address anything other than short-term, market-driven needs. A lack of information about institutional quality makes it difficult for students to make choices about their education, making it hard to enlist consumer demand in the battle to raise standards. Universities are left with a formidable task – expanding to meet increasing public demands and improving quality, all within continuing budgetary constraints.

Universities then must compete well to be relevant and to remain in business. A case in point for the Philippines would be the experience of the University of the East (UE), how such a big university was struck by the vicissitudes and an inconvenient economic environment hosting Philippine higher education. UE's travails and how it pulled through to survive could provide lessons for Higher Education Institutions (HEI) in Southeast Asia that are in the same or impending predicament.

There is now a renewed emphasis to improve quality of goods and services. An important component of this customer-driven culture is known as Quality Assurance, to guaranty with confidence and certainty that standards are met and the quality of educational provisions is continually enhanced (ssq.com).

Quality of service today is dictated by a full range of stakeholders, each having their own standards, changing needs and demands that management must comprehend in various effective fashions.

For HEIs, Quality Assurance is a tool for competitiveness in this world created not for the convenience of school administrators. Quality Assurance, so important to business has already permeated the field of education. Surely, HEIs can benefit from the lessons learnt by business.

THE HUMAN CAPITAL THEORY

Szirmai (1997) believes that as people becomes more educated, knowledgeable, skillful one is led to be more productive and even better able to handle existing or new productive technologies. The essence of the human capital theory was the notion that individuals were willing to invest in their education so that they would be able to earn higher income in the future. The theoretical link between investment in education and the level of income was labor productivity (Figure 1).

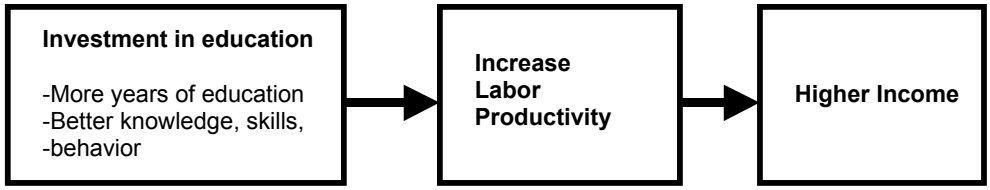

Figure 1 Human Capital Theory

Increasing the level and improving the quality of schooling would lead to increased productivity, resulting in higher income of the individual that would also benefit the society from an increasing supply of better educated tax paying citizen- workers. People would gain from quality education, thus ensuring a more endearing participation in a nation's economic development. This theory lent support to the concept of quality assurance, providing the rationale why the University of the East for that matter should provide quality education in line with its obligation to society.

At an educators meeting on the impact of globalization towards quality assurance, accreditation and quality recognition in higher education under the auspices of the UNESCO in 2001, there was a realization of the acute concern on the above-mentioned agenda that cut across borders, requiring new approaches and new way of understanding those phenomena (unesco.org/edu.). Given the situation, UNESCO encourages initiatives from educators aimed at establishing formidable frameworks for quality assurance and quality recognition. This paper is the response of the University of the East to UNESCO's urgent call for the promotion and codification of valuable practices of HEIs on quality assurance and quality recognition to help out in addressing pressing problems besetting universities such as reclining student enrollment, funding and recognition problem, to name a few.

THE DECLINE OF THE EAST: The University of the East Experience

According to experts (Krietner,2000) corporate performance almost always declines following a period of success. They believe that management complacency is largely responsible for turning success into decline.

Decline is the destabilizing condition resulting from resource and/or demand restrictions and mismanagement (Stoner,1995). In education, the poor performance in licensure examinations, decreasing enrollment, general dissatisfaction of student on the service delivery are but examples of this weakening. Decline is also a cycle that feeds on itself and only gets worse if left unmanaged (Razik,1995).

Amidst today's competitive pressures, it is naive to expect organizations like universities to prosper infinitely. Instead, one should expect successive period of growth and decline that should be recognized and managed skillfully.

An organization that fails to recognize severe threats to its stability puts its survival in jeopardy. These threats may take the form of loss of resources and loss of legitimacy from the supporting environment leading to organizational stagnation.

Such was the state the University of the East found itself in the middle of the 1980s up to the 1990s.

The University of the East is a private nonsectarian university located in University Belt Area, Manila, Philippines. The university was founded in 1946 as a coeducational institution. It used to have an enrollment of over 60,000 students and once labeled as the "Largest University in Asia" in terms of population. In over 60 years of existence, the University of the East has grown into a respected private university in the Philippines. At present UE offers degree programs in accountancy, business administration, law, dentistry, engineering, arts and sciences, fine arts, education, computer technology, nursing, physical therapy, medicine and graduate studies. UE has two other extension campuses.

University of the East started in a rented room where 110 students enrolled in Certified Public Accountant (CPA) review classes. The group of business teachers led by Dr. Francisco T. Dalupan, Sr. made it their objective to help the country, which was still reeling from the war. Of the 110 students, four made it to top spots in the 1947 CPA board Examinations.

On September 11, 1946, Francisco Dalupan, Sr. with four other partners established the Philippine College of Commerce and Business Administration (PCCBA) and admitted 350 students in the summer of 1947. PCCBA alumni performed successfully in the government's accountancy examinations. Because of this success, the government granted the PCCBA permission to establish other colleges, leading to the establishment of the Colleges of Liberal Arts, Business Administration, Dentistry, and the Graduate School of Business Administration. Later, PCCBA was granted university status on July 3, 1951 and was renamed the University of the East.

The succeeding years saw the opening of the colleges of Law, Medicine, and Engineering, as well as the Graduate School of Education. In June 1954, UE opened a new campus in Caloocan and in 1955, established the College of Medicine in Quezon City. Together with the expansion came rapid growth in enrollment. From the original 110 students in 1946, the student population steadily grew each year in 1960; UE became the first Philippine university to have an enrollment of over 60,000. The highest enrollment record was achieved during the first semester of school year 1975-1976, with 67,443 students registered. Today, the body of UE alumni is over 250,000.

The economic crisis and recession that hit the Philippines in the 1980s did not spare UE. The devaluation of the peso, rising inflation, the high cost of wages, coupled with faculty, personnel and student strikes affected UE. Enrollment declined. This period intensified into a crisis that almost led to the school being sold to a foreign religious group. Financial troubles and academic deterioration, falling student numbers continued to burden UE throughout the 1980s and the 1990s (ue.edu.ph.).

RESURGENCE: PRUDENCE AND REFORMS

Quality assurance in UE is embedded in the vision-mission statement declaring its "service to the youth, country and GOD . . . adherence to academic freedom, progressive instruction, creative scholarship . . . constructive leadership . . . dedication and compelling yearning for relevance . . . and affordable quality education"

Incidentally, in the Philippines, providing quality education is not only a business imperative but a constitutional mandate as well. Article XIV, Section (1) of the Philippine Constitution (1987) provides . . ." the State shall protect and promote the right of all citizens to quality education at all levels. ." .

Cognizant of its duty to the country and its avowed vision-mission, the University with such dispatch took the bite, gather all the talents and mustering all resources, swiftly put in motion incessant measures to redeem UE from sure demise.

Starting 1984, UE began applying draconian measures that included personnel reduction, cost-cutting measures, and renting out of school premises and facilities on short-term and long-term leases. In 1990, Dr. Panfilo O. Domingo, took over as Chairman of the Board of Trustees and became Chief Executive Officer and Acting President of the University. Chairman Domingo immediately worked to cure the financial ills of the University by retiring its short-term debts and instituting fiscal and operational reforms. Within five years, the University's loans were substantially reduced and the long-accumulated operating deficit was eliminated from the books. At the same time, Dr. Domingo began a massive rehabilitation of UE's infrastructure and academics (ue.edu.ph.).

The TOTAL STUDENT CARE PROGRAM OF UNIVERSITY was instituted early 1990 to address the two fold *sine qua non* of UE, the students and the faculty – the subject, of whom all such policies exist, averred its President, Dr. Ester A. Garcia (2007). The Total Student Care Program is an organized plan of activities geared towards the holistic development and welfare of students. It is designed to create a student-friendly environment and strengthen the academic function and goals of the University. Every person or entity in the school was enjoined to work together to ensure that students achieve their own educational goals more efficiently and effectively.

The components of the TSCP of the University are: 1) Quality Education, 2) Quality Infrastructure and Facilities 3) Quality Service 4) Quality Student Life.

QUALITY EDUCATION – a well defined academic support program:

- Academic Support Program is the promotion of an environment conducive to learning, emphasis given to modern trends of instruction, new knowledge and information in the area of discipline. It includes screening of worthy student-applicants as admission quality assurance. Another is the retention policy aimed to ensure that students are on the right track and schedule to finish their studies within reasonable time.
- Faculty development program is the continuous provision for faculty development to improve classroom instruction, increase competency, diligence in work and research activities.
- Improve faculty profile by providing competitive compensation to attract experienced and highly qualified faculty. Only applicants with minimum of master's degree were accepted.
- Enhanced teaching competency of faculty through: in-house seminars, echo seminars, training programs, workshops and conferences, peer evaluation and teaching quality circles.

- Research capability building in coordination with the Research Coordinating Office by offering special package for prospective high caliber faculty with doctoral degrees from reputable institutions.
- Effective instruction by equipping faculty with knowledge and skill necessary for effective instruction. This include regular updating of course syllabi whose design was based on the goals of the courses and the use of media technology, criterion based assessments, and teaching strategies for critical thinking and creativity. There is now an increasing use of e-learning in many courses.
- UE Student Portal is a web based gateway to student's academic and financial information.
- UE faculty portal to allow faculty to upload lectures, lesson materials, examinations, assignments for dissemination.
- Training for the proper use of the portals.
- Problem-based Learning and Academic IT-initiative, offers a computer-based facility designed to help increase employability of graduates.
- Globally Competitive Educational Programs. The contents were benchmarked with reputable foreign universities and determined according to the needs of the community upon consultation/linkage with industries here and abroad. The curricula were made to fit qualification recognition from other universities her and abroad. The normative and critical processes to come up with competitive educational programs explicit in the Manual of Academic Programs and Planning, Review and Design (2006) containing the principles and procedures before a curriculum maybe approved by appropriate University bodies and by the Commission on Higher Education

QUALITY FACILITIES -- UE provides the following facilities and equipment;

- Library and Audio-Visual Facilities. UE has twelve (12) libraries, all provided by online public access catalog. Collection of books is most attended too by the administration knowing the importance of updated collections.
- Science Laboratories with complete line of modern instructional instruments for both Biological and Physical Sciences.
- Engineering Laboratories are equipped with sophisticated sets of equipments, among them are: Radiant Communication dBase, MC88 microcomputer trainer, spectrum oscillator, universal testing machines and more.
- Statistics Laboratory. Being the first school to offer undergraduate program in statistics, UE has a modern laboratory for statistics fully furnished with the latest computers and software for student's unlimited use.
- Communication Arts Laboratory. This fully equipped room houses the modern and sophisticated speech-radio-TV studio, broadcasting, cinema, station booth and audio-video, film editing classes and language booths with recorder, mouthpieces and headsets.
- Dental Laboratory. A complete line of modern dental laboratory instruments and equipment is available for student's use, for experiments and faculty instructional needs. UE is the only University in the Philippines that offers Master of Science in Dentistry.
- Other world-class facilities include: Computer Laboratory, Center for Business Information and Communication Technology (Integrated IT Infrastructure, Online Campus system, Financial Information System, Instructional Technology system), Physical Education Facilities, University Theatre, Conference Hall, Multipurpose Hall, Briefing Room, CCSS Multipurpose Room, Internet Rooms, Multi-Media Computer Room, Post Office, and Food Centers (TSCP, 2007).

QUALITY SERVICES – Student services is delivered by UE through:

- Computerized Web – Based Services. IT integration in the academe is not only our window to the cyberworld, but its online persona that extends its services and operations, to wit: Student and Faculty Portals, IT Immersion Program, Linkage and Twinning Arrangements (British Columbia University, Farleigh Dickenson University and Xiamen University), Digital Archiving, Web – based Registration, One-stopshop Registration, Year-round Entrance Examinations, Online Encoding of Grades, Online Faculty Evaluation, Personnel Management Information System, Information Kiosk, Turnstile Entry Security System, SMART ID System, UE Techno-Bus.
- Guidance and Counseling Service. Serves to maintain student cumulative records, assessment programs, psychological tests, gender sensitivity, individual and group counseling and team building..
- Information and Orientation Services refer to the informative activities and materials designed to facilitate student adjustment to University life.
- Scholarships and Financial Assistance Program. The following are the scholarship, grants-in-aid and financial assistance granted by the University. 1) Integrate University scholarship: University scholarship and the College scholarship 2) President Francisco Dalupan Sr. scholarship 3) UE – Tan Yan Kee Foundation, Inc. scholarships, 4) Integrated Service Grant Program: Athletic Service Grant, Cultural Service Grant and Student Assistantship. Other grants were donated by private firms and philanthropic organizations and individuals. Cash awards are also given to students who have made to the top of any licensure examination in the country.
- Student Health Benefits and Services that includes: Clinic for Free (first aid, physical examination, free medicine, laboratory procedures) and Hospital for Free (consultation, 7day confinement at the University hospital, elective surgery, obstetrical, gynecological, executive, neurosurgical, cardiovascular case, and other forms of checkups, emergency surgery, x-ray, free medicine and hospital reduced rate for longer confinement).
- Career and Placement Services refers to the assistance provided for vocational and occupational employment. With thousands of alumni already in various industries and occupational fields, they provide the backbone for job search.
- Research, Monitoring and Evaluations are the feedback mechanisms to seize up the effectiveness and efficiency of all undertakings in the University such as the areas of student services, teaching quality, curricular and extra-curricular activities and the like (ACAD Compendium, 2007).

QUALITY STUDENT LIFE – These are provisions found in the Student Development Program and Services designed for exploration, enhancement of student's full potential for personal development, leadership, and social responsibility through institutional or student initiated activities. Following are the components of this thrust.

- Student Organizations and Activities refers to the recognition, supervision and monitoring of student groups including the evaluation of their activities.
- Involvement and Leadership Formation, Leadership Training Programs. Part of this section is the holding of Student Council General Orientation, Planning Sessions, Leadership Assembly, Team Building and other related programs of the Student Affairs Office. The right of the students to self-governance is fully recognized by the University.
- Student Publication. The University recognizes the freedom of speech, of expression and of the press and adheres to the principle of responsible campus journalism. As such, it provides training for future journalist, writers and/or media personalities.

- Sports Development Programs are programs for physical fitness and development.
- Cultural Programs refers to the set of activities and opportunities to develop talents, abilities and values for appreciation, promotion and conservation of national culture and heritage.
- Group Insurance is provided by the University for students on fieldwork.
- Multi-faith Services pertains to an environment conducive to free expression of one's religious orientation in accordance with law. The right to freedom of religion is fully respected by the University.
- International/Foreign Student Services. This is an integrated program that caters to the peculiar socio-psycho-cultural, academic and non-academic needs provided to all foreign students in UE. The office of Foreign Student Affairs assists in facilitating/coordinating legal requirements from foreign students and for qualification recognition as well (TSCP, 2007).

FINANCIAL REFORMS – The financial difficulties suffered by the University of the East prior to 1990 were practically addressed by instituting standard accounting and auditing practices suited to the specific problems troubling the books of the University. Sound policies for internal financial controls were introduced such as: controls to safeguarding assets, check reliability and accuracy of financial records, preparation of budget, independent verification system, etc. Related to this, was the negotiated industrial peace with existing labor unions of the faculty and employees resulting to wholesome co-existence between and among them (Delgado, 2008).

ACCREDITATION AND GOVERNMENT MONITORING – An external way to measure or determine Quality Assurance is Accreditation and Government Monitoring. Accreditation is based on an evaluation done at a specific point in time, normally with reference to a specific area of the institution (a program or facility). This normally led to the awarding of certificate or recognition that the institution or part thereof meets specific standards. When accrediting, quality assurance is the guaranty that the standards measured in the accreditation process can be upheld in the long term. CHED however realized the need for institutional recognition, thus the Institutional Monitoring and Evaluation for Quality Assurance (IQuaME) Program was introduced. U.E. President Ester A. Garcia (2008) in an unequivocal term dubbed Accreditation and IQuaME as the *sine qua non* for all other strategies. UE had gone through with different accreditation exercise starting in 1990s with astounding success. Just recently, UE went through IQuaME program from CHED, and result is being awaited.

QUALIFICATION RECOGNITION -- It means any diploma, degree or other qualifying certificate that is awarded by an institution of higher education or another appropriate authority, establishes that the holder has successfully completed a course of study and qualifies him/her either to continue to further stage of study not requiring further special preparation or it would also refer to "partial studies", a homogenous fraction of a course at the first stage or at more advance stages of higher studies that has been evaluated and authenticated and, while not a complete course in itself, can be equated with a significant acquisition of knowledge and skills. As a form of recognition, it means the acceptance by the competent authority of the state concerned or institutions as entitling its holder to be considered for admission to its higher institution under the same condition as the holder of a comparable qualification or certificate awarded by the state or institution (ssq.com). In UE, this processes involve the Deans, Registrar and Admission Director to evaluate the credential

of an applicant by comparing the description of the course taken from other schools here or abroad, and if it jibes with the competencies described in the course syllabi of the department concern or is similar or equivalent to UE standards, recognition is granted. Subjects taken from other schools are then credited.

LINKAGES – UE exists in conjunction with the society it serves, thus its linkages with the general public stretch to the different geographic regions in the country, extending to the industry, the business and financial sector, different professions and government service. The alumni association has been very supportive in forging collaborative endeavors involving UE. It served also as artery for benefits accruing to UE out of these linkages (Alumni, 2006)

By way of OUTCOMES, UE aptly claims with pride the following accomplishments:

- UE has grown further, with the opening of new Bachelors degree programs in International Studies, Broadcast Communication, Computer Science, Information Technology and Information Management, International Hospitality Management, Financial Economics and Master's degree programs in Dentistry, Construction Management, Information Management, and Public Administration (ue.edu.ph.)
- UE remains a formidable member of the University Athletic Association of the Philippines, a member since 1952. UE was the host of the concluded 2006-2007 UAAP season. UE also produced the greatest basketball star in Philippine basketball who also became a member of the Philippine Senate. In the arts, the UE Chorale successfully defended their Grand Prix during the recently concluded Busan Chorale Festival and Competition in South Korea (UE Today, 2008).
- Several colleges have each been accredited the Level II status by the Philippine Association of Colleges and Universities Commission on Accreditation (PACU-COA). The Commission on Higher Education (CHED) has identified the Information Technology Department as a Center of Development in Information Technology Education. The Medical College (UERMMMC) has been accredited the Level II status by the Philippine Accrediting Agency of Schools, Colleges and Universities (PAASCU). The College of Medicine was cited for Innovative Curriculum. The College of Medicine was also granted the Recognition as Center of Excellence in Research by the Department of Science and Technology. The College of Nursing has Level III accreditation and accredited by the Commission on Higher Education (CHED) as Center of Excellence. UE is one of the early universities who have undergone the IQuaME Program under CHED, now awaiting its result (ue.edu.ph.).
- Performance in the different national board examinations is the most glaring evidence of quality education in UE. It is the home of topnotchers in the field of Accountancy, Engineering, Law, Medicine, Dentistry, Education, Library Science, Physical Therapy and Nursing. It is also important to mention that UE has consistently produced board and bar passers much higher than the national cutoff (ue.edu.ph.)

- State-of-the-art and high-technology facilities abound on all UE campuses, providing good value for tuition fees. We have air-conditioned classrooms and a campus conducive to learning. Among the more recent infrastructure milestones are the Tan Yan Kee Building in Caloocan campus and the TYK Park in Manila campus (UE Dawn, 2008).

- In terms of contribution to national development, UE has an array of alumni, making names in their respective fields of occupation such as in practice of public accounting, engineering, arts and culture, business management, entrepreneurship, public service, practice of dentistry, medical practice, education and academics, government service and the bureaucracy, judiciary, media, law, military/police service, science and technology, sports and the international arena (Alumni, 2006).
- The Quality Assurance provisions have been fulfilled and will be continuously provided. It is UE's covenant with the students as customer-beneficiaries recognized as contract that is legally binding between the contracting parties - - the students and UE (Opena, 2008).
- The Quality Assurance provided by UE to its students are: Responsive, because the services caters to the peculiar needs of the varying and changing standards and quality demands of its clientele and are delivered just in time. Reliable, because most of the services are wired, hence, utmost accuracy of service delivery is assured all the time. With world-class infrastructures, facilities and equipment, educational ambiance is maintained. By recognizing and respecting the multi-cultural diversity of students and holistic development of the same, interracial harmony in the campus prevails. (Del Rosario, 2008).
- Recently the University is labeled as "One of the Most Wired Universities in the Country", conducted by the Computer World Magazine and Enterprise Magazine. Featured in the 2006 Computerworld Premier 100 of Computer World Magazine, the university ranked 15th among the top 100 corporations and companies in the use of Information Technology and is the only educational institution to have entered the list (ue.edu.ph.).
- The University migrated from ATM to Gigabit Ethernet to support growing online requirements, expanding online learning capabilities and improving administrative functionality in its Manila campus with an Ethernet networking solution from Nortel Networks. It significantly improved the speed of student and faculty access to online learning resources and academic records. The upgrade will support the University's plan for a unified communications network ultimately linking the Manila facility with campuses in Caloocan and Quezon City (ue.edu.ph.).
- At present, UE has liberated itself from the shackles of financial woes and now enjoying the fruits of frugal reforms leading to liquidity, stability, solvency, profitability and stability (Delgado, 2008). UE now is in a position to compete, grow and dominate. Consequently, management–labor relations remain mutual and cordial.

TOMORROW BEGINS IN THE EAST

In a recent survey of the DAWN, an independent student publication in UE, 71.5 percent or almost 12,000 students gave positive approval rating to the University of the East declaring loyalty to their Alma Mater. The result is indicative of high level of satisfaction on the services provided by the University to its clientele. Post-purchase possibilities are very encouraging for UE, preparing it to lurk further in the education market (UE Dawn, 2008).

UE is proud and deeply honored in having nurtured and touched the formative life of its outstanding graduates --- the Vice President of the Republic of the Philippines, Supreme Court Justices, and Justices of the Appellate Courts, the Honorable Mayor of the City of Manila, Legal Luminaries, and International Achievers. Cabinet Members, Members of the Philippine Legislature, Local Government Executives, Academics and Business tycoons. More of these high profile graduates are expected to emerge continuously (Alumni, 2006).

In the future, U.E. will expand into a University learning system focusing on maritime and agriculture education; become a center for science and technology, a leading health sciences institution, the first choice of foreign students, and a virtual learning hub in Asia.

On top of all, the HUMAN CAPITAL produced by UE through the years of its existence as a center of learning that has drawn college students throughout the country and from foreign lands is indeed a fitting tribute to the visionary founders of the this University and a legacy to the nation that will be remembered for all times.

The long history of UE is just like the history of many universities in Southeast Asia that are struggling to find relevance in their respective host counties. UE will continue to search for that relevance through quality assurance, the only path and the reason of being – a University of the East.

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Tracking Institutional Performance Using Importance-Satisfaction Analysis

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Abstract

Importance-Satisfaction Analysis (ISA) has been widely used for evaluating institutional performance in providing their services that are important to their customers. This paper reports on a study using ISA at Open University Malaysia (OUM) to assess the improvements made in delivering its services to learners from 2005 to 2007.

The study employed the survey method and the instrument used is a set of questionnaires similar to that of Noel-Levitz Students Priority-Satisfaction Inventory. Learners were requested to rate the service items based on their degree of importance as well as the level of satisfaction using a 7-point Likert Scale. An Importance-Satisfaction (I-S) Matrix was developed based on four I-S quadrants which are defined as follows: Quadrant 1: High-Importance-Low-Satisfaction (HILS); Quadrant 2: High-Importance-High-Satisfaction (HIHS); Quadrant 3: Low-Importance-Low-Satisfaction (LILS) and Quadrant 4: Low-Importance-High-Satisfaction (LIHS). Using the I-S quadrant analysis, the movements of service items (measured by their percentages) across quadrants over the 2005-2007 periods were tracked.

The results showed that the percentage of items in the HIHS quadrant increased while that in the HILS quadrant decreased. At the same time, there was a decrease in the percentage of service items in the LILS quadrant. These indicate that OUM learners were generally more satisfied with the quality of services received in 2007 compared to that in 2005. The only concern was that there may have been a slight misallocation of resources as indicated by the presence of one item in the LIHS service items in both years. However, the overall improvement in learner satisfaction is a testimony to the overall improvement in the quality of services provided by OUM to its learners.

Keywords: Importance-satisfaction analysis, open and distance learning, institutional performance, quality of services, learner satisfaction

INTRODUCTION

Just like any other organization, to be successful, a university must perform its role effectively. In this context it has to identify what is important to its learners and then deliver what they expect (Elliot, 2002). This is the essence of performance, which is defined as the "action of accomplishing something." Performance is becoming more critical to a university in this today's highly competitive higher education environment. With globalization and increasing complexity of demands by learners, a university needs to respond to the needs of their learners quickly and efficiently.

In this regard, it is essential that a university makes a genuine effort to measure its performance on a regular basis. There are many measures of performance and one of them, the Importance-Satisfaction (IS) Matrix can been used to assess the performance of an institution. By using two dimensions, that is, the level of satisfaction derived by learners in using the services and the degree of importance they attach to the services, it is possible to determine whether a university has provided the services that fulfill the needs of its learners. In the past, performance is measured only in terms of the quality of the services that satisfies the needs of the learners. However, for a better assessment of performance, it should meet the expectations or level of importance attached to by its learners as well (Noel & Levitz, 2003).

Open University Malaysia (OUM) is the first open and distance learning university in Malaysia. It began operation in August 2001 by with 753 learners enrolling in 4 academic programmes. As at January 2008 Semester, OUM has more than 67,000 learners in 51 academic programmes. This phenomenal growth in enrolment within a relatively short period of time is one indicator of positive performance of the university.

There are many factors that have led to this accomplishment. One of them is that OUM has been able to provide the services that meet the needs of its learners. OUM is able to do this because it continually makes a genuine effort to assess what are the services its learners deem important and then provide them to their satisfaction. In this regard, IS Matrix has been instrumental in assisting OUM to pinpoint which services should be introduced, enhanced, reduced or even terminated. Since 2005, OUM had conducted importance-satisfaction surveys with the objective of identifying what processes and activities are important to our learners and which provide a high level of satisfaction to them. This initiative is part of OUM's continuing effort to improve the quality of services to its learners, with a view to improving the latter's rate of success and persistence.

OBJECTIVE OF PAPER

The objective of the paper is to assess the improvements made by OUM in delivering its services to its learners from 2005 to 2007 using the IS Matrix.

IMPORTANCE-SATISFACTION ANALYSIS (ISA)

It is generally accepted that learners' satisfaction level is a measure of short-term attitude resulting from an evaluation of their educational experience (Elliot, 2002). Traditionally, learners' satisfaction level has been unidimensionally used to measure quality and consequently performance. However, for greater reliability and accuracy, learners' satisfaction should be viewed in the context of the importance of the services to the learners. Combining the two dimensions of importance and satisfaction in a single analysis, called Importance-Satisfaction Analysis (ISA) will provide a better assessment of the performance of an organisation. This has led many researchers and research organizations to develop important-satisfaction instruments to attempt to measure the performance of an organisation. The more notable of these instruments for higher educational institutions is the *Students Priority-Satisfaction Inventory* developed by Noel and Levitz (Noel and Levitz, 1993).

The Importance-Satisfaction Analysis (ISA) or some refer to it as Importance-Performance Analysis (IPA) was first developed as a marketing tool by Martilla & James (1977) to assess consumer acceptance of a marketing programme. They argue that this approach is a low-cost, easily understood technique that could be used to gain important insights into which the marketing strategy a firm should devote more attention as well as identify areas that may be wasting the firm's resources. They go on to assert that the presentation of results on the importance-performance matrix would facilitate management interpretation of data and increased their usefulness in making strategic marketing decisions.

Consequently, ISA was used by leisure professionals to assist in the evaluation of visitors' satisfaction (Guadagnolo, 1985; Sarah, 1987; Hollenhorst, Olson and Fortney, 1992; Hudson & Shephard, 1998). ISA was also used by Alberty and Mihalik (1989) to evaluate the effectiveness of instructors in adult educational settings. Using the approach, they were able to identify the relative importance of factors influencing student preferences (importance component) and also indicate the degree to which a particular educational setting possesses these factors (performance component). Siegenthaler (1994) employed ISA to find out what attributes of programmes for older adults that were important in order to develop and maintain quality program for this segment of the population.

Havitz, Twynam and DeLorenzo (1991) used ISA in staff evaluation to find out some items that attract staff to their jobs and whether they are satisfied with attending training seminars and conferences, conducting training seminars and answering the phones.

ISA or its diagrammatic representation, the Importance-Satisfaction (IS) Matrix enables an analyst to quickly discover the key areas to focus on in terms of an organisation's strengths and weaknesses. The result gives us immediate attention to areas in need of urgent repairs and distinguishes those areas where the organization needs only to maintain its current performance. The IS Matrix analysis works first by determining what attributes or features are important to the consumer. Then information is solicited from the consumers regarding the relative importance of the various attributes and asks how well the organisation under study provides for these attributes. The matrix is divided into four sections providing an easy guide for management's focus. Decision makers are then able to identify attributes where concentration is needed in order to improve services deemed important by the consumer.

METHODOLOGY

The research instrument

The study employed the survey method and the instrument used is a set of questionnaires similar to that of *Noel-Levitz Students Priority-Satisfaction Inventory*. The questionnaires comprise of 3 sections: *Section One* consists of questions on learners' demographic, socio-economic and academic information and *Section Two* consists of a number of service-related items, each expressed as an item of expectation. Learners were requested to rate the service items based on their degree of importance as well as the level of satisfaction using a 7-point Likert Scale with 1 representing the lowest degree of importance or level of satisfaction and 7 representing the highest. This results in three sets of scores for analysis. They are the Importance Score which reflects how high the expectations are (the higher the score, the more important it is to a student, hence the stronger the expectation); the Satisfaction Score which shows how satisfied the learners are (the higher the score, the more satisfied the student); and the I-S (Performance) Gap Score which measures the difference between the importance score and satisfaction scores, which indicates how well the expectations have been met (A large performance gap score for an item (e.g., 1.5) indicates that students' expectations are not being met. A small or zero gap score (e.g., 0.50) indicates that students' expectations are being met. A negative gap score (e.g., -0.25) indicates that students' expectations are being exceeded). Finally, *Section Three* consists of general questions that relate to quality, choice, and pride of institution and learners intention as to whether they will continue their study in OUM.

The Samples

The sample size selected for 2005 and 2007 surveys was 4,000 learners each. Out of these, 2,946 and 2,994 learners responded in 2005 and 2007, respectively. The questionnaires were sent by mail to 36 learning centres and were distributed to learners in the last tutorial session of the May Semester of each year.

The Analysis

An IS Matrix was developed based on four quadrants which are defined as follows (see Figure 1):

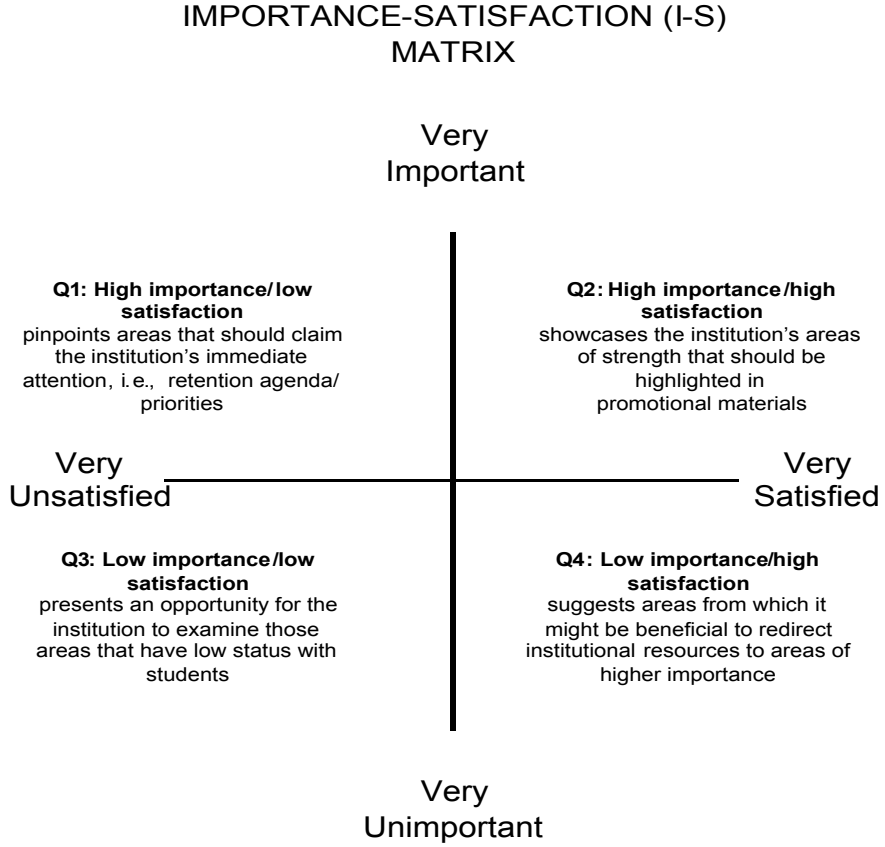
- Quadrant 1: *High-Importance-Low-Satisfaction* (HILS) for items with a mean importance score more than 5.68 and a mean satisfaction score of less than 4.92.
- Quadrant 2: *High-Importance-High-Satisfaction* (HIHS) for items with a mean importance score more than 5.68 and a mean satisfaction score of greater than 4.92.
- Quadrant 3: *Low-Importance-Low-Satisfaction* (LILS) for items with a mean importance score less than 5.68 and a mean satisfaction score of less than 4.92.
- Quadrant 4: *Low-Importance-High-Satisfaction* (LIHS) for items with a mean importance score less than 5.68 and a mean satisfaction score of more than 4.92.

For consistency in the inter-year comparison, the mean importance and satisfaction scores for the 2005 Survey were used in both years.

The service-related items were grouped into 6 service dimensions as follows:

i. *Student Record Management* which evaluates the effectiveness of activities conducted to enhance the efficiency of learners data base management;
ii. *Registration and Orientation* which appraises the effectiveness of activities conducted to assist new learners in to familiarise with OUM's learning environment;

Figure 1



iii. *Learner Centeredness* which measures the effectiveness of OUM's effort towards caring for our learners;
iv. *Student Affairs Management* which assesses the effectiveness of programmes conducted by OUM's Centre for Student Affairs;
v. *Teaching and Learning* which examines the effectiveness services relating to the enhancement of a learner's academic pursuit; and
vi. *Assessment* which determines the effectiveness of services relating to the conduct examinations, tests, and continuous assessments.

The items were then placed in the appropriate quadrants based on their I-S mean scores. For example, items with high mean importance scores (above 5.68) but low mean satisfaction scores (less than 4.92) were placed in Quadrant 1 (HILS) while those with high mean importance scores (more than 5.68) and high mean satisfaction (above 4.92) scores were placed in Quadrant 2 (HIHS), and so on. The analysis is repeated for each item. The result is a distribution of items by quadrant which is also referred to as the Importance-Satisfaction (or Performance) Inventory. To determine whether OUM improved in the provision of its services compared to the previous year, the same procedure was repeated for the service items in the 2005 Survey.

An additional analysis was carried out to examine the distribution of items by dimension and quadrant for each of year 2005 and 2007. This is to enable OUM to have an overall view of the changes that have taken place and whether it is investing in the most appropriate areas.

The last section looks into the percentage of learners who answer YES or NO to questions related to quality of, choice of, pride in and loyalty to the university.

RESULTS

Movement of Items by Dimension and Quadrant

The use of the 4-quadrants (Figure 1) provides a simple but easy to interpret summary of results. Items with scores falling in the upper left quadrant, Q1 are HILS items. This quadrant can be labeled "Concentrate here". Items falling in the upper right quadrant, Q2 are HIHS items. This quadrant can be labeled as "Keep up the good work". Items falling in the lower left quadrant, Q3 are LILS items, and this quadrant is labeled as "Low priority" and finally items in the lower right quadrant are LIHS items, and this quadrant is labeled as "Misallocation of resources" of "Possible overkill" (Martilla & James, 1977).

Table 1 shows the distribution of items by dimension and quadrant. An analysis based on the distribution of items in 2005 and 2007 by the four quadrants points to the following observations:

1) The number of items in Q1, the HILS quadrant, decreased from 9 in 2005 to 7 (-2 items) in 2007, resulting in the percentage reduction from 13.4% to 13.0% (-0.4% point). This indicates that OUM has managed to reduce the percentage of services with low satisfaction level that are of high importance to learners in 2007 compared to 2005.

2) The number of items in Q2, the HIHS quadrant, increased from 30 in 2005 to 43 (+13 items) in 2007, resulting in a percentage gain from 44.8% to 62.3% (+17.5% points). This suggests that OUM has managed to increase the percentage of items with high satisfaction but are of high importance to learners in 2007 compared to 2005.

3) The number of items in Q3, the LILS quadrant, decreased from 27 in 2005 to 16 (-11 items) in 2007, resulting in a percentage reduction from 40.3% to 23.2% (-17.1% points). This shows that OUM has managed to de-emphasise the items of lower importance in favour of the higher ones in 2007 compared to 2005.

4) Finally, there was no change in the number of items in Q4, the LIHS quadrant which remained at 1. This implies that there still exists misallocation resources to those services that are of low importance to learners in 2007 compared to 2005.

The above results can be viewed as positive for OUM. Its learners were generally more satisfied with the quality of services received in 2007 compared to that in 2005.

This performance is reinforced by the favourable response from learners to the last section of the questionnaire. The results reveal that learners' general perceptions on matters related to quality, choice, pride of and loyalty to the university are indeed very favourable (see Table 2). It is most satisfying to note that, except for one statement, more than 80% of learners are loyal to OUM and proud of being its learner.

Table 1: Distribution of Service Items by Dimension and Quadrant in 2005 and 2007

DIMENSION	Q1: HILS		Q2: HIHS		Q3: LILS		Q4: LIHS		Total	
	2005	2007	2005	2007	2005	2007	2005	2007	2005	2007
Student Records Management	0	1	7	7	2	1	0	0	9	10
Registration & Orientation	1	0	4	6	4	1	0	1	9	10
Learner Centeredness	2	3	2	4	11	2	0	0	15	9
Student Affairs Management	1	1	0	1	6	7	1	0	8	9
Assessment	2	0	10	15	0	1	0	0	12	16
Teaching & Learning	3	2	7	10	4	4	0	0	14	16
Total	**9**	**7**	**30**	**43**	**27**	**16**	**1**	**1**	**67**	**70**
Total (%)	***13.4%***	***10.4%***	***44.8%***	***64.2%***	***40.3%***	***23.9%***	***1.5%***	***1.5%***	***100.0%***	***100.0%***

Table 2: Student Responses to Issues on Quality of, Choice of, Pride in and Loyalty to OUM, 2007

No.	Statement	% Yes
1.	OUM is a University that is equivalent to other higher learning institutions in terms of quality	79
2.	If I am given the chance to go through the learning process again, I will choose OUM	84
3.	I will encourage others (eg family members and friends) to study in OUM	85
4.	I am proud as OUM students	88
5.	I will continue my study in OUM, until I graduate, whatever the situation may be	88

Items in the HILS quadrant and their Importance-Satisfaction Gap Scores

The items in Q1, the HILS quadrant, are of importance to OUM in terms of seeking to improve its services to its learners. Efforts must be made to try and move the items in this quadrant ("*Concentrate here*") to the HIHS quadrant ("*Keep up the good work*"). In order to do so, we need to examine each of the items in the quadrant. Table 3 gives a list of the items by dimension and I-S Gap Scores. "Facilities at the learning centres" in the teaching and learning dimension tops the list with an IS Gap score of 1.42. This indicates that OUM needs to improve further the facilities at its learning centres. Five items in the learner-centredness dimension are also in the list indicating that OUM also needs to improve further in several areas of learner-centredness.

Table 3: Importance-Satisfaction Gaps of Service Items in HILS Quadrant: 2007

NO	DIMENSION	ITEM SERVICE	I-S GAP
1	Teaching & Learning	Facilities at Learning Centres	1.42
2	Learner Centeredness	OUM HQ staff are caring	1.22
3	Learner Centeredness	Learning Centre staff are caring	1.16
4	Learner Centeredness	Faculty staff cares about my performance	1.16
5	Learner Centeredness	Problem solving by PPW/T staff	1.08
6	Learner Centeredness	Problem solving by Faculties	1.08

DISCUSSION OF RESULTS

At OUM, internally generated important-satisfaction survey instruments developed along the framework of Noel and Levitz have been used to identify what services are important to OUM learners and what is their evaluation of them. This exercise was carried out with a view to continuously improve its services to its learners. The results of the surveys provide useful indicators to management on the performance of OUM in delivering its services to their learners.

It is very heartening to note that in this study, the results clearly suggest that OUM has performed well in terms of providing services to its learners in the period of study, that is, from 2005 to 2007. OUM has been able to increase the level of satisfaction of its learners in the services that mattered most to them. This is shown by the increase in the number of items in the HIHS quadrant and the decrease in the number of items in the HILS and LILS quadrants. While there appears to be misallocation of resources in that there is an item in the LIHS, this is not a serious concern since it is only one item out of 67 in 2005 and 70 in 2007.

Since the HILS quadrant represents "*Concentrate here*" quadrant, it deserves special attention. An analysis of items in this quadrant reveals that one item was from the Teaching and Learning Dimension and 5 are from the Learner-Centeredness Dimension. The presence of "*Facilities at Learning Centres*" in this quadrant indicates that OUM learners were still not satisfied with the quality of facilities at OUM learning centres and OUM has to improve on this aspect of teaching and learning environment. Table 3 also shows that learner-

centeredness dimension is dominant in this quadrant. Despite very keen efforts on the part of management of OUM to promote learner-centeredness in its operations, the results of the study seem to indicate that it is not doing enough in this area. More specifically, OUM learners expect OUM staff to be more caring and more involved in problem solving for learners. However, these results are not totally unexpected since OUM learners are mainly working adults studying part-time at a distance. The feeling of loneliness and being distanced is natural and the quest for assistance and guidance is more for them compared to that for the regular on-campus full-time learners.

OUM fully recognises this aspect of its learners needs and had instituted several measures to overcome this challenge of their learners. The university's leadership has at all times emphasised the critical importance of adopting "learner centred" approach in all its day-to-day interactions and decision making. OUM takes pride in embracing the five shared values: Caring, Innovative, Dedication, Integrity, and Professionalism. OUM's Human Resource Department continually emphasises capacity building for all staff involved in providing services to learners, particularly the front-liners and has put aside substantial budget allocations each year for Customer Relationship Management (CRM) training. The Learner Services Centre which was established as a one-stop centre caters to learner enquiries and problems via its toll free number. Through OUM's e-learning platform myLMS, learners are free to interact and get connected to peers, tutors and staff, through emails and forums. Learners can channel their problems and inquiries through email, fax or even phones. Each department has a learner charter, which promises that all learner enquiries and problems be attended to within 48 hours. At every end of the month, a Customer Care Meeting is conducted to ensure all matters pertaining to learners are given due attention and action.

Similarly, the teaching and learning aspects have always been given serious attention. To assist learners in going through their studies, numerous initiatives have been put in place. OUM has invested heavily in teaching and learning facilities at both its own and rented learning centres in order to create a conducive learning environment for its learners.

It is particularly interesting to note that the findings of this study parallels that of Elliott and Healy (2001), who examined the aspects of a students' educational experience which are most important in influencing overall student satisfaction. They found that the relevant dimensions include: "student centeredness" (which relates to the universities' effort to convey to students that they are welcome and valued) and "campus climate" (which relates to the extent a university provides a sense of campus pride and belonging).

CONCLUSION

The paper attempts to track OUM's performance in providing support services to its learners using the Importance-Satisfaction Matrix. Overall, the results indicate that OUM has improved in its performance in 2007 compared to 2005. This is evidenced by the shift in a number of service items from the low priority and low satisfaction quadrants to those of high importance and high satisfaction. This is reinforced by the positive response of learners on issues related to quality, choice, pride and loyalty of the university.

However, there are still several items in the low satisfaction quadrants (i.e. HILS and LILS). This indicates that OUM needs to continue to increase the level of satisfaction of these items in the future. In addition, there still exists one item in the LIHS quadrant, suggesting that

there is misallocation of resources. The appearance of 5 items of learner centeredness and 1 item of teaching and learning in the HILS quadrant presents a challenge to OUM to improve further in this aspect. This could be done by showing greater care and concern and resolving learner problems and issues with greater urgency and promptness.

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Preventing Dropping – out Among the First Year Students of Sukhothai Thammathirat Open University

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Abstract

The study was carried out with the following objectives :- 1) to study opinions of student about the factors that made them desire to drop – out. 2) to study factors which affecting students retention. 3) to identify needs of students for supports services from the university which will help them continue their study to the end of the programme and 4) to propose a guideline of learning supporting services which the university should provide for the students. The sample of this study was 912 students from all 12 schools who have just pasted the first year and continued their study in the second year. They were randomly selected from 38 provinces through – out the country. Research instruments were a questionnaire and an interview form. Questionnaires were sent to all sample students. Then 12 students, one from each school, were purposively selected as a representative of each school to interview for in – depth information. Data obtained were analysed by frequency and percentages. Data from the open – ended questions and from interviews were analysed by content analysis. The main findings showed that the causes of dropping – out included both factors related to students themselves and factors related to the university. There were several factors affecting students retention. Students needed various kinds of learning support from the university. A proposed guideline for keeping the first year students continue their study without dropping – out included 12 services. There were :- admission advice, orientation, learning materials, contacting with the university, registration, tutoring, information services, interaction between teachers and students, students club, counseling service, local network and evaluation. They can be categorized in to 3 groups:- pre-learning support services, support services during studying, and support services for learning evaluation.

Introduction

Sukhothai Thammathirat Open University was established in 1978 with the aims at extending higher education opportunity to all thai people through – out the country, especially working people. The university employs distance education system. Her students do not have to come to the university. They study through multi – media at anytime and anywhere that suit their convenience. At present, the university offers over 100 study programmes in 12 schools (faculties) at certificate level, bachelor's degree, master's degree and doctoral degree levels.

* ***Co-researchers for this project:*** Assoc. Prof. Dr. Pradinan Oparamai, Assoc. Prof. Napalai Suwannathada, Ms. Nednapa In-Thong, and Mrs. Sumalee Samathong

Each year there are about 70,000 to 90,000 new enrolment. Among them there are about 65,000 bachelor degree students. For about 30 years after establishment, the university has developed her distance education system continuously. Multi – media employed are moving from printed based toward electronic based. New study programmes are always introduced. For example doctoral degree programme was introduced in 2007. Since the establishment, there are about 200,000 people graduated from the university (Planning Division, 2008). Most of them are working people. Through distance education system of the university, they can obtain opportunity to upgrade themselves. Apart from serving her students, a large number of the general public also obtain informal education from the university.

However, providing education to a large and difference groups of people through – out the country (eg. 200,000 current students), the university still faces a number of problems. One among them which is similar to other open universities is a high drop – out rate. The drop – out rate is about 50 to 60 precent. It is found mostly among the group of first and second year students. After students have gone to second year, they rather stay until the end of the programme. For other open universities, Garison (1987) found drop – out rate between 30% to 70% while Zaikaski(1977) found between 29% to 98%.

Since the drop – out rate is very high and it is continue year after year, the university's administrators and personnel have paid very high attention to solve this problem. A number of strategies and plans were introduced. However, to identify a proper strategy, related information and the real problems, especially from students' perceptions should be identified. For example: what are the causes of dropping out, how to prevent students from dropping – out, what kind of support that students require from the university. Therefore, in order to obtain those related information, the authors have carried out this study with the following objectives.

Objectives of the study

1. to study opinions of students about the factors that made them desire to drop - out
2. to study factors which affecting students retention.
3. to identify needs of students for university supports services which will help them continue their study to the end of the programme.
4. to propose the guideline of learning supporting services which the university should provide for the students.

Method of the study

This study was carried out with the first year students who proceeded to the second year of bachelor's degree programme. The researchers drawed the sample students from each of 12 schools who live in 76 provinces through - out the country by the following steps. First, fifty percents of the provinces were simple randomly selected. Therefore 38 provinces from every part of the country were obtained. Then, the researcher asked for the list of names of the first year students of 12 schools in each province who proceeded to second year (in the year 2006). From each province, 2 students from each school, which made the total of 24 students from 12 schools, were simple randomly selected. The total sample students in 38 provinces were 24 X 38 = 912 people. Moreover, 12 students, 1 from each school, were purposively selected to be the representative of sample students for in- depth interview.

Research instruments were questionnaire and interview form. The researchers sent the questionnaires to 912 students in every province though-out the country. They asked the students to return the questionnaires by the attached envelopes with stamps within the time designed. After that, 12 representative students were made appointment to interview in order to obtain indept information.

The data obtained were analysed by frequency, percentages and means. Data from the open- ended questions and from the interview were analysed in form of content analysis.

Main findings

1. General background of students

Among 579 students who completed the questionnaires, 248 people (42.8 %) were male. Most of them (79.2%) were between 21- 40 years old. 318 people (54.9 %) were single. Most of them (87.2 %) were working people. About 64.8 percents earned 5,000 – 10,000 baht per month while 32.1 percents earned more than 10,000 baht.

2. Opinions of students about the causes of dropping- out. Among 579 students who completed the questionnaires, 107 people stated that they had ever designed to drop – out while another 472 had never designed to drop – out.

The group of 107 students stated the reasons that made them think about dropping – out as followed:-

1) The first reason was they had very little time left for study due to various kinds of responsibilities such as work, families, daily lives. Next were :- 2) The field of study they have chosen was too difficult for them. 3) distance learning method did not fit with them. 4) the programme had no formative evaluation. 5) financial problems. 6) studying on their own was too hard for them. 7) support services of the university were not enough.

3. Opinions of 107 students who had ever thought about dropping – out on factors which enabled them to proceed on their study. They were :- 1) high ambition to finish the study .(94 people), 2) began to adjust themselves with distance learning system (58), 3) sense of belonging (59), 4) began to understand distance learning system (62), 5) be able to manage personal responsibilities (51), 6) be able to manage time (42), 7) receive better services from the university(39).

4. Opinions of 472 students who had never thought about dropping – out on factors which enabled them proceed on their study. They were :- 1) wanted to finish the study (465), 2) had chosen the right field of study (431), 3) reaching study goal (366), 4) sense of belonging (358), 5) wanted to apply knowledge obtain for work and self development, 6) were satisfy with the flexibility of study time and with rate of study fees, 7) the university is famous.

5. Needs of students for support services from the university . Students expressed their needs for support services which will help them proceed on their study until the end of the programme as followed :- 1) availability of student follow – up system (517), 2) contacting the university quickly through various channels (510), 3) receiving text – books immediately after registration (492), 4) local learning centre available at every province (478), 5) advise from teachers in every subject (471), 6) lecturers or counselors available at each local learning centre (456), 7) formative evaluation (with marks) for every subject (422), 8) tutoring services for every subject (417), 9) intensive tutoring before examination (412).

6. A guideline of providing support services for the first year students. After synthesizing all data obtained, a guideline of providing students support services for promoting student retention rate was proposed. The guideline was composed of 12 services. There were :- admission advice, orientation, learning materials, contacting with the university, registration, tutoring, information services, interaction between teachers and students, students club, counseling service, local network and evaluation. These services can be categorized into 3 groups:- 1) Pre – learning support services, 2) Support services during studying, and 3) Support service for learning evaluation.

6.1 Pre – learning support services. They Included :-

1) Admission advise

Students suggested for example: - providing guidance and advice about enrolment for new students.

2) Orientation service

Students suggested orientation by face to face and by various kinds of media.

3) Production of learning materials

Students suggested that the university should provide various kinds of learning materials both of printed media and electronic media for students to choose, provide conclusion for every subject , using VCD , CD as supplementary media, text-books should not have too much contents, contents should be up to date, sending learning materials to students quickly.

6.2 Support Services during studying. They included:-

1) contacting with the university

Students suggested the provision of one stop service, call centre, providing information for students continuously through various channels.

2) Registration service

Students suggested that material should not arrived students late, should provide registration warning service, hotline for registration, advice should be available all the time.

3) Tutoring and intensive training services

Students suggested: - conclusion of each subject should be sent to students.

- intensive tutoring before examination should be available
- in the subjects that tutoring were not available, conclusion of contents in form of printed – media or other media should be made available.
- tutoring though media should be made available in order to serve students who have no time to attend.

4) Information sources

Students suggested:- all learning materials available at every local library.

5) Interaction between teachers – students.

Students suggested:- teachers providing advise for studying each subject

- assigning adviser for each student
- using advance media to create more interaction between teachers and students.

6) student clubs

Students suggested:- students club in each province should make more public relations

- provide more academic activities to help students
- encourage students to meet and help each others.

7) guidance and counseling service

Students suggested:- guidance should be available though various media

- personnel at the regional STOU centres should be able to provide advise to students in their areas.
- counselor should be available at every local learning centre.

8) Local network

- Local network such as local learning centre (LLC) should be available at every provice
- lecturers or tutors should be available at LLC
- guidance and academic activities available at local centres

6.3 Support services for learning evaluation.

Students suggested:-

- pre – leaning examination in order to adjust knowledge background of students.
- every subject should have both formative and summative evaluation and marks for formative evaluation should be more than 20. It should be about 40.
- criteria for passing final examination (60%) was too high.
- a number of questions in the exam papers were too complicated , long and difficult.
- exam results should reach students earlier so that those who did not pass will have time to register for re – examination.

Conclusion and Recommendations

Since dropping-out is one of the main problems that STOU is facing, therefore the university has high attention to overcome it. Information and suggestions from the students themselves is a very useful source of data for the university to solve this problem.

The study showed that the causes of dropping-out came from both students side and the university side. The main factors within the students side were: students had no time and students could not adjusted themselves properly with self-studying in distance learning system. The main factor within the university side was support services and the evaluation system of the university.

Students indicated a number of factors which motivated them to carry on their study for example: their ambition to finish their study and they started to be able to adjust themselves properly with distance learning system. University support services that students needed most were students following – up system and various channels to contact the university quickly and conveniently. The study also proposed a guideline of providing support services for decreasing student dropping-out which composed of 12 services. They can be categorized in to 3 groups:- pre-learning support services, support services during studying, and support services for learning evaluation.

The researcher believes that result of this study could be very useful for the university for decreasing drop-out and increasing retention rate. The university should bring the guideline of learning support services obtained from the study into action and then followed-up.

The results from following-up will be very useful for adjusting this guideline to be more appropriate to the nature of the students and the context of the university. The results of this study do not only useful for helping the first year students but also for the other groups of students. Moreover, they can be used as a guideline for other open universities in the other parts of the region.

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National Defence University Malaysia Riding on Outcome-Based Education: The Case of Civil Engineering Programme

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Abstract

*This paper will venture into the process of utilising Outcome-Based Education, or better known as **OBE**, as a tool to improve achievement of our graduates relative to the need of the stake holders mainly the job market, i.e. the industries. This case study will focus on the development, execution, and assessment of Civil Engineering degree programme in National Defence University Malaysia (UPNM).*

*Since 2005, the **OBE**, has become the pillar of education planning, development and execution for Institutions of Higher Learning (**IHL**) in Malaysia. OBE put a strong emphasize on achieving a set **Programme Educational Objectives** stated by the IHL together with stake holders, i.e. the industries, the parent, the university, and the student.*

The emphasis, on adopting the OBE approach, arises on the intention of Malaysia to be accepted as one of the member of Washington Accord. The prime objective is to increase the quality of Malaysian Education so that graduates from local IHL will be recognised by all the member states. Subsequently, to ensure that our graduates are employable not just locally but also globally.

*In OBE, achieving the **Programme Educational Objectives** is very crucial because the standards are set by the industries and will be judge by the industries. The Programme Educational Objectives should also be in-line with the mission and vision of the University. Thus, in striving to achieve the Programme Objectives set, the IHL will established a list of targets known as the Programme Outcomes (**PO**). The PO's are set relative to the Programme Objectives identified earlier. The PO's need to be measurable and the level of student achievement in each PO will be measured toward the end of student study period.*

Thus, by adopting the OBE approach, a new path needs to be developed and to be followed by all members of the academia in order to achieve the programme objectives.

Keywords: Higher Education, OBE, Civil Engineering, Outcome-Based

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1. INTRODUCTION

National Defence University Malaysia (UPNM) previously known as Military Academy Malaysia (ATMA) was established on 1st June 1995 as an organization that offers Foundation Program and Bachelors Degree Program concurrent with military training to the military officer's cadet. ATMA was upgraded to UPNM and gazetted on 10th November 2006. UPNM offer Bachelor Degrees in Engineering (Civil, Mechanical and Electric & Electronic), Computer Sciences, Nautical Science, Maritime Technology, Strategic Studies and Human Resource Development.

From 1995 to 2006, all students at ATMA are sponsored by the Malaysian Armed Forces and all graduates are commission as military officer to serve in the Army, Navy, or Air Force meaning 100 percent employment guaranteed after graduation.

2. ORGANISATION

UPNM is headed by a vice chancellor and two deputy vice chancellors, namely the "Academic and Internationalization" and "Student and Alumni Affairs". There are established board of directors and senate committee in the university management system.

Faculty of Engineering is headed by a Dean and assisted by three Heads of Department namely for Civil, Mechanical and Electric & Electronic Engineering. Other than that the faculty is managed by an assistant registrar and other supporting administrative staff for clerical work of the faculty and department.

3. VISION OF UPNM

The vision of UPNM is to become the premier institution in military training and defence education and research.

4. MISSION OF UPNM

The mission of UPNM is to mould graduate military officers with professional qualities to fulfil defence needs.

5. PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Over all, UPNM has developed three (3) Programme Educational Objectives for Bachelor of Civil Engineering. The Programmes Objectives are:-

i. Graduates posses great **personal value**, subservient to God, responsible and dedicated to work in societies of diverse backgrounds in serving the Community and the Nation and able to communicate effectively across a range of contexts and audiences.

ii. Graduates are **technically competent** and able to apply their knowledge and skills in performing their duties professionally and ethically as an engineer, leader and/or manager while maintaining their professional development and contribution for the betterment of the Nation and Mankind.

iii. Graduates possess military **leadership and professional** qualities contributing towards the development of the Nation and Worldwide with abilities to respond and adapt readily to changing situations including in time of emergency and during war.

5.1 Relationship of the Programme Objectives with the Vision And Mission of The IHL

Mapping of Programme Objectives to Vision and Mission, it is clearly identified that all the Programme Objectives has major contributions to the vision and mission of our university.

To become the premier institution in military training and defence education and research as well as to mould graduate military officers with professional qualities to fulfil defence needs, the university provides adequate training, teaching, learning and research environment to the students, as well as lecturers and staff.

5.2 Process of Establishing and Reviewing Programme Objectives

An Outcome-Based Education (OBE) workshop was organize involving stake-holders, to discuss, review and establish the programme objectives for Bachelor of Civil Engineering programme. A Soft Skills Workshop was organized by UPNM attended by all lecturers to discuss about programme objectives, learning outcome and soft skills requirement.

5.3 Description of the System of Ongoing Evaluation of the Achievement of the Programme Objectives

A method utilised to monitor the achievement of the Programme Objectives is by analysing the alumni's performance assessment from employers. Since employers involved are mainly from the armed forces, thus the assessment forms for performance evaluation are readily available. However, since the performance report is confidential, thus some organisations refuse to allow even to the former IHL to have access to it. Summary from the analysis of the alumni's job performance assessment is as follow:

Table 1: Analysis of Alumni Performance Assessment Report to track Achievement of Programme Objectives

Category	PEO	Average Score (Scale 1 – 9)	Average Rating	Minimum Score	Maximum Score
Personnal Value (Generic Skills)	1	7.58	Good	6.88	8.31
Task Execution (Technical Skills)	2	7.51	Good	6.50	8.60
Overall (PEO3)	3	7.49	Good	6.50	8.40

Table 2: Score and Rating

Score Range	Rating
9	Excellence
7 - 8	Good
4 – 6	Satisfactory
1 - 3	Not Satisfactory
X	Not Relevant

Generally, the achievement is good with average score well above 7 and lowest score is well above 6 indicating achievement of objectives are from satisfactory to good with highest score is 8.6 over 9.0.

6. PROGRAMME LEARNING OUTCOMES (PO)

6.1 Programme Learning Outcomes (PO) is the statements that describe what students are expected to know and be able to perform or attain by the time of graduation. These relate to the skills, knowledge, and behaviour that students acquire through the programme.

Students of an engineering programme are expected to attain the following:

i. Ability to acquire knowledge of science and civil engineering principles.
ii. Ability to use the techniques, skills and modern civil engineering tools.
iii. Ability to analyse, interpret, develop and conduct experiments; and design components, systems, or structures.
iv. Ability to identify, formulate and solve civil engineering related problems.
v. Ability to communicate effectively and with confidence.
vi. Ability to respond and adapt to changing situations and priorities.
vii. Ability to function effectively as an individual and/or in a team to achieve common goals.
viii. Ability to perpetually seek and acquire contemporary knowledge.
ix. Ability to think positively and possess self-esteem.
x. Ability to apply high ethical standards in professional practice and social interactions.

6.2 The relationship between the Program Outcome and Program Objective must be clearly mapped to ensure that all Programme Educational Objectives being address by the Programme Learning Outcomes.

6.3 The Program Outcomes developed from collective inputs from stakeholders such as: students, employers, advisory board, and academic peers. Such information is gathered by several mechanisms that include the following:

i. Outcome Base Education (OBE) Workshop from 30th June 2007 to 2 July 2007 and 16 Feb 2008.
ii. Meeting with the advisory panel.
iii. Course and faculty evaluations by current students every semester.
iv. Exit interviews and / or graduating student surveys.
v. Formal and informal communications with funding agencies.
vi. Comparison of Programme Educational Objective (PEO), Programme Learning Outcomes (PO), and curriculum with peer universities, peer publications, etc.
vii. Feedback or report from external examiners.

6.4 The data on Programme Learning Outcomes (PO) were gathered from the result of exams, final year projects, assessment of students' performance in various elements of capstone design course and corresponding contribution of courses outcomes to the program outcomes.

6.5 From the assessments, the criteria that UPNM consider are:

- Area of improvement needed
- What can be done so that the students learn more or perform better?
- How the faculty and university should help to improve the Programme Outcome?

Upon investigating the above criteria, UPNM has implemented the method to improve the student performance by encouraging and insisting on the lecturers to detect and implement the Continuous Quality Improvement (CQI) in the respective courses while the management will look into the improvement of the facilities and supporting staff and infrastructures.

7 ACADEMIC CURRICULUM

7.1 Programme Structure and Course Contents.

The curriculum used for these programme reflect the Outcome Base Education requirement with focus on the Programme Outcome expected. The programme was design for 8 semesters covering the duration of 4 years with credit hours distribution as follows

i.	University Subject	– 32 credits
ii.	Faculty/Programme Core Subject	– 93 credits
iii.	Elective	– 9 credits
iv.	**Total**	**- 134 credits**

The curriculum covers a complete variety of civil engineering main area such as structure, highway and transportation, hydrology and hydraulic, geotechnical and environmental engineering. The result from mapping of subject to programme outcomes, i.e. the distributions in terms of approximate percentile (for programme core subject) is as follows:

Table 3: Courses Contribution to Programme Outcomes: Approximate Percentile

Programme Outcome (PO)	Percentage (%)
PO1	83
PO2	80
PO3	39
PO4	37
PO5	51
PO6	10
PO7	56
PO8	32
PO9	22
PO10	39

The above table shows that PO1, PO2, PO3 and PO4 are being emphasis more in the programme core courses, while PO5 to PO10, which are generic in nature, will be covered more in the University or supporting courses and in the military training module which is part of the requirement to complete the program.

In order to ensure that the above mentioned Programme Outcomes are achieved, the related courses outcomes have to be achieved.

7.2 Programme Delivery and Assessment Methods.

Generally subjects are divided into 5 mode of delivery such as Lectures, Laboratory Works, Projects, Designs/Problems Base Learning and Tutorials. Fundamental subject such as Applied Mechanics, Fluid Mechanics and Soil Mechanics are usually delivered in lectures and tutorial. For design subject such as Reinforced Concrete Design and Steel Design, the delivery modes are composed of lectures and studio work, with project and presentation at the end of semester.

Continuous assessment with the final examination at the end of each semester covering 40% - 50% of student total marks for most of courses and the remaining 60% - 50% from coursework, i.e. tests, quizzes, tutorials, assignments and mini project. Apart from 134 credit hours, there are several subject related to military training. The students must take the entire military training subject as part of the requirement to be a commissioned officer in the Armed Forces in future. Failure to complete these subjects, the students will not be awarded their degree and will be discharged. Parts of these military curricula were aim to develop leadership skill, communication skills and physical and mental endurance.

7.3 Student Workload and Activities.

Average load per semester is between 16 to 17 credit hours which are within reasonable academic load.

Detail on running of the academic programme is mainly cover 5 days a week. The frame of the timetable is as follows:-

i.	Monday and Friday	-	8 am to 1.00 pm only
-			Military training after 2.00 p.m.
ii.	Tuesday to Thursday	-	8.00 am to 5.00 p.m.
iii.	Saturday	-	Military training

The university, being partly managed by the ATM, conducted various activities to expose the student to the real working environment as well as exposing to some extracurricular activities such as managing sport and other event locally and internationally. Some of these activities which requires the attendance and participation of these students such as involvement in inter university programme especially sport and other Ministry of Higher Education (MOHE) programme and hosting international and national event.

8. ACADEMIC AND SUPPORTING STAFF

In the department of civil engineering, all the academic staffs have the competencies to cover all areas of the program and are fully aware of the outcome-base approach to education. In addition, the Civil Engineering department has sufficient full time academic staff to accommodate the staff-student interactions. Most of the lecturers has experience working in industry and are able to advice and help the students in academic matters.

Professional and engineering ethics is applied in course outcome therefore professional development and interaction with practitioners is applied to the program. Invited speakers from industries and public bodies are engage to share knowledge and experiences. This will ensure the quality of the engineering program and attain to the program outcomes**.**

9. FACILITIES: Teaching and Learning Facilities

i.) Lecture Rooms

Basic facilities for lecture rooms provided are whiteboard, tables and chairs. Some of the rooms are well equipped with audiovisual and multimedia facilities such as LCD projectors and personal computer. For continuous quality improvement in teaching and learning facilities enhancement, the University planned to equip all the lecture rooms with audiovisual and multimedia facilities in future.

ii.) Library

The UPNM library is equipped with the on-line integrated computerized library system and online databases called Neuweb. It had about 64,068 volumes of books and periodicals and could seat approximately 200 students at one time. The environment is very comfortable for self study. There are about 2,650 volumes of reference books for Civil Engineering to date.

iii.) Computing & Information-Technology Systems

The computer laboratories provide sufficient number of computers which have been recently acquired in a continuous process by UPNM to upgrade the computing facilities. A number of PCs spread over the building were available for use by staff and students alike. All lecturers and tutors were provided with individual computer to further enhance the teaching and learning process. All UPNM's staffs and students also provided with computer log-in accounts and e-mail addresses.

There are 11 computer's laboratories provided for students used such as Network lab, Computer Workshop Lab, MAC lab and etc. UPNM has planned to build a new building for ICT Centres to provide more ICT facilities to cater for the increasing number of students in the future.

iv.) Laboratories

The Department of Civil Engineering has laboratory building providing adequate space and adequate equipments installed for teaching and limited research purposes. There are six's laboratories namely:-

(a) Structures & Materials Laboratory

(b) Geotechnics Laboratory

(c) Highways Laboratory

(d) Hydraulics & Hydrology Laboratory

(e) Environment Laboratory

(f) Geomatics/ Photogrametry Laboratory

Geomatics Laboratory is equipped with sufficient numbers of total stations, digital theodolites, optical theodolites, levelling equipments and various supporting land survey equipment for students' field work.

In addition to acquiring equipments for undergraduate work, the department is planning for new equipments to enhance research capability in selected areas as the number of staff grows. As these equipments can be very expensive to acquire, the department may look into the possibility of securing research grant provided by various agencies or through collaborative research projects.

10. QUALITY MANAGEMENT SYSTEM

UPNM has adopted ISO as one of its management tool. Thus, UPNM has certain goals and objectives to be achieved. Progressively, UPNM are achieving the objectives and at the same time, the objectives are being revised and reviewed to ensure continuous quality improvement. At this moment, UPNM has not set the benchmarks, however, UPNM has adopted certain KPI through our strategic document to ensure proper guide for performance indicator in future.

11. CONCLUSION

OBE has set a new direction in academic planning, development and execution. It's directed toward fulfilling the need of the stakeholders and very focus and objective oriented.

OBE ensure that a programme establish must be dynamic in nature, thus, development and improvement must be maintained, thus, ensuring continuous quality improvement and sustainability of the programme.

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Development of English Test via Electronic Media in a Distance Learning System

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Abstract

The paper demonstrates an electronic English test in a distance learning system and discusses the issues arising from the test. It is based on research on "the development of English testing via electronic media in a distance learning system" focusing on the objective of developing an electronic test to measure the use of English instead of the current paper and pencil exam.

The electronic test was developed using the discrimination and difficulty method for item analysis and the Cronbach alpha method for content validity and reliability. It consists of listening, speaking and reading elements with pictures for the context. Candidates do the test online (limited number of stations at the time of the research). Speaking items are recorded on to the computer and uploaded to an external drive to be graded by 3 English experts. Test results can be viewed for each item in the multiple choice sections; candidates are able to practice the test procedure before the actual test.

The research finding showed that the electronic test was qualified with content validity and reliability coefficients result at .9229. The discussion will focus on strong and weak points of the test. It is successful for provision of context for communication and the opportunity for expression of candidates' speaking ability. The limitation is the lack of immediate response through the computer and variety of test design in the objective section.

It is recommended that the university should implement the complete four skills electronic test and develop its own authorware for electronic testing.

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Demonstration of electronic test by Ms. Songsri Inkhai, Computer Office, Sukhothai Thammathirat Open University.

Development of English Test via Electronic Media in a Distance Learning System

This paper focuses on the development of an electronic test. It is part of the research on the development of an electronic test and the study for the relationship of the electronic test and the current test of the *English for Communication* course in Sukhothai Thammathirat Open University.

1. Introduction

English is important as the language of media used to communicate valuable data. Knowledge is now shared through various sources such as the Internet, CAI, E-Learning. This has unbound the limit of learning English only in a classroom. Various websites offer a large number of English courses. Also, social and economic progress enforces the need for an English-proficient workforce in areas such as business, tourism, to name but two. The School of Liberal Arts at Sukhothai Thammathirat Open University (STOU) has offered its Certificate for English for Specific Purposes in various fields such as computer, business, office, etc. It also offers various English courses via distance as a core, compulsory, or elective in some bachelor degrees.

One of the core courses is English for Communication whose main purpose is to enable students to communicate in English. The course includes a set of textbooks, CDs, and e-learning online. At the time of the research, the evaluation for this course, which emphasizes on listening and speaking, covers an assignment (voluntary) and a final test. However, the assignment is in written form, which is not a task for communication as with actual listening and speaking. The final test consists of 100 multiple choices measured according to the behavioral objectives in each unit. The students choose the alternatives they think appropriate for the situation. For example in telephoning; What would you say if you pick up a phone and a caller says, “Hello, I’d like to speak to Mr. White, please.”? Students will select the appropriate phrase without hearing the actual voice or uttering any kind of speech to express their ability to speak. Thus, it may be said that the test does not directly measure the ability to speak.

The rationale behind the paper-based test is of the appropriate cost. Each semester, about 5,000 students registered for this course. The management of the test in using tape cassettes, laboratory, or individual face-to-face interviews can be done, but with high cost because the test must be organized all over the country (more than 76 test centers).

With the advent of technology and software, the electronic test can handle a huge number of students, in various places, at the same time. Moreover, in terms of the test design for construction validity, each task can be the integration of various functions, not as a discrete point for one item. It is also possible to write the test in a form of task that is similar to the real use of English. The students can hear the voices, and see pictures, which provide contexts and make the communication “real”. The speaking ability can be recorded and graded later. In terms of management system, it can be done through author ware, in which test designers write tests by themselves, and in the long run create a test bank. The registration can be examined and checked with real students.

It is also the mission of STOU to be the leader in materials writing in English; however, it has not yet developed tests that are appropriate for the changing technology for the benefit of their students. The development of an electronic test that can cater for measurement of the ability to listen and speak must be studied. An effective test can ensure stakeholders, such as students’ future bosses, of the prospective employee’s ability to communicate in English.

2. Literature review

Literature review for the development of the electronic test covers the following issues: (1) The recent evaluation system of the English course and its weak points (2) current electronic tests (3) limitation of electronic tests (4) research in electronic testing.

(1) The recent evaluation system of the English course and its weak points

The current English test for *English for Communication* course is paper and pencil based. It consists of multiple choice items and evaluation of listening and speaking skills through reading. For example, the test gives a situation for A interacting with B. Test-takers will choose the correct answer without listening or understanding even such a simple statement such as 'Hello.' They will answer, possibly correctly, expressing neither their ability to say the word "Hello", nor their ability to understand any tone or intonation. This is a major drawback for the test because it does not measure what it is supposed to measure. The electronic test will remedy this weak point by offering listening and speaking sections, and providing language context that is similar to the real use of English.

A sample of an item from the paper and pencil based test.
Objective: to be able to use and respond to expressions in suggestions. Test candidates will only read the printed version.
A: _____
B: Yes, let's.
1. Shall we go to a movie?
2. Why don't you let him go?
3. Do you enjoy playing tennis?
4. Would you prefer to stay home?
5. Let's not waste time watching TV.

Weak points in measuring the listening and speaking skills

From the example, we can see that the paper and pencil based test basically lacks validity and authenticity.

In terms of validity, the test must measure what it is supposed to measure (Weir, 1990: 22). And the test will be valid if it shows the language skills, or structure, or other elements which are involved in learning (Hughes, 1996: 22). The current test does not have listening activity, which is the most fundamental for any listening and speaking tests. It only asks the test takers to identify whether an expression is appropriate in a situation by reading and choosing an alternative. So it may be said that the current test is not valid.

In terms of authenticity, in developing a test for language skill there should be language use in a real situation, or "real life language use" (Bachman, 1995: 41). In other words, the test takers must be able to express the language in real life. The current test measures the apparent performance by discrete items while in real life language use, language users use a variety of language functions and grammar (Weir, 1990: 2-3). Moreover, a test in a form of task which integrates various language functions and knowledge reflects more of a real life language use.

(2) Current electronic tests

The only full-range electronic test, to my knowledge at the time of the research, is the TOEFL online test (http//:www.ets.org/toefl), which integrates listening, speaking, reading, and writing. It started in April 2006 worldwide. The test tasks are varied, for example: listen to a statement, give opinions, talk about what the test takers read and listen (TOEFL @ iBT

At a Glance from ETS). The test takers record their speaking materials and forward them to the center. This test was developed in response to the notion that the TOEFL test only measured receptive skills, not productive skills in speaking. For writing, there has been a writing test for sometime.

There are also electronic tests (http://www.engtest.com) in which test takers can choose their own levels, from beginners to advanced; the tests cover language skills such as grammar, reading comprehension, or writing. The test takers will get the results either in total or for individual items. However, there is no online speaking test.

The measure of language skill today has been developed using electronic media, both online and offline. For offline there are a variety of CDROMs for the English language. Online tests can be found free on various websites. The contents cover all language skills. The styles are varied as well: multiple choice, true-false, fill in the blank, speak with computer response. Test developers can indicate conditions to the users to use the test. The weak points concerning electronic testing is the test takers' lack of adept use of computers, the number of computers, the location for computer rooms, the computer recording program, and of course, the high cost.

The use of electronic test can be viewed in terms of students and the educational institution. For the students they can measure their own performance in English use, not the English usage. It also helps build confidence in language use. For the educational institution, it is easy for scheduling a test timetable, catering for large number of test takers, and it is efficient and fast. There are a variety of designs such as scroll down, matching, true/false, and cloze. It can interact with the test takers. The institution can design the operation system when designing the test, test bank, in a form of author ware, in which the test writers can design their own test.

The criteria for marking speaking test

In marking speaking performance of students on the electronic test, standard criteria are needed. Also, there should be more than one assessor to make the best reliability, which will be done through interrater reliability test.

Douglas (2000: 133) has developed criteria for marking speaking performance as follows:

Topic	Scale		
Overall communicative effectiveness	near native	flexibility and range ……	limited
Intelligibility	intelligible	…..	unintelligible
Fluency	even	…..	uneven
Comprehension	complete	…..	incomplete
Appropriateness of language	appropriate	…..	inappropriate
Resources of grammar and expression	rich	…..	limited

The English as a Second Language ESOL Examination by Cambridge University who organize the worldwide IELTS has developed the criteria for marking listening and speaking in the following topics: Fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation with the level from 0-9 (IELTS www.ielts.org/_ib/pdf/UOBDs_SpeakingFindal.pdf)

Specific criteria for this electronic test has been developed using 0-3 scale in 5 areas: Overall Communicative Effectiveness, Pronunciation, Intelligibility and Grammar Usage, Vocabulary and Expression, Fluency and Use of Connected Speech. This is aimed to suit the level of the fundamental course and the nature of Thai students.

(3) Limitation of electronic tests

There is limitation in the candidates' ability to use computers. Acknowledging this limitation the research team conducted an orientation period, familiarizing students with computer training in entering selections for the objective tests, and how to record their voices. Another limitation is the inability to measure nonverbal language, which is an important element in communication.

(4) Research in electronic testing

Research concerning electronic test varied. For example, the test takers' satisfaction in Pittsburgh Public School, USA: The School conducted the first online speaking test in the country, there were differing opinions. Some were more worried than taking a test with the teachers in person; others were not shy speaking with the computer, but were with the teachers in person (Lee, 2003). In terms of Real-time Feedback, Brett (2000) found that the checking system can help create more understanding for the reading text. Moreover, Tsutsui & Kato (2000) of Washington University developed a system to check speaking skill with multimedia called Language Evaluation, for language teachers to correct student's speaking performance on videotape. In terms of the validity of electronic tests, Carsten (2006) conducted the content validity of a web-based test, and found that the test was reliable, with a one-hour test and not a lot of time required for marking. In Thailand, Pavavijarn (2004) compared paper-based and electronic tests with the same test content. Research results showed that the achievement on reading English between paper-based and electronic tests showed the same significant statistic difference of .05 in their attitude to both kinds of test. Students had better attitudes toward the electronic test.

3. Research methodology

3.1 Population and samples

The population was STOU students registered for English for Communication semester 1/ 2007 (5,039). The sample consists of 80 students who joined the research voluntarily (from meetings with students at tutorial centers, students clubs, from Websites of the School of Liberal Arts). This number is appropriate because in the simulation of the test, 80 computers must be used at the same time, and the number should yield data adequate for the study.

3.2 Research instruments

In this paper we will focus on the electronic test only. The electronic test consists of two main parts. The first part is 20 items with multiple-choice options; each item consists of 6 issues. The second part is the speaking test of 3 situations, from which the students have to choose two.

3.3 The design of the test

3.3.1 Steps in designing the test

In constructing the electronic test, the following steps were taken: first, study various electronic tests on free websites and in the form of e-learning both in Thailand and overseas; second, study computer aspects to be applied for the tests; third, write the manuscripts of the test.

3.3.2 The details of the test are as follows:

(1) The objective test consists of 20 items (6 questions in each item) with 120 marks. The test was designed according to the behavioral objectives in the 12 units of the English for Communication Course. Each item is a communication situation that integrates various language functions.

(2) The subjective test consists of 4 items (later changed to 3), from which the students have to choose two. Each choice offers 40 marks giving a total maximum score of 80. The two parts constitute a maximum score of 200 marks.

3.3.3 Operation system

Students must be able to use a computer mouse in order to choose their answer and to record their voice.3.3.4 Content validity and Reliability test

(1) The first draft of the test was evaluated by 3 experts in the English field for IOC (Identification of Congruence) value. This was to check for the content validity. The items with IOC value of lower than 0.50 had to be modified.

(2) First pilot. The modified test was piloted with 5 students who were not from the sample group. This was to check for language use in the test, computer use, and their impression of the test. The test was then adjusted according to students' reactions.

(3) Second pilot. The adjusted modified test was piloted with 22 students who were not the sample group. Item analysis then followed. This was to study the difficulty and discrimination level, and reliability. The item-total correlation was between -.27 and .79. The Cronbach alpha value is .905. Then items modified were those which had a difficulty value of less than .20 or higher than .80 and a discrimination value of less than .20.

(4) Real use. The final version of the test was used with 58 students from the sample group to find the reliability value.

3.4 Data collection

3.4.1 The sample group of voluntary students were collected as follows: (1) 500 invitation letters to students registered for the English for Communication course; (2) invitation on Orientation Day for first year students; (3) invitation at tutorial centers; (4) advertisement in newspapers (STOU section); (5) 205 invitations by phone for students who had sent their assignments. 108 students accepted the invitation, but on the actual test date only 58 students showed up.

3.4.2 The interrater reliability of 3 examiners

The test takers read the questions from the computer monitor and chose the correct answer, they then recorded their voices onto the computer. Three English experts, one native speaker of English and two Thai teachers, graded the test. The average scores were recorded. The interrater reliability of the three teachers was tested using the "Kendall Coefficient of Concordance" of 22 test takers. (Supim, 2545)

The research team developed the marking scheme appropriate for the nature and level of this test, adopting and modifying criteria from Douglas (2000) and IELTS Band (level 9-0) consisting of fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation (see www.ielts.org/_ib/pdf/UOBDs_SpeakingFinal.pdf). The marking scheme was from 0 – 3 in five areas: 1) Overall Communication Effectiveness, 2) Pronunciation, 3) Intelligibility and Grammar Usage, 4) Vocabulary and Expression, and 5) Fluency and Use of Connected Speech. This was to set up a standard manual for test assessors. The test assessors then graded the tests from 58 students.

4. Data analysis

Data analysis for the electronic test consists of the quality test of the electronic test for both individual items and the overall test. For the item test, difficulty and discrimination values of the test were used. For the overall test, content validity and reliability were used with the Cronbach alpha method.

5. Results

The development of the electronic test for English was qualified in its content validity and reliability. Details are reported by the steps in developing the test.

5.1 First experts' evaluation (IOC value)

There are 8 test items whose IOC value from 3 English experts that is lower than .50. These were items 4, 6, 9, 11, 12, 16, 17, and19. The 4 subjective tests had no IOC value less than .50.

5.2 First pilot

The first pilot was done with 5 students, who were not from the sample group, in order to check the language of the test and the computer system. These 5 students were people in the Staff development project in STOU. They had good ability English, performed well, and gave good feedback on the test system, except for the unclear sound of the test. They suggested that students should be able to try the test procedure before testing.

5.3 Second pilot

The second pilot was done with 22 STOU students who were not from the sample group. This was to test the quality of the test for item analysis and the test as a whole. For item analysis, discrimination and difficulty were used. For the content validity and reliability of the whole test, the Cronbach alpha method was used.

Item analysis results showed that the item's difficulty was between .13 to .93 and discrimination between -.27 and .79. The reliability of the test was at .905

5.4 Test modification

Test modification was made as follows:

(1) Objective test. The item with a difficulty value of less than.20 or higher than .80; the discrimination value less than .20 was adjusted.

(2) Subjective test. Items of greatest interest to the test takers:

item 1, 22 students; item 2, 5 students; item 3, 14 students; and item 4, 3 students.

So, item (4) was deleted because of low interest and technical difficulty.

[Item 4 was an interview, so accurate recording should be for each sub-question, and thus too complicated to handle.]

(3) Other improvements

The size of some pictures was adjusted as the function was only to provide context and should not distract test takers.

The electronic test was done within the ATutor software, which at the time of the research, could not accommodate matching. So the test was modified to multiple choice options. Moreover, the fill-the-gap options cannot be implemented at the time of the research because students may lack good keyboard skills.

5.5 Interrater reliability value

In the subjective section the test takers recorded their voice on to the computer, and the sound was retrieved for the test assessors to grade. There were 3 assessors: one native speaker of English and two Thai teachers. The Kendall Coefficient of Concordance (w) of the 3 assessors from 22 test takers was 0.57, which showed that it is significant statistically at the level of 0.05.

5.6 Real use

This was the actual use of the 58 students in the sample group. The reliability from Cronbach alpha value was .9229; the discrimination between .10 and .77. There were 2 items which had a discrimination of less than .20 (item 15 and item 18). The difficulty for each item averaged at 2.6 to 5.5.

In summation, the research finding showed that the electronic test was qualified with content validity and reliability coefficients at .9229.

6. Discussion

6.1 The construct of the test

The test is of good quality—valid and reliable. It was constructed according to the following principles in test design: The most important issue is that it measures what it is supposed to measure (Weir,1990: 22). The test is valid if it shows test of the language skills, structure or other issues that the teaching involved. (Hughes, 1996: 22) It must be authentic, or "real life language use" (Bachman, 1995: 41) –that is, its contents show real situations of language use, which consist of various language functions, and not measuring discrete language items separately.

The design or format of the test covers the objective and the subjective, and all four skills, but focusing on listening and speaking. There are pictures to provide contexts for the questions. Samples of integration of the skills are listening to telephone conversations, writing down information in a diary; listening to radio news and answering questions. The design of such a test can measure the performance in English better because the task reflects the real use of language where speakers have to use a variety of language functions, not just an individual one (Weir, 1990: 2-3) –especially for the subjective test in which test takers have to record their voice onto the computer.

However, the test is limited in its software program (at the time of the research.) Also, the context or situation for some language functions may be too long (reflected in the limited number of the language points).

6.2 Reflection on developing electronic test

The electronic test in this research has measurement of the receptive skills; that is, the reading and listening skills. It also has the productive skill in speaking. However, the test does not accommodate the writing skill because of the students' possible problem in using a keyboard. The test included email writing, which should have been a writing skill, but was changed to a multiple choice option. This issue is to be researched and developed further.

Another weak point of the electronic test is the differing levels of students' competence in using the computer. Despite procedures being explained in detail, and the opportunity to practice before doing the actual test, many candidates forgot to submit, or spoke too low to be heard. The research showed results in line with Lee (2003) that there were differences in students' opinions on the conducting of the electronic test.

In creating an electronic test, there should be no limit in terms of software; it should not be created under an existing author ware, but should create its own author ware. However, when the budget is limited, using ATutor is a start.

7. Recommendation

The electronic test should be developed freely and create its own authorware; in other words, it should not be developed under an existing authorware that is currently used for learning not for testing. However, it is a start. The test takers should be able to practice the test beforehand. There should be an online test to serve students.

Recommendations for further research include the study on a marking scheme and the band to show the level of ability and performance. Study writing test feasibility of typing and sending on the Internet. Develop the listening and speaking performance test. Study how to use the electronic test online in terms of management aspects. Study the costs in the adopting the electronic test online.

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Challenges and Opportunities for Universities at Crossroads: Creating and Implementing the Innovative Integrated Management System (IIMS) into Sustainable Food Industry Purposing to Level Up the Country's Competitiveness

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Abstract

In order to play the important role as the competent social service provider, universities have to create and initiate as well as provide the international innovative knowledge corresponding to the needs of the society and the country. In Thailand, food industry is the most important industry that creates the highest income. More than 20 millions of Thai people involve in food industry and related occupations. It is essential that universities must involve to level up Thai food industry. The Centre for Standards and Quality Development of Production and Services at Sukhothai Thammathirat Open University realizes this responsibility. We consider that the long-term survival and growth of global food industry depend on the availability and efficient use of raw materials, energy and water and other facilities under the concept of sustainable practice, i.e. in environment, society and economics. According to this, quality and food safety managements are essential to ensure that the food industry can continue to support the communities in which it operates. Awarding a number of certifications to show the high standing of international quality and hygiene characteristics are currently necessary, e.g. ISO 9001 : 2000, GMP/GHP, HACCP, ISO 22000, BRC and etc. In order to minimize the cost and maximize the efficiency, the Innovative Integration Management System (IIMS) has been developed and effectively implemented in a numbers of national and international food production companies in Thailand during the past years under the frameworks of sustainability. IIMS will allow the organization to integrate all common processes such as management review, document control, record control, training, monitoring & measuring, data analysing, internal audits, and corrective and preventive actions whereas the critical or specific processes required by each standard are still retained harmoniously with the others. IIMS developed and implemented have been recognized and accredited at the national and international levels.

Keywords: University, Challenges and Opportunities, Innovative Integration, Management System, IIMS, Food Sustainable Industry, Quality, Food Safety.

1.0 Introduction

It has been worldwide accepted for centuries that universities have played a critical role in the development of society, particularly for the development of industries. Competent universities have to help manufacturers become more productive and more competitive through innovative road map that lead to the business management excellence. Novel production management techniques or better business practices that enhance the industrial competitiveness must be initiated and implemented in the nowadays industry in order to achieve the global competitive goal.

From now on, the concept of sustainable industry is the immersing issue for nations. Sustainable industry is industry that enhances the sustainable development. Sustainable development was defined by the World Commission on Environment and Development in 1987 as "is about meeting the needs of the present without compromising the ability of future generations to meet their own needs." From the Thailand's National Research Project entitled "Thailand's Sustainability Industry" conducted during 2007 by Prasert Suttiprasit and others, it was figured that the major strategies for the sustainable industry are to cover the aspects of (1) environment, (2) society and (3) economics. In addition to these aspects, more suitable and effective law and regulations are essential.

UK food industry sustainability strategy published in 2006 is an example of the dominant model for international food sustainable industry. Regarding this international food sustainable industry, the UK Government set out the strategy to cope the environmental, social and economic aspects along the food supply chain as the followings

a. Environmental aspect (1.Energy use and climate change, 2.Waste, 3.Water and 4. Food transportation)

b. Social aspect (1.Nutrition and health, 2.Food safety, 3.Equal opportunities, 4.Health & Safety and 5.Ethical trading)

c. Economic aspect (1.Science-based innovation, 2.Workforce skills and 3.Tackling retail crime)

To maintain the efficiency and effectiveness of the Food Industry either in UK or Thailand or in any countries; analysis, action and control measures as well as the corrective and preventive actions should be integrated planed, implemented, evaluated and improved continually through out the food supply chain.

2.0 The Needs of the Best Practices for Food Sustainable Industry

Regarding the food that is an essential of human life, the concern related to safety and suitability for consumption is the major immersing critical issues for the social aspect at the international level since outbreaks of foodborne illness can damage trade and tourism, and lead to loss of earnings, unemployment and litigation. Food spoilage is wasteful, costly and can adversely affect trade and consumer confidence. To cope this issue, HACCP (Hazard analysis critical control points) in which was firstly established in the USA 4 decades ago as the preventive mechanism for safety control of foods has been worldwide adopted into the production and services of food industry. The common one for all nations in general format was adopted and revised by the Codex Alimentarius commission of the Joint FAO/WHO Food Standards Program in 1997 and amended thereafter in 1999 and lately in 2003. The quality management system

standard, i.e. ISO 9001 has been implemented to control the food production process purposing to ensure the quality food products. Later on the majority of European, U.S. and other global retailers, and brand owners will only consider business with suppliers who have gained certification to the appropriate retailers' standard such as SQF 2000, BRC, IFS and GFSI.

In order to meet the global needs and expectations described above, most food companies in the earlier days implemented each standard (ISO 9001, GMP/GHP and HACCP, and other standards such as BRC and ISO 22000) separately. Hence, the resource requirement particularly human resource was somewhat very high. Too much documents and records had to be formulated and controlled. To resolve this problem, there have to be an integrated approach that will be imperative for organizations to have flexibility in their systems' design and management in the range of disciplines covering all standards in which they have to implement. Besides, the new integrated approaches have to be flexible and modernized enough for integrating the later implementation of standards and quality tools. The innovative integration approaches to the ISO 9001: 2000, Codex Hygiene (GMP/GHP and HACCP), BRC, and ISO 22000 for food industry by merging of both requirements and processes needed for each standard were initiated and successfully implemented in the companies for food sustainable industry.

3.0 Concept of Innovative Integrated Management System (IIMS)

Innovative Integrated Management System (IIMS) is the modernized and flexible management system that utilizes core business processes, both management and technical, to effectively manage and meet its business objectives. The IIMS describes the way of the organization business management by merging of both requirements and processes needed for all standards and quality tools. This will allow the organization to integrate responsibilities and centralize control the common processes such as management review, document control, record control, training, monitoring & measuring, data analysing, internal audits, and corrective and preventive action. However, the critical or specific processes required by each standard or quality tool are still retained harmoniously with the others. All departments within the organization reside within at less one of these business processes.

Implementing the IIMS is suitable for all organizations seeking to develop and continually improve performance across their business through management systems such as those for quality, environment, health & safety, information security and others. The organization could achieve a reduction in everything from top management time to internal audits to forms used. With IIMS, the organization can also reduce the number of man-days and assessment visits of the Registration/Certification Body. This will save the organization time and money as well as provide the advantages that management systems offer the organization over competitors. The key benefits of implementing IIMS include (1) continuity of working practice (2) reduction of resource requirement (3) reduction of management costs and time (4) unity of on-site processes and (5) customer satisfaction and competitive edge.

The IIMS can be apply directly to all types of food production industry organizations as well as the organizations within the food industry chain ranging from feed producers, primary producers, food manufacturers, transport and storage operators, sub-contractors to retail and food service outlets, together with inter-related organizations such as producers of equipment, packaging materials, cleaning agents, additives and ingredients. It is applicable to all organizations, regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide quality safe products.

4.0 Road Map to Achieving the IIMS and Documentation

In order to establish and implement the IIMS effectively, the 9 steps that had been developed and brought to implementation by the Dr.Prasert Suttiprasit (Director of The Centre for Standards and Quality Development of Production and Services, Sukhothai Thammathirat Open University) for half a decade can be applied as the followings:

Step 1: ***Analysis of Company Status***. Firstly the food company has to evaluate it status, i.e. it strengths-weaknesses-opportunities-treats, in order to determine the company vision/mission and strategy in the next step.

Step 2: ***Defining the Company Vision/Mission and Strategy.*** Up on the completion of the food company status analysis, the consensus vision/mission and strategy have to be formulated correctly.

Step 3: ***Identifying Company Processes.*** All food company processes must be identified and verified. The interaction among processes has to be identified. These should be presented in form of flowcharts and their associated standard operating procedures (SOP's) that corresponds to the requirements of ISO 9001 : 2000, GMP & HACCP and should be linked to the company vision/mission and strategy.

Step 4: Simplifying. The rapid rise of process reengineering has tended to merge two very different process management activities. The first is process simplification: the relentless effort to identify and eliminate non-value adding activities in a process. The second, very different reengineering activity is process redesign as described in Step 9.

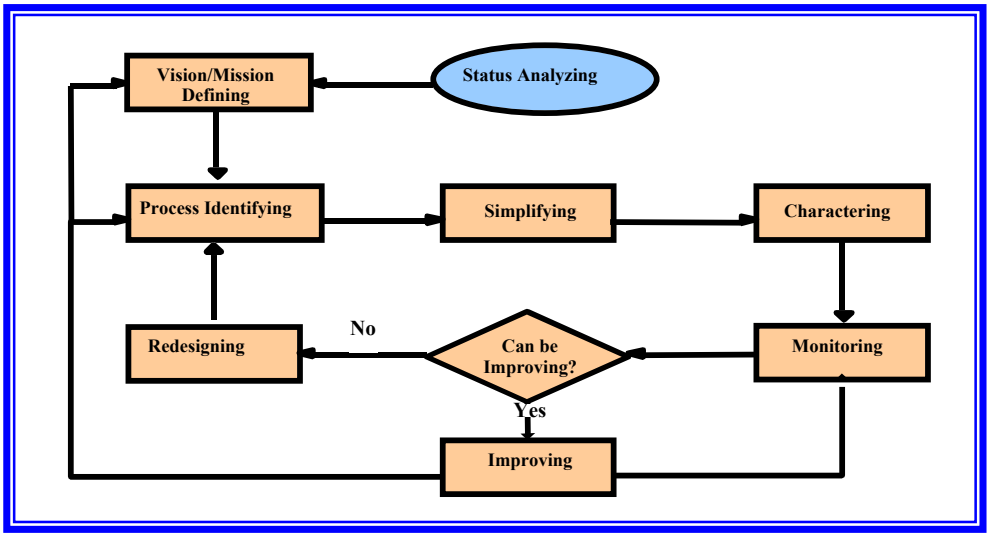

Fig 1 Steps of Implementing cPM

Step 5: ***Characterizing.*** This step refers to process performance measurement or metrics. A process can be characterized by an appropriate set of results called "Key Performance Indicators, KPIs." KPIs reflect the output of the process in terms related to its customer's explicit requirements. They often are the critical factors in determining process efficiency. Usually, the process mapping has to be carried out in order to make the completion in this step.

Step 6: ***Monitoring.*** The monitoring step assures that the metrics associated with the process have been established and maintained. Hence, the fraction of output that fails to meet customer requirements can be controlled. Besides, continual improvement can be processed.

Step 7: ***Determining for Improvement.*** At the appropriate period of time, top management or the responsible person has to determine whether the process is needed to be re-designed in order to achieve or maintain competitive leadership. Process redesign is very expensive in both fiscal and human capital terms. It is known that defects are highly contagious but a newly redesigned process often generates the same defects as the old one. Thus, top or process management of the food company must ebb and flow between redesign and incremental improvement.

Step 8: ***Improving (PDCA).*** Incremental improvement is the essence of evolution and an ever-present human activity, ongoing since the very dawn of humankind three million years ago. To date the classic P-D-C-A principle still be active and good for all Integrated Quality + Hygiene + Food Safety Processes.

Step 9: ***Re-designing.*** If incremental improvement yields diminishing absolute returns, re-designing has to be the choice.

During the Identifying Company Processes (Step 3), all requirements of each standard were critically interpreted and compared to each others in details resulting into the Application Matrix. This means that all standards are integrated into single system by merging of both requirements and processes. It is the bottom line that the company should minimize the amount of documentations; having only the integrated documentation system complying with the process approach model. The list of the topic presented in the Company's Integrated Quality and Hygiene Manual are as the followings:

1. Introduction
   - 1.1 Company Profile and Development of Integrated Quality & Hygiene System
   - 1.2 Policy and Objectives
   - 1.3 Control and Review of Manual
2. Organization Management System
   - 2.1 Organization Structure, Responsibility and Authority
   - 2.2 Management and Customer Focus
   - 2.3 Management Representative and Related Working Committees
   - 2.4 Control of Organization Management System and Management Review
3. Application of ISO 9001: 2000, ISO 22000: 2005, Global Standards BRC – Food (2005) and International Standards of CAC/RCP 1-1969, Rev 4-2003
   - 3.1 Definition
   - 3.2 Requirement Interaction (1) ISO 9001: 2000 (2) ISO 22000: 2005, (3) BRC – Food and (4) CAC/RCP 1-1969, Rev 4-2003 with Production Process
4. Integrated Production System and Floor Plan Diagram
5. Resource Management and Environmental Standard
6. Production System Hygiene and Prerequisite Programs
7. Hazard Analysis and Critical Control Points
8. Action Systems of Control-Correction-Measurement/Analysis and Preventive Action

Annex: Procedures

Key to success is having clear, simple targets that provide measurable outcomes and milestones along the way. Knowledge management are a central issue of the innovative integration management system that will require continuous rebuilding, updating and innovation within the different areas of the management system. Without having personally and collectively integrated the related values, the desired behaviour will not last; it will only occur incidentally and will not be manifested for long. Culture is seen as an important enabler for improvements of performance. The biggest common success factor was figured to be the degree of involvement of top management. Those companies that had a fully committed and informed top management team were able to quickly implement the innovated system and realized the greatest savings in time and money, as well as in continual process improvements.

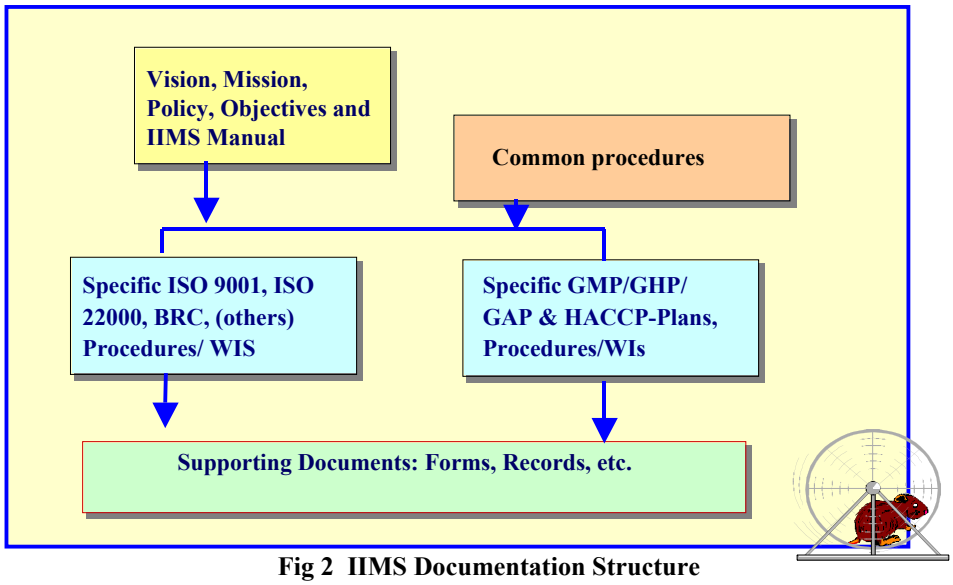

Fig 2 IIMS Documentation Structure

It was also indicated that savings in the implementation time are due to the centralized approach to innovated system implementation, i.e. primarily: sharing of implementation lessons learned, application of best management practices customized to suit their culture, application of appropriated best practices, and, development of a complete series of templates shared across all organizations.

5.0 Concluding Remarks

It is one of the major responsibilities of universities to involve in the process of level up the society and the country. One dominant achievement of The Centre for Standards and Quality Development of Production and Services at Sukhothai Thammathirat Open University is the challenges and opportunities for creating and implementing the Innovative Integrated Management System (IIMS) into Sustainable Food Industry Purposing to level up the country's competitiveness.

Due to the fact that Quality and Safety are the extremely critical issues for the Food Sustainable Industry that affect it role in the society aspect. Any activity that creates value for a food company and its customers, be it a product or service, is linked within the company as part of interacting sets of processes. There are interacting processes at many levels throughout the food company, from the large scale manufacturing of products to the mid-scale and to the small scale manufacturing of products' minor parts. It is the linkage of these processes that directly impact the operating costs and ultimately,

quality & safety of the food products reflecting customer satisfaction. Good organizational process model for the food industry is extremely organized in cohesion development of goals from the workers to the top manager with the scope of ISO 9001 : 2000 + ISO 22000 : 2005 + GMP + HACCP + BRC + other standards. On the other hand, lack of appropriate system of processes could increase cycle time, make products more expensive, create defects related to food quality & safety and ultimately reduce value to customers and the society.

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The Challenge of Research Universities: A SWOT Analysis

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Abstract

Recently four universities in Malaysia were accorded the status of research universities .Universiti Kebangsaan Malaysia is one such university. The Malaysian government and the Ministry of Higher Education have strong convictions that through research the universities can achieve world class status. The challenge for research universities necessitates change and adaptation to the new demand .In order to move forward effectively to respond to such demand the universities need to reflect upon their present status and evaluate themselves both intrinsically and extrinsically. One mechanism that is popularly used in the psychology of change is the SWOT analysis. This precedes the development of a more strategic model to pave the way forward. The SWOT analysis focuses upon four environmental factors namely (a Strengths (b) Weaknesses (c) Opportunities and (d) Threats.. Using the SWOT analysis model the status of the research universities can be analyzed evaluated and comprehended.

A SWOT profile was develop that help depicts the strengths, weaknesses, threats and opportunities facing the research universities. The SWOT Profile was determined following data collected from the academia. Strength factors derived included the research funds pumped into the research universities and the qualifications of seasoned researchers; the opportunities for networking and professional development. Threat factors include competition from other research universities, distractions and workloads and work priorities. Weaknesses that exist include governance of research activitiers, financial management, group formation and multidisciplinarity and time management .The opportunity factor can be seen in the number of research innovation and rewards for the researcher and contribution to society. The writer forwards recommendations based upon the SWOT analysis.

Introduction

Malaysia Vision 2020 stresses the establishment of a scientific and progressive society that is both forward looking and innovative. The National Vision Policy also stresses the need to develop a knowledge based economy whereby research and development is considered of paramount importance. Recently the government of Malaysia has designated four Malaysian universities the status of research intensive university. Traditionally Malaysian universities have been involved in the traditional roles of teaching, research and publications consultancies and community services .However by bestowing four Universities the status of research universities the government has high expectations that these universities excel in research activities and invent knowledge through research and publications. The four research universities selected are University of Malaya, Universiti Kebangsaan Malaysia , Universiti Sains Malaysia and Universiti Putra Malaysia. These universities are considered to be premier universities being established long time ago and supposedly to be more accomplished.

Research universities are expected to show quantum leap in research undertakings and to be the models of Malaysian universities in research. The challenges for research universities are to respond to new developments and improve their research capacity and competitiveness. By bestowing the status of research universities several perceptions and beliefs occurred. The research university status suggests the existence of academic elite coming from the research universities mentioned .Secondly it suggests that these universities are definitely more ahead and more powerful since they are privileged to the special research grants accorded to them. as compared to those universities which are 'normal" and do not have access to this special research grants and operating research funds. These universities are also identified as proper candidates for university rankings standing ahead of the other universities in Malaysia. Thus they have the competitive edge and advantage

Universiti Kebangsaan Malaysia has been vigorously developing monitoring measures to sustain the research intensive university status. The university has established eight criteria to be fulfilled in order to be a research university. They include

- Publications : an average of two journals per year per lecturer
- Research Grant ;an average of RM50 000 per year per lecturer
- Post Doctoral: 10 posts appointed per year
- Percentage of lecturers having PHD reaches 60%
- Ratio of first degree to post graduate students reaches 40% :60%
- Percentage of international postgraduate students to be increased
- Changes in management to enhance the research university
- University-industry partnership to be enhanced

The SWOT Analysis

In order to excel and achieve the research university goals there is the urgent need to reflect and reexamine the roles of the present research universities. For this purpose the SWOT Analysis is selected. The SWOT Analysis refers to a classic strategic planning tool which focuses upon the internal strengths and weaknesses of an organization as well as to the external opportunities and threats. The SWOT is a reflective tool that can help planners be realistic about their goals and what to focus on .A SWOT framework is usually referred to as a two by two matrix reflecting the

four quadrants Strengths, Weaknesses Opportunities and threats. This paper reports on the results of the SWOT analysis done by the author in the context of Universiti Kebangsaan Malaysia. The findings may be similar to the situations in the other three research universities or may differ to a certain extent. The SWOT is said to be able to help make better decisions and to facilitate changes. The SWOT tool was distributed to a mix of seven junior lecturers and professors who are involved in planning and conducting research in UKM. Thee paper is also based on additional data conducted through telephone interviews to several academic staff. The results of the SWOT Analysis are in no way exhaustive but include among others the following findings

Strengths

UKM has been acclaimed as a very strong research university under the guidance and leadership of the respective Vice Chancellors till the present. The university's policies on research has been tabulated and succinctly written to enhance understanding of the academic staff of UKM. . Several terms have been given to UKM to signify its achievements such as UKM *Universiti Penyelidikan*, (UKM as a Research University; UKM *Universiti Kebangsaan di Persada Antarabangsa* (UKM as an international University) which denotes that indeed UKM prioritizes research and internationalization. .The Times Higher Education Supplement (THES) in 2005 has ranked UKM at number 91 among the world top 2100 universities in science.

UKM Strategic Plan 2000-2020 is the catalyst that spearheads the way forward to excellence in all pertinent areas. For the past 35 years UKM has been the pioneers in several areas such as Antarctic Studies, biotechnology, Science and Technology Energy Micro-electronic and its researchers have participated and achieved success in several expositions locally and in competitions abroad such as in Geneva and Korea. The researchers in UKM are seasoned researchers having long term experiences which have been involved as consultants for government agencies and outside bodies. The research grants obtained from research grants such as (IRPA) (FRGS) (ESCIENCE) (GUP) and other grants from outside the university remains very commendably high.

The strength of UKM in research undertakings is irrefutable because of the number of Professors who are (Lead Scholars) to guide the young lecturers to conduct research. Thus the system has embedded within it a support group to propel it forward to enhance the status of Research University. To reiterate a university's strengths is its resources and capabilities that can used as a basis for developing a competitive advantage

Equally important to mention is the existence of several centers and institutes of Excellence such as a) Institute of the Malay World (ATMA) b) Institute for Environment and Development (LESTARI) c) Institute for Malaysian and International Studies(IKMAS)d) Centre for Gene Analysis and Technology (CGAT) e) Institute of Microelectronic and Nanotechnology (IMEN) e) Institute Mikromolukel for Health (UMBI) Institute Kajian Occidental(IKON) f) *Institut Penyelidikan Tenaga Suria* (SERI) g)*Institut Biologi Sistem* (INBIOSIS) h) Marine Studies .These Centers of Excellences are the pride of UKM. These Centers of Excellence can be said to be exemplars initiating and conducting research in certain thrust areas

The Centre for Research and Innovation has been especially set up to coordinate research activities in UKM and to plan further progress. UKM has taken several measures to fulfill its role as research intensive university .Described as a systematic and holistic approach UKM propagates and reinforces several strategies related to the upholding of a research intensive university. To enhance the research culture the academic staff at UKM are motivated to be good researchers through the promotion of research skills, ensuring accessibility to research grants and support from the university through the sabbatical leave .At the micro faculty level enthusiasm and responses to the workshop doing research proposals are tremendously enlightening A rewarding research culture is demonstrated through yearly research exhibitions at the faculty , university and international levels.. The concept of research leadership through informal leaders such as lead scholars seeks to enhance the motivation of doing research.

The strengths of UKM as a research intensive university can be seen in the reward structure such as in promotions to associate and full professors whereby performance in research publications and graduate supervision are given greater weightage. With regards to management the researcher can easily access the web based financial system to determine the usage of the research funds. UKM also has a Process structure which monitors the research processes such as dissemination of information on available grants, evaluation of research proposals and monitoring of research progress and technology transfers. The *University Research Management System* or U3P helps keep basic information on every research project approved and registered formally. Strengthening all these is the organizational structure involving the Research Advisory Board, *the Research Development Planning Committee,* and several other committees

Weaknesses

Recognizing the strengths alone would not sustain the research intensive university. For indeed every positive will also have the negative aspect. For every endeavor there has to be the human aspects attached to it. To be identified and respected as a research university UKM has to examine its internal weaknesses. The SWOT analysis reflects several factors that may be considered as restraining factors (depending on how one interprets them)

One is the need to upgrade the supportive research infrastructure such as adequate and quality research laboratories, efficient research assistants and the existence of a reliable and dependable server. With the numerous offerings of research grants given recently the question about supportive infrastructure arises. Research assistants alone are not adequate but the more important question is a very competent research assistant who can help manage the research processes. We can also find academic staff without the necessary prerequisites with academic workload tensions.

Secondly the urgent need to realize the development of a cohesive multidisciplinary research teams which although has been encouraged but still has not materialize fully to achieve its targeted goal. Research groups a the faculty level need to extend and outreach its arms to members of the academia outside the faculties and the universities thus crossing over Faculty boundaries across to other universities in Malaysia and crossing over other countries and continents. Although internationalization efforts has been the strength of UKM there seem to be further concrete efforts to develop inter-continent research projects in the wake of globalization.

Thirdly the flurry of research activities often put the ordinary researcher at a crossroads. The numerous distracters that pull and push the academia are too well known.

Which increases the stress level of the latter? The academia is faced with which priorities to address trying to manipulate and juggle with the ever increasing work demands and work loads. The research university encourages navigating from its traditional role of a balanced of teaching, researching, publishing and consultancy and community services to a more solid focus on research. Thus the researcher has either to downplay teaching to do research or to succumb to be left behind in the research grant race. To reecho this finding is to say that researchers need the comfortable pace and quality time accorded to research otherwise it will helter skater or hurry scurry. The system then will need to ensure that a harmonious homeostasis exists between traditional demands of teaching and the more glamorous demands of research. Thus management of time then is the inherent weakness of the system.

Despite many accomplishments in UKM (especially in the numerous research grants granted) there is still urgency to ensure that each academic member produces on the average two journals per year per lecturer. The recent evaluation on the research activities in UKM demonstrated that the lecturers seem to favor doing proceedings to the referred international journals. This is quite understandable looking at the tardiness in getting articles published in the Scopus list. Perhaps this pertinent and dominant weakness reflects the weak research writing culture existing in the university and the need to write journal articles in the National language instead English.

A very demanding urgency is to maintain a cutting edge curriculum and maintaining a stimulating research environment. Universities can lack behind in integrating research into teaching or using teaching to explore research. The integration between research and teaching should be receiving considerable attention as researchers are more often than not attracted to national issues and aspirations at the macro level and thus not giving the attention to research in their own disciplines.

Opportunities

The new millennium and globalization put forth many opportunities to scholars and researchers around the world. Being borderless each researcher in the university can enhance its outreach to fellow researchers in notable universities .To be a global research player is the demand of the new era. The opportunity is provided in the internationalization plans of UKM whereby *the dana operasi* or the operational funds enable each researcher in his or her research group to initiate cross border research. . For example for my area in Early Childhood Education there are other professors in Early Childhood Education in the University of Melbourne or the Columbia University. The opportunities to develop borderless friendship and to explore cross cultural research themes and projects are numerous only subject to the limitations of the imaginations. There are also opportunities to work closely with NGO's and NFO's and GLCs and to foster friendship and complementary relationships that enhance the progress of the community .This is especially so since the discovery of new knowledge from the university can enhance the economy and national developments. University researchers need to explore the endless frontier and to concretize linkages between the government universities and industries

Threats

Threats can be interpreted to be internally derived or externally derived. The race for university ranking can accentuate vigorous competition and threatens the stability of the workplace. Which university in Malaysia will occupy the uppermost rank that is called the apex position? While some may regard the proposition to create the apex position as ridiculous there are others who abide by its philosophy excellence above excellence. The research university achievement in research and other related activities can be the number one priority in these universities. With it comes the excess baggage of working beyond to fulfill the demands of needed outputs measured in terms of the number of academic articles to be published for high impact journals such as the list from Scopus. Threats derived from the government quality assurance goals and responsibility to students may be a very conflicting. Alongside the currents which push academia to do the research and to add on to the numerous research projects is the need to be highly accountable to students who claim that the core business of the universities are just to produce graduates. From now the career profiles of academicians may be changing to the direction of the expert researcher and less of the subject specialists. . The increase in demand for off shore academic programs which accumulates every semester also necessitates the academia to be masters at constructing time and energy to avoid what Covey addresses as "always putting the fire" or catching deadlines.

The Way Forward

Having looked into the SWOT findings we can suggest several recommendations to assuage the constraints and weaknesses of the research culture as well as enhance the opportunities and strengths. This paper is by no means exhaustive and may have neglected certain components that need to be addressed. It is imperative for the academia to address the following pertinent issues

a) How does one achieve homeostasis in balancing research endeavors and teaching responsibility? How does one strategies to work at a reasonably comfortable level the time between listening to your students and the time to furiously delve in your research undertakings. This is a critical moment to ask philosophically the meaning and glory of doing research or teaching or the integration between research and teaching.

b) If billions of funds has been pumped into the research universities how does one sincerely measure whether one as a researcher has contributed concretely to the society as well as to the new knowledge engineered. This would call for a very succinct measurement system and societal judgment on whether a cost effective and a cost benefit scenario has been demonstrated. I recall a community leader stating that prizes of awards alone do not mean the community has benefit from the research.

c) Developing a cohesive and multidisciplinary membership in the research teams would necessitate a reexamination of several focus research areas or thrusts. There would need to be consensus on the common good as opposed to personal specific and narrowed to ones disciplined research topic. In conjunction with this is the importance of determining the appropriate research thrusts. Universities need to be aware that thrusts should be of societal relevance, and should embrace the postgraduate training for research. Research thrusts should not become areas of conflict or disagreement but should enhance the reputation and prestige of the university locally and internationally.

d) In terms of research leadership there need to be followers and leaders intertwined. based upon positive interaction .It is futile to appoint a Lead Scholar if the perception is negative towards the lead scholar or if the lead scholar does not fulfill the needs of the members of the team

e) Looking at the macro level Malaysia has yet to develop an excellent research clearinghouse and a strong data base to coordinate all research efforts and results. This is to ensure that research conducted is not done in duplications and in a piecemeal fashion. Segregation in research at universities would not establish substantial long term effects.

f) There is need to upgrade efforts at technology transfer and patents. Examination of the financial and management constraints at patent development can be a strategy forward The demand for new technologies and new products should be balanced with outputs

g) Complementing its internationalization efforts UKM should have a steady increase of post doctoral students from other countries. Every faculty needs to develop international networking enticing more international professors to become fellows. It is also necessary to develop and implement student exchange programs. For this to occur there is need to solve the issue of credit transfers amicably and flexibly. Rigidity or lack of flexibility does not support the research culture.

h) Incentives and rewards are opportunities that can be further developed and sustained. Many researchers who are also teachers at the university suggested greater research time given such as exemption from teaching for one semester as well as enhanced facilities. The opportunity to conduct internships with industry or other partners can be further explored.

The writer acknowledges input from important documents in UKM as well as the help given by fellow colleagues.

Media and Risk Perception amongst Thai People during the Coup Period

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Abstract

Risk perception is a cultural construction of reality. However, one of the most important determinants of risk perception is knowledge about a particular risk issue. According to "agenda setting" theory, the media place certain issues or problems foremost in the public mind simply by making them salient in news broadcasts or publications. A qualitative research conducted in 2006 revealed that in the midst of the Thaksin's modernity period, the Thai people were still at risk with various social problems such as risks of food, health, economy, employment, drugs, and technology (Anantho, 2007). This follow up research was conducted after the military staged a bloodless coup in September 2006. The objectives of the research were to examine 1) risk perception amongst Thai people living in Bangkok and its vicinity during the coup period; 2) their media exposure to risk information; and 3) factors affecting their perception of risk in the areas of food, environment, health, and crime.

The survey research was conducted during the final period of the interim government under the military coup. The sample comprised 766 Thai people aged 15 and above living in Bangkok and the vicinity. The data were collected using multi-stage sampling technique**.** Descriptive statistics were used to describe the basic features of the data in the study**.** Additionally, a Chi square test was used to determine the relationship between two or more variables.

The research results found that Thai people perceived risk mostly through mass media. Television and newspapers were their major sources for information pertaining to the risk issues. According to the levels of perceived risk, the research showed that most Thai people felt "somewhat" worried about risk relating to food and environment, and were "very worried" about health and crime risk. Using Chi- square test, the research results suggested a significant association between demographic factors and the number of hours people were exposed to the mass media on a daily basis, and risk perception.

Although the mainstream media in Thailand have always been criticized for too much covering on crime, violence and sexual issues, this research revealed that the mass media were still the important sources of risk information amongst Thai people in many areas during the coup period. News from different sources, however, tended to have an effect on public perception on risk with different degrees. Therefore, deliberate media campaigns should be considered by policy makers as effective tools to communicate and educate people about societal risk.

Keywords: Media, Risk Perception, Thailand.

Introduction

Risk perception is a cultural construction of reality. However, one of the most important determinants of risk perception is knowledge about an issue pertaining to risk. During the administration of Prime Minister Thaksin Shinawatra, a number of Thai people enjoyed modernization along with his populist policy changes in the fields of economics, public health, education, anti-drug, and social welfare. The research on "The Perception of Risk Society in Thailand" conducted in 2006 revealed that, in the midst of the Thaksin's modernity period, the Thai people were still at risk with various social problems such as risks of food, health, economy, employment, drugs, and technology (Anantho, 2007). However, the military staged a bloodless coup on September 19, 2006 accusing Thaksin's government of corruption, creating conflicts of interest, and violation of human rights etc. This research was therefore conducted during the coup period to examine 1) risk perception amongst Thai people living in Bangkok and its vicinity during the coup period; 2) their media exposure to risk information; and 3) factors affecting their perception of risk in the areas of food, environment, health, and crime.

Theoretical Background

Risk Perception

Risk perception is the subjective judgment that people make about the characteristics and severity of a risk. Perception of risk is a dynamic process, acting at several different levels within an individual's life, and that events external to an individual may manipulate the perception of risk in a variety of complex ways, and even contradictory ways. Several theories have been proposed to explain why different people make different estimates of the magnitude of risks. Two major theories have been developed by social scientists: the Psychometric Paradigm and the Cultural Theory. The psychometric approach to risk perception research is an individual-based approach. It is a research paradigm that elicits judgements about risks from individuals who are confronted by risk stimuli (Jackson, Allum & Gaskell, 2006). According to Tversky and Kahneman (1974), there are three heuristics that are employed in making judgements under uncertainty: representativeness, availability heuristic, and anchoring heuristic. The psychometric approach relies on two basic principles (Slovic, 1992), namely: (i) perceived risk is quantifiable and predictable; (ii) "risk" means different things to different people. However, there is a criticism that psychometric studies do not have a strong theoretical base, and in this respect some researchers have turned to cultural theory as offering an alternative approach to risk perception research. Cultural Theory refers to the risk perception that focuses on culture, rather than individual psychology, as an explanation for differences in risk judgments. Cultural Theory arose out of the work of Mary Douglas (1982), an anthropologist studying traditional African religion. She observed that different societies feared different sorts of threats, and that these differences correlated with differences in their social structure. She proposed a functionalist explanation: social structures (which she called "ways of life") generate attitudes towards the world (which she called "cultural biases") that serve to uphold the social structure.

Media Influence on Risk Perception

Public perception is an important consideration when communicating about risks. However, none of the available risk perception models make any specific predictions about media influences. (Wåhlberg and Sjöberg, 2000). According to "agenda setting" theory, the media place certain issues or problems foremost in the public mind simply by making them salient in news broadcasts or publications. Therefore a person may not perceive some problem as more important to him or her personally just because he or she has seen news concerning it, but that person will be very likely to think that it is an important issue to other people and, thus important social problem (McLeod, Becker, and Byrnes, 1974; Becker, McCombs, and McLeod, 1975).

Although several channels of information may shape risk perception amongst people, the mass media play a significant role through their accessibility, immediacy, and penetration at various scales of geography in people experience to hazard events. In other words, the media are performing an agenda-setting function by reporting on certain hazard events. Researchers have also shown that the mass media report on only a small number of hazard events because of their constraints of time, space, money, and the perceptions by editors of readers' interests. In other words, only a select number of hazard events are highlighted in the mass media. People, on the other hand, do not have direct experience with most hazard events.

Gerbner and associates proposed their "Cultivation Theory" which stated that people would grow more fearful (experience more subjective risk) with a heightened amount of television viewing, as they would see the world more as it was on the screen than it was in reality (Gerbner and Gross, 1974; 1976). However, Doob and Macdonald (1979) later found that there was no relationship between television viewing and fearfulness. People were fearful because they lived in the areas with high crime rates.

Media coverage can influence the public's perception in some different manners. Risk amplification occurs when media sensationalism causes hazard perception and public concern to be magnified far beyond levels proportional to the risks estimated in risk assessment science. Such agenda-setting can create political activism or disruption more costly than the original hazard. Sometimes the media act, instead, to attenuate perception of a significant hazard and thereby blunt concern and political pressure to do something about it. Therefore, the media usually play an important role to inform the public not only by providing information about political, economic, and current social issues, but also by bringing issues to the attention of the public, even creating a sense of urgency around them.

Research Methods

The survey research was conducted during the coup period between March and May 2007. The sample comprised 766 Thai people aged 15 and above who lived in Bangkok and its vicinity. Using multi-stage sampling technique, the data were collected through questionnaires**.** The questions included items of socio-demographics, media exposure, and respondents' risk perception relating to food, environment, health, and crime. Descriptive statistics were used to describe the basic features of the data in the study**.** Additionally, Chi square test was used to explain the relationship between two variables.

Research Results

The research results are summarized as follows:

1. Respondent Demographics.

The majority of respondents were female (60.57%) age15-25 years old (36.42%). Most of them worked as employees (34.73%) followed by students (28.07%). Concerning the educational level, the majority of respondents held bachelor's degrees (35.90%), followed by high school certificates (31.46%). Furthermore, most of them lived in the inner cities/urban areas (80.68%).

2. Respondent Media Exposure.

Respondents were asked how much they were exposed to news and information from various sources of media as well as what types of news and information pertaining to risk issues they were exposed to. The results found that most respondents did not read newspapers on a daily basis (56%) while 22.48 percent read one newspaper everyday. Concerning electronic media, the majority of respondents listened to news and information from radio one hour a day or less (45.81%) while the majority of television viewers watched news and information two hours a day or less (30.67%). The new medium, the Internet, was also a major source of news and information for Thai people during the coup period. Most respondents used the Internet one hour a day or less (50.48%). while 18.76 percent did not used the Internet as the source of news and information at all.

A Chi-square test was used to examine the relationship between demographic factors and respondent media exposure ($P < 0.05$). The results found that respondent occupation and living areas had a statistically significant relationship with the number of hours they watched television on a daily basis**,** while gender had a statistically significant relationship with the number of hours they used the Internet on a daily basis**.**

3. Source of Risk Information

The research found that respondents had different sources of information about risk issues. However television was the leading source among others. Most respondents perceived their information pertaining to food risk from television (88.29%), followed by newspaper (69.62%) and their family members (46.95%) respectively. For environmental issues, most respondents received risk information from television (89.62%), followed by newspaper (68.19%) and radio (38.86%) respectively. Likewise, the majority received health risk information from television (86.57%), followed by newspaper (67.24%) and radio (38.10%) respectively. Concerning local crime, the research found that television was the leading source for news and information (76.29%), followed by newspaper (66.57%) family members (49.05%) and friends (46.48%) respectively. For general crime, most respondents received their risk information from television (89.81%), followed by newspaper (80.76%) and radio (40.48%) respectively.

4. Risk Perception.

The respondents were asked to indicate how much they were worried/concerned about various types of risks (food, environment, health and crime). The results showed that most respondents felt "somewhat" worried about food and environmental risks. However they were "very worried" about risk from health and illness, and crime.

The Chi-square test was used to examine relationship between demographic factors and respondent's perception of risk ($P < 0.05$). The results found a statistically significant relationship between educational level and perception of food risk, while gender and occupation had a statistically significant relationship with the perception of health risk. However occupation and educational level also had a statistically significant relationship with crime risk perception.

Discussion and Conclusion

It is often that the mass media are deemed the power brokers in their ability to potentially influence an audience. The agenda-setting theoretical framework operates from the perspective of the mass media having the power to transfer the salience of an issue to the public. However, different media have different impact on people's perception. The results of this research showed that television was the major source of news and information for Thai people living in Bangkok and the vicinity during the recent coup period. Even though the Internet was an increasingly important source of news for Thai people, television was still their primary source of risk information, followed by the newspaper.

The same results were reported in the author's qualitative research on "The Perception of Risk Society in Thailand." It was found that participants received information about risks from the mass media, especially through television and popular newspapers. While interpersonal communication also contributed to the perception of risks in some issues (Anantho, 2007). This research suggested that most respondents received their information pertaining to general crime risk from television. However their family members and friends were increasingly their important source for local crime news. Therefore the research was seemingly congruent with Tyler (1984) who draws the conclusion that fear of crime is not generated by the media, but by personal experiences and those of friends.

In the qualitative research mentioned above, cultural theory also played an important role in explaining risk perception. Gender differences in risk perception are derived from differences in cultural worldviews. For example, women worried much more about risks affecting their family such as food, drugs, economy, and technology. Additionally, risk perception of elderly people was different from their younger counterparts (Anantho, 2007). Likewise, this research found a statistically significant relationship between some demographic factors and the perception of risk. For example, people's educational level affected their risk perception linked to food and crime; occupation affected their perception of health and crime risk; and gender affected their perception of health risk.

This research revealed that the mass media were crucial sources of risk information amongst Thai people during the coup period. Demographics, however, contributed to respondents' media exposure to risk information and their perception of risk. Therefore, deliberate media campaigns should be considered by policy makers as effective tools to communicate and educate different groups of people about societal risk. The research suggested the future research should focus on an in-depth study on the effect of media on risk perception on a specific risk issue.

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The Mobile Teaching and Learning Technology for the Undergraduate Students

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Abstract

In the mobile revolution, people are increasingly connected and are digitally communicating with each other in ways that would have been impossible to imagine only a few years ago. As mobile connectedness continues to sweep across the landscape, the value of deploying mobile technologies in the service of teaching and learning seems to be both self-evident and unavoidable. Taking this into consideration, a group of researchers from the Faculty of Education, Universiti Kebangsaan Malaysia is offering its first year undergraduate students from all programmes (Science and Mathematics Education, Special Education, Teaching English as a Second Language (TESL), Islamic Education and Quranic Education) an exploration of this new field of mobile learning (m-Learning) by participating in series of m-Learning activities. This paper reports the study on the students' acceptance of the m-Learning approach in the teaching and learning process. A total of 200 students from the undergraduate programmes (20 students from each programme) responded to a self-report questionnaire on the usage and practice of mobile phones and the acceptance of mobile phones for teaching and learning after participating in series of m-Learning activities. From the data analysis, the study reported that the students agreed that mobile phones can be used for teaching and learning. The study also revealed that with this first year students' age group, SMS is the most popular method of communication and mobile phones are mainly used for talking, messaging, photographing and game playing. Furthermore, the m-Learning activities are great ways to motivate students and foster interaction among them.

Keywords: Mobile learning (M-learning), Acceptance, Short Message Service (SMS)

Introduction

The use of wireless mobile technology such as PDAs, cellular phones, ipods or ultra notebook computers in education and training is making learning more flexible where students can learn from anywhere and at anytime. Mobile learning is defined by various researchers with a focus

on the novelty and development of handheld technologies, such as mobile phones, and wireless technologies, such as laptops, allowing easy access to resources. Laouris and Laouri (2006) describe the move from e-learning to m-learning as a revolution since it implies not only a change in terminology but a change of mindset when designing and planning learning environments and goals. Sharma and Kitchens (2004) assign this unavoidable change in paradigm to the unique facilities provided by mobile technology such as the provision of communication facilities at any time or location and the provision of learning content dynamically dependent on the learner's location, context and device. This necessarily implies a change in classroom culture. It is also clear that the exposure to a greater variety of media is causing a different kind of learner who gathers and processes information differently. Mellow (2005) describes this new generation of learners as the media generation. According to him, educators should explore the possibilities of applying these technologies in educational settings.

This paper reports a study of mobile learning, which was conducted to the first year undergraduate students from all programmes (Science and Mathematics Education, Special Education, Teaching English as a Second Language (TESL), Islamic Education and Quranic Education) in the Faculty of Education, Universiti Kebangsaan Malaysia. The students were exposed to an exploration of this new field of mobile learning (m-Learning) by participating in series of m-Learning activities. The objectives of the study were to investigate the innovative practice and the acceptance of mobile phones in teaching and learning, based on an instructional model that adopts the mobile learning concept to supplement the face-to-face instruction. Two activities were being carried out. A questionnaire was used to collect the data at the end of the activities. Data was analyzed and findings were then reported in this paper.

Literature Review

According to Moseley & Higgins (1999), mobile devices can be more easily integrated across the curriculum than desktops. This is possible since many students already have mobile devices and wireless mobile devices do not need extensive infrastructure as desktop computers. The mobility enabled by these devices can also foster a greater feeling of work ownership by students. Additional research shows gains in students' motivation in their studies. Time needs to be allowed to ensure adequate familiarization with the new mobile devices. Technical staff must be available for helping. The pedagogical approaches and goals must be clear as in traditional teaching (British Educational Communications Technology Agency, 2004).

M-learning has been a subject of interest to researchers for the past one decade, and many research findings indicate that m-learning is an effective tool for strengthening learning strategies as well as m-learning learners can utilize wireless network and mobile learning device to get convenience, expediency and immediacy of mobile learning in appropriate time and accessing appropriate learning content (Su et al. 2004). The last ten years have also seen a revolution in communications and computing technology, with the installation of digital cellular phone net works, and development of mobile computers and digital cameras. These three technologies are now converging, into personal digital assistants that enable learners to access internet resources and run experiments in the field, store and manage everyday events as images and sounds, and communicate and share the material with fellow learners throughout the worlds. According to Sharples et al.(2000), there is a natural alliance between learning as a contextual activity and the new personal technology, so that it is becoming feasible to equip learners with powerful tools to support learning anytime, anywhere. The fact that mobile phone could be used on the move, e.g. in a bus or train anytime, anywhere to

make learning environment lifelong. Prensky in Tsi(2005) indicates that children are growing up with wireless mobile technology with positive outcomes in modern society and some technologically-advanced countries start to conduct wireless mobile technology in their educational institutions.

According to Sharples (2000), formal education cannot provide people with all the knowledge and skills they need to prosper throughout a lifetime. Therefore, people need continually to enhance their abilities, in order to address immediate problems and participate in a process of continuing academic and professional development. Ting (2005), in his research mentions that fundamental belief of mobile learning is not to convert all PC-based learning content into a mobile format, but to consider how the mobile devices can be used to strengthen and harmonize overall learning strategy.

M-learning is contributing in various way including voice communication, e-mail interaction, short message service etc. Voice communication provides negotiation between facilitators and learners for support and cooperative purposes. To access the learning portal in the internet, the learning management system provides appreciatory content to support the continuity of learning activities. The facilitators can send reminders and alerts to their learners through SMS (Short Message Service) as a powerful way and help to keep them on the proper learning way. The SMS can also be sent as a daily message to learners as a daily amount of learning.

Focus of The Study

The focus of this study is to find the acceptance of mobile phones for teaching and learning by the first year undergraduate students. This may link heavily to their daily operational use of mobile phones. In general, there are three dimensions that are critically affecting the success of m-Learning, which are location independence, meaningful content and time independence (Rosenberg 2001). Among the three dimensions, mobile phones have greater advantages in term of "location independence". Mobile phones make it possible to gather and record information nearly everywhere. They have the highest mobility inside or outside classrooms. The coverage of mobile phones allows teachers to engage in activities requiring ubiquitous tools. With respect to the dimension of "time independence", mobile phones can also be used in asynchronous and synchronous learning. SMS and forum messages can be retrieved and sent to support asynchronous learning. Synchronous learning can be facilitated via in-class voting systems and interactive games on mobile phones. They can also be used as real-time assessment tools. The dimension of "meaningful content" is the most critical one. Without quality content, m-Learning will be meaningless. There are many factors adversely affecting the delivery of quality content using mobile phones. Slow processing speed, limited bandwidth, small form-factor, limited memory and one-finger operation are some of them. Through this research, the researcher would like to determine whether features of m-learning can be implemented in the blended learning mode. The results are hoped to provide output for the future planning of the reconstruction of the undergraduate teaching and learning modes.

Since a mobile phone is nothing more than a limited but featured computer, the limitations of these devices must be recognized. Furthermore, the researcher would like to develop what they can do best. In this study, a voting system and an assessment platform (i.e. an examination system) were pursued. These activities cover the major directions in m-Learning. One-off experiment was performed and a questionnaire was used to collect their opinions to minimize the interference to the students. It took place in a classroom environment.

Methodology

In this research, two activities were developed to address different applications of mobile phones for teaching and learning. Simulators developed to execute in real mobile phones were used for this study (Openwave, 2006). There are three reasons for this approach. Firstly, the chosen software has been implemented in a number of real phone models. It behaves like a real phone. Secondly, many students may not have mobile phones with advanced features to support WAP 2.0 (Wapforum, 2006). Some students may still have text based mobile phones! To support the experiment of this research or any m-Learning application in general, a WAP gateway connected to a Web server is needed. Figure 1 outlines the system architecture to support applications over
mobile devices. Apache, PHP and MySQL were chosen as the Web server, server-side programming and database support respectively.

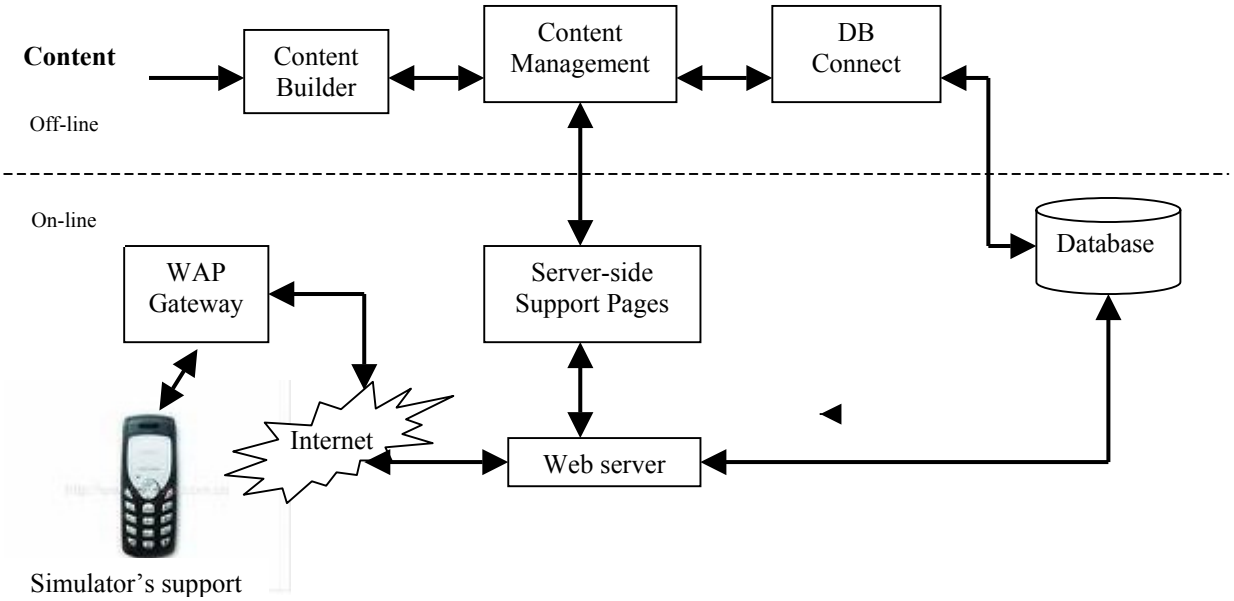


Figure 1 System Architecture to support applications over mobile devices

Among the two applications developed for this experiment, the first application is a voting system. Students can cast their votes and lecturers can interactively check the voting results. Students can use the quick access keys ("1" to "X") on the keypad to cast their votes. This acts as if the voter has a simple voting machine at hand. Lecturers can retrieve the voting results from the database onto their handsets as well. The second application is a system to administer tests or examinations. Students attempt the questions stored in the database. The overall score can be sent to the students at the end of the test. The scores are kept in the database as well.

The second data set was for the questionnaire. The questions were categorized as follows:

- Demography– to establish the background of the students.
- Handset and service information – to find out the types, the mobile service providers, the tariffs, and services (e.g. 2.5G or 3G).
- Phone usage and practice – to survey information such as airtime, SMS, MMS, ring-tone download, Internet and other usages.

- Attitude – to find out how the students feel about the use of mobile phones for teaching and learning.

Data Collection and Analysis

A total of two hundred first year undergraduate students from the Faculty of Education (20 students from each programme: Science and Mathematics Education, Special Education, Teaching English as a Second Language (TESL), Islamic Education and Quranic Education) completed the two activities and the survey. The data obtained from the questionnaire were keyed into the database for analysis.

i. Demography

Figure 1, Figure 2 and Figure 3 provide demographic overview of the respondents with respect to gender, handset brands and types of mobile services.

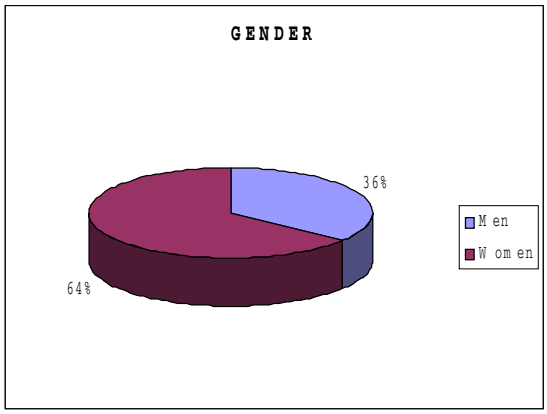


Figure 2 Demographic overview: Gender

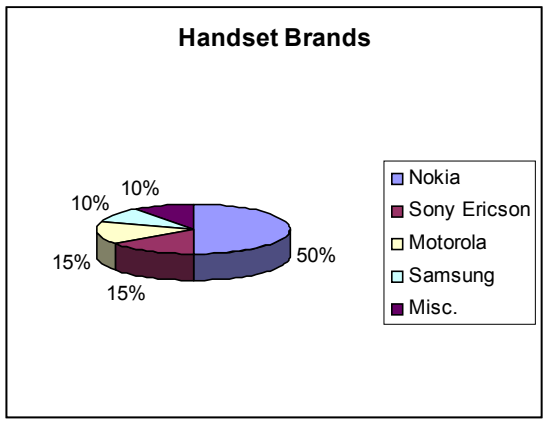


Figure 3 Demographic overview: Handset brands

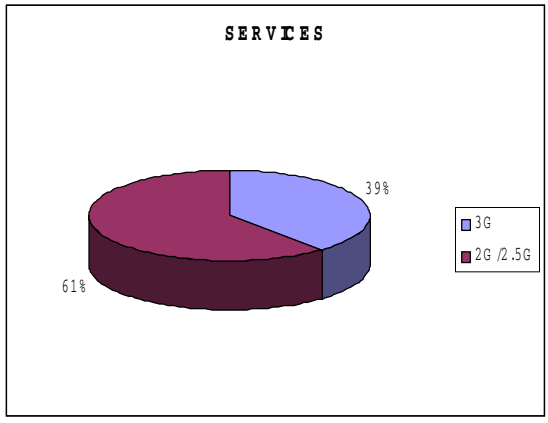


Figure 4 Demographic overview: Services

a. The distribution of male and female respondents reflects the typical composition of any education programme in the higher education institutions in Malaysia.

b. The output reveals that, Nokia is the leader of the market share on handsets with 50% and followed by Sony Ericson and Motorola, both 15%.

c. Only 39% of the respondents use 3G services.

ii. Usage and practice

Figure 5 to Figure 9 reveal how the respondents use mobile phones for different purposes. Most of the recent handsets are equipped with camera, true color display, stereo sound and external memory card. They can be multi-purpose for the respondents as shown in the figures.

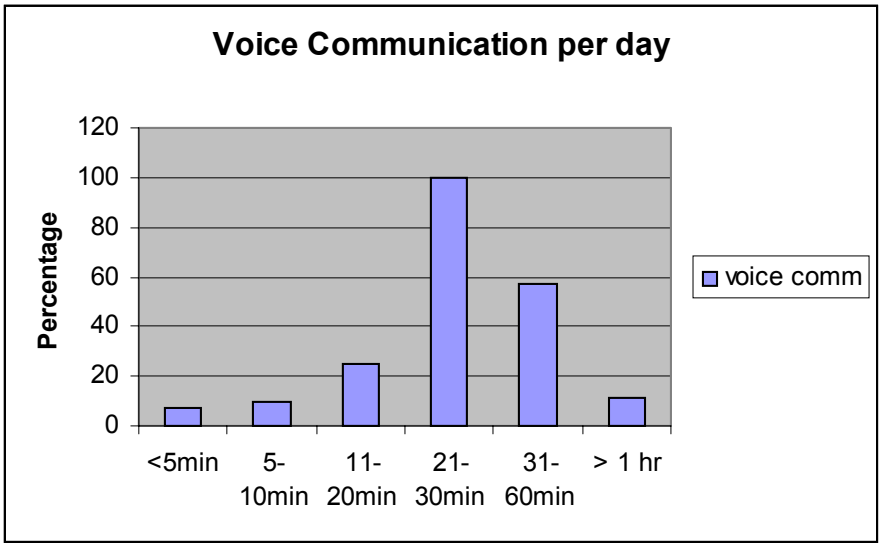


Figure 5 Voice communication per day

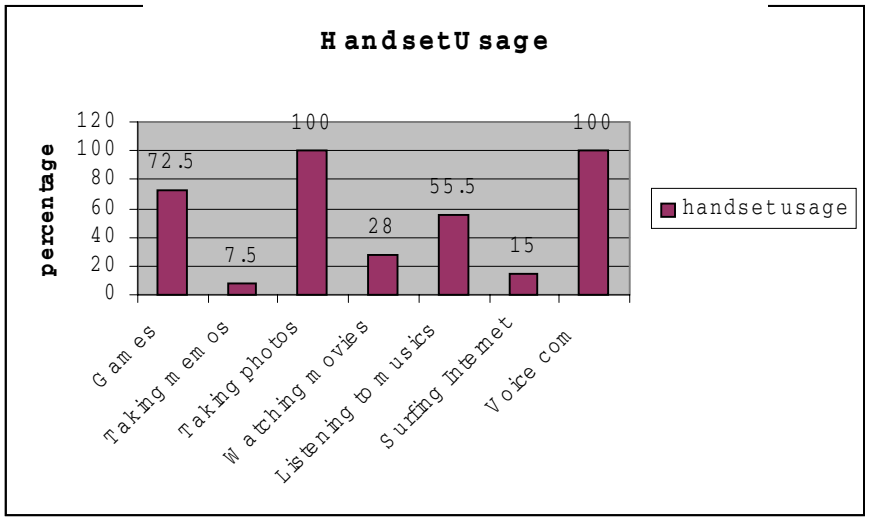


Figure 6 Handset Usage

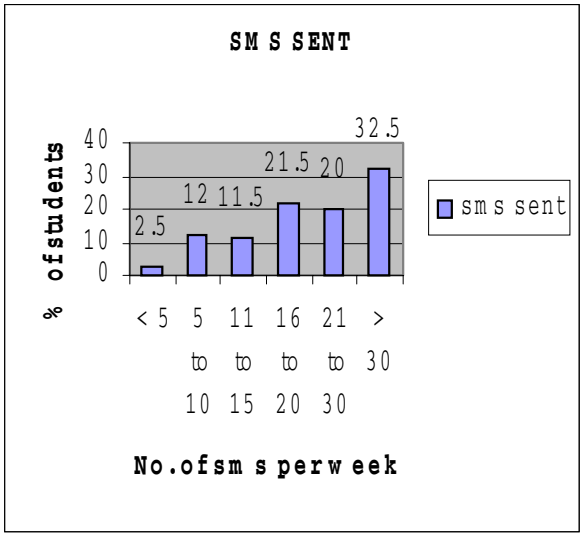
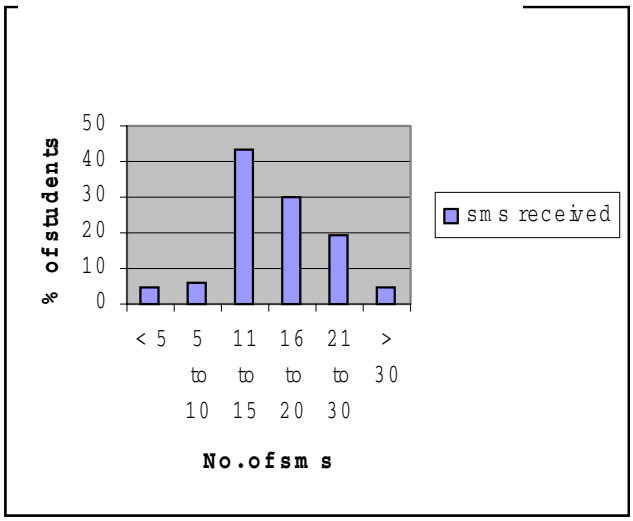


Figure 8 SMS sent



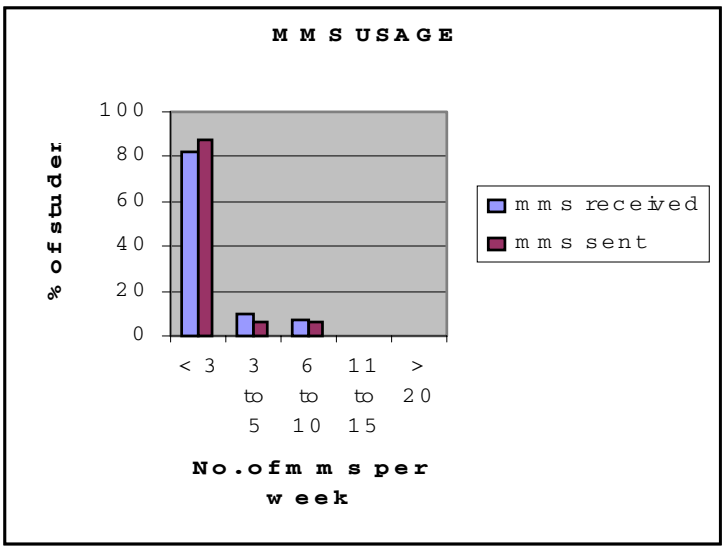


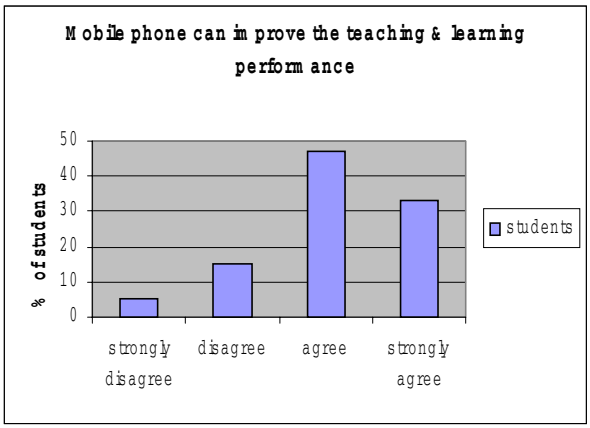
Figure 9 MMS Usage

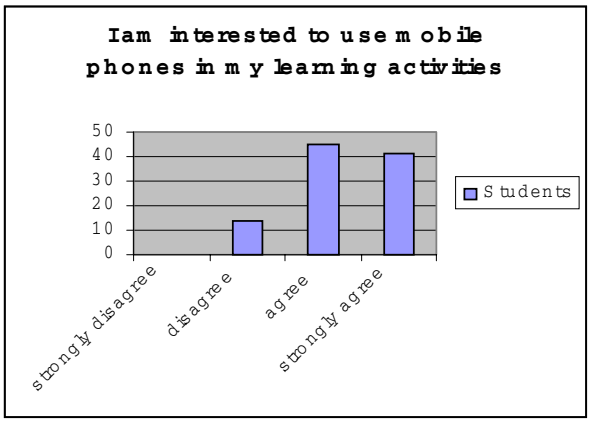
a. The data in Figure 5 and Figure 6 show that 100% of the respondents used mobile phones for voice communication and taking photos. 72.5% of the respondents used the mobile phone for playing games and 55.5% used the mobile phone for listening to music. Other elements such as taking memos, watching movies and surfing Internet are not their major practices.

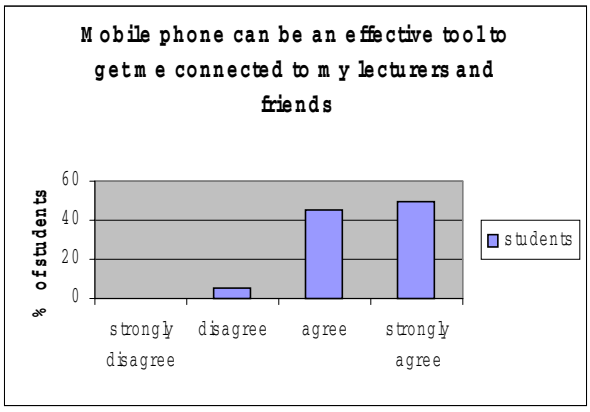
b. Sending and retrieving SMS messages are quite popular among the respondents, but sending and retrieving MMS messages remain very low.

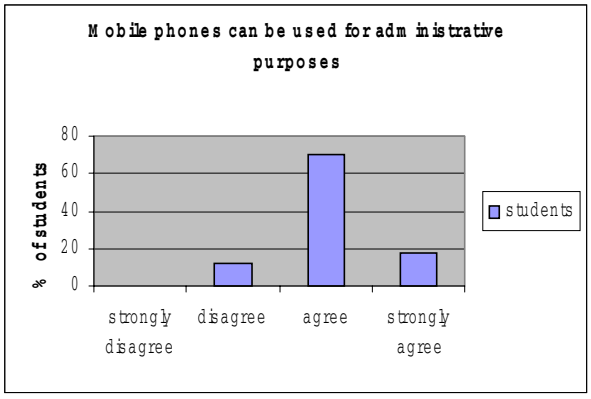
3. Acceptance of mobile phones for teaching and learning

This section provides answers to the focus of this research. Respondents were asked to express their views on using mobile phones for teaching, learning and administrative purposes. After they have experienced the activities described above, respondents stated their difficulties. They were also asked to provide their opinions on issues like secondary students taking mobile phones to schools, communicating with parents using SMS messages, and incorporating the topic of "m-Learning" into their curriculum.









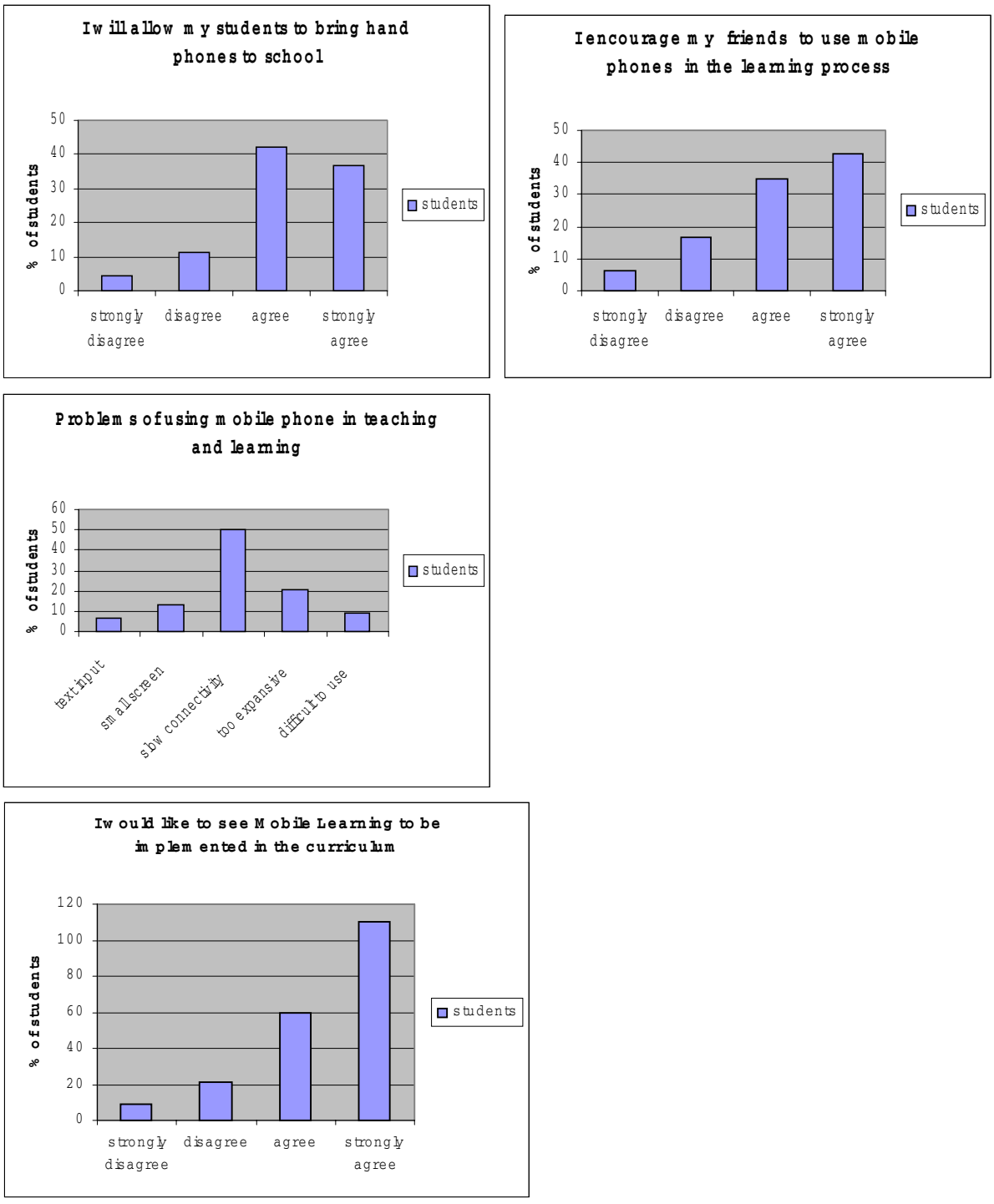


Figure 10 Acceptance of Mobile Phones

This study shows that the majority of the respondents accepted the use of mobile phones for teaching and learning in general. They found the inhibiting factors are slow connectivity (50.5%), too expansive (20.5%), small screen (13.5%), difficult to use (9%) and text input problem (6.5%)

They somewhat agreed that mobile phones can improve the teaching and learning performance (47% + 33% = 80%). Their curiosity on using mobile phones for teaching and learning is high (45% + 41% = 86%). The respondents are confident that mobile phones can

be effective tools to them to get connected to their lecturers and friends. The respondents have quite a liberal mind on allowing secondary students to bring mobile phones to schools (42% + 37% = 79%). They would like to use mobile phones for administrative purposes (70% + 18% 88%). They were somewhat interested to see "m-Learning" be part of their curriculum.

DISCUSSIONS

In this study, the focus was to find the acceptance of mobile phones for teaching and learning among the undergraduate students. The experiment was generally well-received by the students. They found that it is fun to participate in the exercise. The findings of this study reveals that the students agreed that mobile phones can be used for teaching and learning. However, they were somewhat skeptical towards the quality that mobile phones can bring to education. Majority of the students are very liberal and interested to use mobile phones for teaching and learning. With the undergraduate age group, SMS messaging is a popular way to communicate. This study also reveals that mobile phones are mainly used for talking, inputting text, taking photographs and playing games. Although the sample size is small and the findings may not be reliable, this study provides the researcher with the preliminary data to carry out more discriminating experiments on m-Learning. From the study, it can also be revealed that m-Learning activities are great ways to motivate students and foster interaction among them. This is not only applicable to the field of m-Learning, but also a general pedagogical technique in teaching and learning.

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English for Mobile
A Model for Learning English on Mobile Devices

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Abstract

The increasing availability of mobile devices with abundant enhanced features could provide a rich and interactive environment for learning "anywhere, at any time and at any pace." Macromedia/Adobe Flash is a leading software for developing interactive and web based applications for personal computers (PCs) under Windows and Macintosh environment. Using Flash technology on a mobile phone provides the same advantages as using Flash on the desktop personal computers (PCs) or laptops. Many experimental studies on mobile and handheld computing devices have been used for learning various subjects including foreign languages via SMS and pod-casting. These filed studies have yielded very positive results. This research paper is based on two major aspects of mLearning. First, it presents the result of a survey conducted for students and lecturers at Assumption University towards mLearning. In the second component, it examines the Adobe Flash features of mobile devices such as smart mobile phones and PDAs, for learning English as foreign language or a second language. Based on the Adobe Flash features a new model is proposed for learning English with Adobe Flash Lite used in many mobile devices.

Keywords: mLearning (Mobile Learning), English for mobile devices, Flash-Based mobile learning, Learning foreign language on mobile devices, Attitudes towards mLearning

Introduction

Learning and the lifelong pursue of knowledge has become one of the most essential activities in the current knowledge-based economy, which is characterized by information age, globalization, knowledge acquisition and transfer, and the information and communication

technology revolution. Globalization requires new methods of knowledge acquisition and to convey new skills and tools (Adam *et al*., 1997).

Traditional learning context is experiencing radical changes and challenges. There are often occasions when people want to learn exactly what they are interested in or what they need to learn, without time and location boundaries. Learners are demanding for better and improved access and convenience at the lower costs and with the direct application of contents to their working environment and needs.

The recent developments of the web 2.0, virtual reality to build simulated learning environment such as "Second Life", and availability of mobile and wireless communication Technology are predicted to have extensive effects upon learning environments at all levels. Educational institutions and commercial companies are experimenting with these technologies and are designing new methods to take advantage of these emerging technologies and are marketing their programs to new audiences and in new ways. Corporations are forming alliances with universities to promote learning using technology. Completely new models for universities are also being developed to respond to the opportunities created by a growing worldwide market for learning and new technologies.

Mobile technology is introducing new approaches to learning for both students from traditional classrooms to those learning in blended and/or totally online learning environments. "Second Life" has become available on some brands of mobile devices.

In the notable Leonardo da Vinci Project on technology and learning, Keegan (2002) indicated the industrial, electronic, and wireless revolutions all influenced transitions in learning since the 18th century. Advancements in technology have taken learners from dLearning (distance learning) to eLearning (electronic learning), and ultimately, to the mLlearning (mobile learning) model of today. "The mixing of distance learning with mobile telephony to produce mLearning will provide the future of learning" (Keegan, p. 168).

Mobile Learning

Today's phones and PDAs fit in our pockets and can connect us to a variety of information sources and enable communication nearly everywhere we go. It's argued that these mobile technologies may enable a transition from occasional, supplemental use of desktop computers to frequent and integral use of personal mobile technologies (Soloway *et al*., 2001) to augment physical and situated learning (Roschelle & Pea, 2002; Roschelle, 2003).

Mobile devices used for mobile learning have integrated features that are defined by a number of characteristics. They support learning activities that need just-in-time (JiT). Learning material (content) is presented in short (small) chunks in time and sequence. An audio-video format, with emphasis on audio content applications such as podcasting, is incorporated for the main learning content. Lastly, these mobile devices include text messaging and multimedia messaging capability for an alternative style of communication. One main benefit of mLearning is that learners have access to anytime-anyplace at any pace, 24/7 learning contents.

English Language Learning on the Move

Applications for mobile learning are on the rise and mLearning is both fast and convenient. It provides a unique learning system that ensures more time will be spent on actual learning rather than on the methods of organizing in preparation for learning.

Tony McNicol (2004) stated that there is a huge potential for smart learning software. He gathered psychologists, cognitive neuroscientists, and information scientists to develop learning with technology. Some of these technologies included mobile phones that played short audio clips in English to help with pronunciation for English as a Second Language (ESL) students. The goal of mobile learning is not to replace the traditional classroom environment but to enhance it. Another goal is to educate teachers in how to implement mobile learning and create a great classroom experience. The mode of delivery for mLearning is not important because it is clear that the potential is significant. It is predicted by some scholars that in the future students will depend significantly on their mobile devices or other wireless technologies. Students will bring their mobile devices to school to enhance their individual educational experiences (McNicol). McNicol (2004) described how 10 million Japanese are tuning into learning English with mobility, and at their convenience. It seems that mobile technologies have become more of an extension of the individual and are increasingly perceived as a necessity for life and learning.

Experiments in Japan on mobile language learning revealed that the learning content is best configured in short learning units or sessions. For instance, a unit on language vocabulary would fit the capabilities of mobile devices for learning in a brief period, such as 5 minutes' time. Another helpful feature to include in mobile language learning is customization of learning to fit individual needs and learning experience (McNicol, 2004). While accommodating adaptive mobile learning will entail more computing and programming efforts, learning in this way will continue to enhance mobile learning experiences and learning outcomes.

Assumption University of Thailand

Assumption University is the first international university in Thailand. Fully accredited as an institution of higher learning by the Ministry of Education in Thailand, it currently serves about 20,000 undergraduate and graduate students from more than 60 countries. The University is a non-profit institution administered by the Brothers of St. Gabriel, a worldwide Catholic religious order, founded in France in 1705 by St. Louis Marie De Montfort, devoted to education and philanthropic activities. The congregation has been operating many educational institutions in Thailand since 1901 (Assumption University, 2007).

In order to explore the attitudes of students at Assumption University towards the use of mobile devices in their studies, two online surveys were prepared, the first survey (Survey A) was intended for students who owned a smart phone or a PDA and the other survey (Survey B) for those who did not. A webpage was designed (mlearn.cide.au.edu) in which the definitions of 'mobile learning' and 'smart mobile devices' were explained; and students were requested to click the link to one of the two surveys depending on the ownership of a smart mobile device or not. The information about the availability of the mobile learning surveys was announced on the homepage of Assumption University (www.au.edu) in August 2007 and students were requested to participate in the survey. Within two months after the announcement, 312 students replied to Survey A and 98 students replied to Survey B. Below is some demographic information from the two surveys:

- 312 (76%) out of 410 respondents owned a smart mobile device.
- 61% of those who did not own a smart mobile device, planned to purchase one within 1 year.

- 235 (57%) of respondents were male and the other 175 (43%) were female.
- 231 (56%) of respondents were in the age group 18-22 and 105 (26%) in the age group 23-27.
- 304 (74%) of respondents were Thai national and the other 106 (26%) were foreign students.
- 304 (74%) of respondents were undergraduate students, 85 (21%) graduate students, and 19 (5%) doctorate students.
- 203 (50%) of respondents were from the biggest School of the University, School of Business Administration and the other 50% from all other schools.

In survey A, it was asked to rank (1 to10) the applications on their mobile devices that they mostly use. Figure 1 shows the ranking.

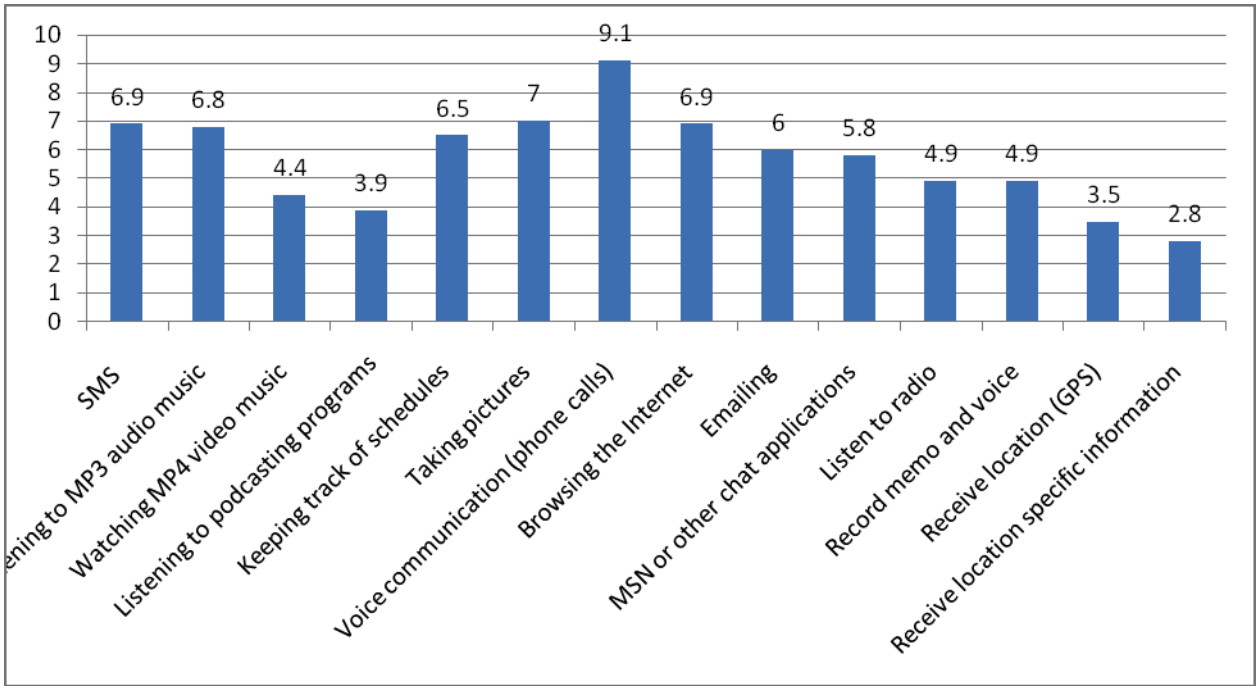

Figure 1. Average ranking of applications used by students on their mobile devices

Then it was asked the average daily time spent on their mobile devices doing the above applications or activities. Their response is shown in Fifure 2.

Later in Survey A, it was asked if they thought it would be useful for them to have the audio or video of the class lectures available for their mobile device. 285 (91.3%) of the respondents confirmed 'yes'. When asked if they would be willing to pay for the audio/video of the class lectures, 71 (22.8%) replied 'yes', 48 (14.4%) replied 'no', and the other 193 (61.9%) replied 'depends on the price'.

Then in Survey A, it was asked to rank the importance of the applications most wanted on their mobile devices. Figure 3 shows the rankings.

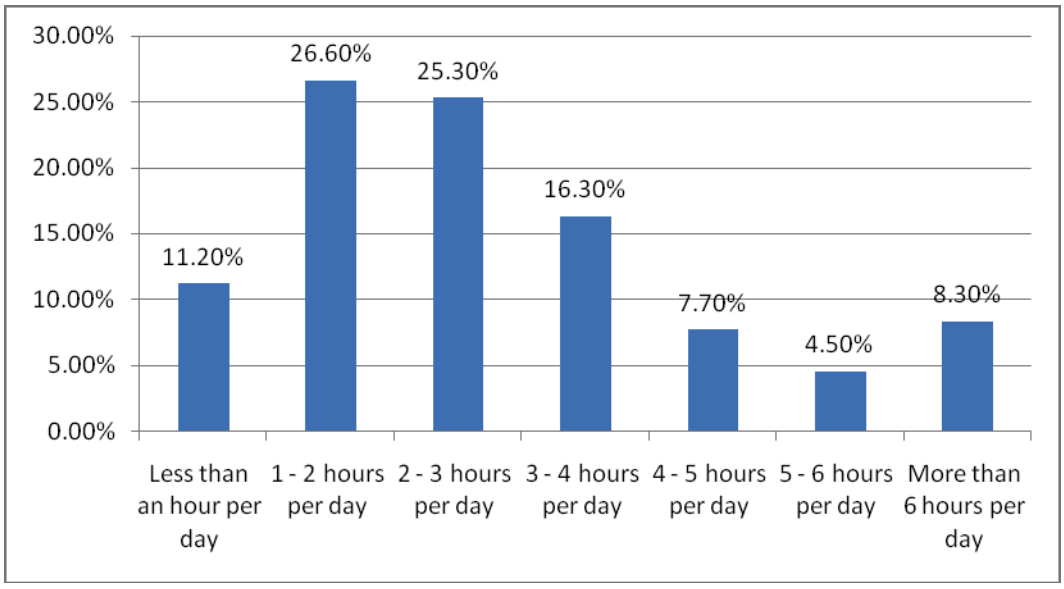

Figure 2. Hours spent daily on mobile devices by students

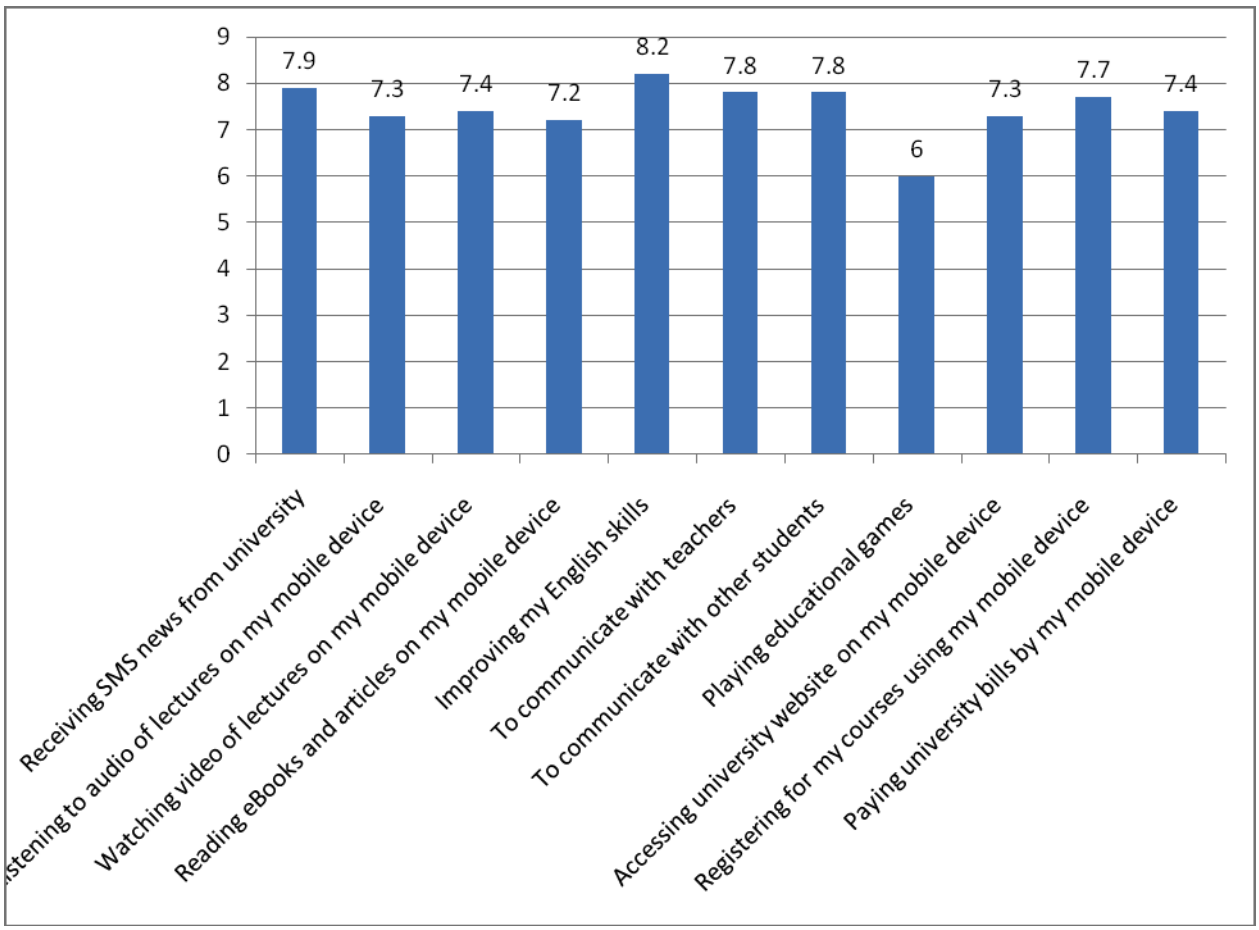

Figure 3. The ranking (1-10) of the application they wish to have on their mobile device.

Design of a Flash-Based ESL for Mobile Devices

Based on first, the experiments conducted in Japan on mobile language learning which MP3 audio files were the only media for teaching English as a second language, and second, the need assessment of mobile learning for English language at Assumption University, and lastly, the Bloom's taxonomy for learning as shown in Figure 4, this researcher decided to design and develop an ESL courseware for mobile devices using Adobe Flash Lite. Most mobile devices, especially those with Symbian or Windows mobile operating systems, are capable of playing Adobe Flash Lite. The main reasons for choosing Adobe Flash Lite were its popularity and it being platform independent. Besides Flash provides a true multimedia delivery of contents that can combine text, audio, and video to create a presentation for PCs or mobile devices capable of playing Flash Lite.

Level	Original	New	Verbs
1 (low)	Knowledge	Remember	Recall, Recognize
2	Comprehension	Understand	Interpret, Summarize
3	Application	Apply	Execute, Implement
4	Analysis	Analyze	Differentiate, Organize
5	Synthesis	Evaluate	Critique, Check
6 (high)	Evaluation	Create	Generate, Create

Figure 4. Bloom Taxonomy (Source Cochran, D., Conklin, J., & Modin, S. (2007). A New Bloom: Transforming Learning. Learning & Leading with Technology

With the assistance from couple of expert professional English lecturers with experience in teaching English as a second language, this researcher produced Flash-based English lectures for few popular mobile devices, i.e. Nokia, Sony Ericson, and Windows mobile based PDAs capable of playing Adobe Flash Lite for mobile devices. Flash Lite is the version of the Macromedia/Adobe Flash Player that has been specifically designed for use on mobile phones. Using Flash technology on a mobile phone provides the same advantages as using Flash on the desktop. One can create rich, interactive, compelling user experiences that have a consistent display across a range of platforms.

The objectives of the Flash–based English lessons for mobile devices are as follows:

- Flash programming allows full control of mobile devices and the lessons by the user.
- Students can listen to native speakers reading a passage or a lesson.
- While listening, students can see and read the text on the screen of their mobile device.
- Students can also learn spelling, grammar, and rules for conversation.
- There are exercises in each unit (lesson) asking students to practice what they learned.

Figure 5 A slide from a unit (lesson)

For this research, the researcher developed 15 lessons also called units. Each unit will consist of 8 slides for a total of 120 slides. Students could upload these lessons to their mobile phones and use the Adobe Flash-Lite application program downloadable free of charge from the Adobe site (www.adobe.com) of their mobile devices to start studying a lesson. Users can control the progress of a unit by using the knob on the mobile device. It could go backward and listen to the same slide again and again by clicking the knob towards the left or could go forward by clicking the knob towards right to go to the following slide.

Preliminary Testing

This researcher plans to try out this Flash-based mobile English learning on sample undergraduate population who are taking English I and English II at Assumption University. The 15 units developed for English mobile learning will be distributed among 100 randomly selected students whose mobile devices are capable of playing Adobe Flash files. There will be pretest and post test to evaluate improvement in students' English proficiency if any.

However, this researcher conducted an informal try out of the first 3 units among 11 students, 3 of them in Mathayom 5, 4 of them in Mathayom 6, and the other 4 were freshmen students of 2 private universities in Bangkok. These students were interviewed after a week of using the 3 units and here are their replies to some questions:

- All confirmed that they learned some new English lessons that they did not know before.
- All said the listening to the units have improved their English conversation.
- On average, every student has listened to each unit for 8.7 times.
- When asked if they would like to have more units to continue their English mobile learning, all confirmed positively.
- Then it was asked if they're willing to pay to get additional units, 9 out of 11 (81.81%) replied positively.
- When asked how much they are willing to pay for each unit, their answers were between Baht 50 to 100, for the average price of Baht 67 per unit.
- All considered that it was fun learning English using their mobile phones.
- 7 out of 11 (63.6%) thought it was easy to use the lessons, 3 (27.2%) said it was average, and 1 indicated that it was difficult.

Conclusion

The experiment conducted in Japan using MP3 voice for learning English as a second language has proved to be an effective tool for learning a foreign language. When using a multimedia based, i.e. voice and text, so that the student can read the text while listening to the voice could be even more effective in learning a foreign language. The preliminary experiment on a number of students has proved its effectiveness and satisfaction by learners. This researcher will conduct a formal try out of the Flash Based Mobile Learning in 2 months time on a sample of more than 100 randomly selected students of Assumption University and will publish a full paper based on evidence collected.

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Borderless Education
Challenges and Opportunities for Southeast Asian Universities
ASAIHL 2008

Parallel Session II

Institutional Readiness for Cross Border Education: A Case of Indonesia University of Education

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Abstract

Cross border education is still a controversial issue in Indonesia. While the cons reject the presence of foreign universities in Indonesia, believing that they will threaten the existence of local universities, the pros argue that education liberalization is needed not only to improve national capacity building, but also to boost the economy. Disregarding the debate, I believe that cross border education in any forms will soon cross Indonesian borders. Negotiation on cross border education agreement between Indonesian government and delegates of six countries including USA, Australia, New Zealand, Korean Republic, China, and Japan, is in progress. Therefore, it is high time that we identified any challenge we have to make sure that cross border education will increase and widen access, create wealth, and promote development. One of the challenges we have in every change is mindset change. If the stakeholders are ready for cross border education, then we will be able to easily direct and control it.

The present study tries to explore university readiness for cross border education. The information acquired will be useful for university policy makers when choosing appropriate strategies on cross border education.

A questionnaire concerning the perception of respondents towards cross border education principles and consequences was administered to 66 respondents, who are the members of quality assurance teams of Indonesia University of Education.

The results show that most of the respondents perceive that they themselves and their university are ready for cross border education. Cross border education is considered more as an opportunity than as a threat. However, they think that the most appropriate type of cross border education is twinning. They are still reluctant to welcome branch campuses. The most crucial problem in facing cross border education is the maintenance of religious and local culture and the improvement of faculty qualifications. More findings will be discussed further.

Key words: cross border education, quality assurance, branching, franchising, twinning, distance learning, education liberalization, capacity building.

INTRODUCTION

Parkinson (2006) identifies six converging changes that lead to higher education globally including: 1) the increasing demographics across the world, 2) the global decline in public financing, 3) the increasing importance of knowledge, 4) the further impact of globalization, 5) the growing impact of internationalization, and 6) the continuing information & communications technologies (ICT) revolution**.** These six factors drive the need for cross border education, which ion refers to situations where the students, teachers, programs, institutions/providers or course materials cross national borders in the form of students (and teachers) traveling to study (teach) in foreign countries, educational institutions partnering with foreign institutions to offer joint educational programs or degrees, educational institutions operating abroad, and educational courses being supplied across borders through e-learning or distance learning (UNESCO/OECD 2005).

Cross border education is inevitable in Indonesia since Indonesian government has ratified WTO through Law No. 7 1994 in which education is considered as a tradable service and that the presence of foreign universities in Indonesia is unavoidable. In fact, with or without the power imposed by WTO and its GATS, for some reasons cross border education is needed by Indonesian higher education system. Firstly, some parents with higher income and wanting to get better education tend to send their children abroad for the sake of quality and relevance reasons. These people consider spending on education as an investment. They do not mind spending much lot money for education because a few years later, they will get return when their children get good jobs because of the skills and knowledge they studied before.

Secondly, some skills or expertise cannot be provided at home and force the students to pursue the degree abroad. For example, biotechnology and forensic computing are two disciplines which so far are not available in Indonesia. Thirdly, cross border education can be a solution to saving foreign exchanges. The deputy of Education and Public Workers, People Welfare Coordinating Minister, Fuad Abdul Hamied, noted that Indonesian students studying in Australia spend 3.7 trillion IDR and 308 billion IDR in England. The spending will be increasing as the number of Indonesian students studying abroad keeps growing. It is reported that there were 18.000 Indonesian students studying in Australia, 1.150 in England, 6.000 in China, and 2000 in Malaysia and Singapore.

Fourthly, another reason for the need of cross border education is accessibility of education for all Indonesian citizens. Through cross border education, prospective students do not need to leave their country to pursue their dreamed education so that they can get quality education with affordable costs. Fifthly, cross border education can also be a way of accelerating national capacity building. Cooperation between local and foreign universities in administering cross border education provision will provide rich lesson for the local universities to improve their capacity in education management such as through benchmarking and accreditation, which finally will ease the process of credit transfer and international recognition. Lastly, cross border education is a hard but unavoidable way for survival of the fittest. If Indonesian universities chose to exempt from cross border education, while other countries did, they would lost their competitive power so that not only is their existence threatened, but the national competitiveness and productivity will be at risk.

INDONESIAN HIGHER EDUCATION APPROACH TO CROSS BORDER EDUCATION

According to Tadjudin (2005), one of the objectives of Indonesian higher education system is national competitiveness by which its position in a global market should be directed by technical innovations and creative use of knowledge than from abundant natural resources and cheap labour, and the ability to produce, select, adapt, commercialize, and use knowledge to sustain economic growth and improve living standards. As a nation's competitiveness can only be achieved when its citizens are well-educated and are able to lead meaningful lives, Indonesian higher education system should obviously provide students with a good scientific knowledge, contribute to the process of shaping a democratic, civilized, humane, inclusive society, maintaining a role as a moral force and as the bearer of the public conscience, and lead the students meaningful lives.

From this perspective, the Indonesian Higher Education Vision 2010 contains the following features (DGHE, 1999):

1. **quality** education that reflects students' needs, develops students' intellectual capacity to become responsible citizens, and contributing to the nation's competitiveness;
2. **access and equity,** providing opportunities for all citizens to develop to their highest potential levels throughout life; and
3. **autonomy** for the tertiary education institutions coupled with accountability and supported by a legal, finance, and management structure, that encourages innovation, efficiency, and excellence. Autonomy also brings a shift in the regulatory environment, which now must encourage innovations at the level of individual institutions.

With the three features above, Indonesian Higher Education Long Term Strategy 2003 – 2010 (HELTS) concerns with: 1) the improvement of national competitiveness, 2) improvement of quality of graduates, research, and community/public service, and 3) the improvement of the internal organization of higher education institutions (improvement of organizational health). Those objectives can be realized through: 1) the improvement of relevance, quality, and academic atmosphere, 2) Geographical and social equity, and 3) the improvement in higher education management (leadership, efficiency, effectiveness, and sustainability), a policy known as "RAISE". To achieve these objectives the new paradigm in higher education management was introduced. The goal of the new paradigm is to improve the quality of higher education. The new paradigm of higher education consists of 4 major points, i.e. autonomy, accountability, accreditation, and evaluation.

QUALITY ASSURANCE IN INDONESIAN HIGHER EDUCATION

Indonesian higher education has made continuous quality improvement as a primary concern. It is believed that quality assurance should be internally driven, institutionalized within each organization's standard procedure, and could also involve external parties. However, since quality is also a concern of all stakeholders, quality improvement should aim at producing quality outputs and outcomes as part of public accountability. The involvement of external parties in quality assurance is made possible by National Accreditation Board of Higher Education (BAN-PT) that will accredit both public and private universities all over the country. Some universities also invite international certification body such as ISO: 90001 to certify their institutions. Every higher institution in Indonesia is also required to administer Self Assessment-Based Program Study Evaluation (EPSBED), which should be updated by every university annually. While accreditation is done periodically and optional in nature, EPSBED is compulsory. The quality of EPSBED will influence the assignment of a university whether to receive government block grant or not. The characteristics of accreditation, EPSBED and internal quality assurance can be described below.

Table 1
Quality Assurance System in Indonesian Higher Education

ACTIVITY	Objective	Nature	Institution
Accreditation	External quality control and quality audit	Periodical	BAN-PT or other institution
EPSBED	Operation extension permit	Compulsory	Directorate General of Higher Education
Quality Assurance	Internal quality improvement	Higher institution initiative	Higher institution

Now every higher education in Indonesia has to establish its quality assurance office responsible for making sure that the quality of the institution improves continuously. If a higher institution does not have this office, it will not be accredited by BAN-PT whether study program accreditation or institution accreditation. In addition, the government determines internal quality assurance as a decisive factor in launching competitive funding to higher education institution. If a higher education does not have internal quality assurance office whose activities are driven internally, the funding will not be allocated.

INDONESIAN RESPONSE TO CROSS BORDER EDUCATION

Generally speaking, there several types of cross-border education. The most common types are:

- **Branch campuses:** campuses set up by an institution in another country to provide its educational programs to foreign students.
- **Franchises:** an institution (A) approves an institution (B) in another country to provide one or more of A's programs to students in B's country.
- **Articulation:** the systematic recognition by an institution (A) of specified study at an institution (B) in another country as partial credit towards a program at institution A.
- **Twinning:** agreements between institutions in different countries to offer joint programs.
- **Corporate programs:** many large corporations offer programs for academic credit from institutions, and this often involved crediting across national borders.
- **Distance education programs:** those distance education programs that are delivered - through satellites, computers, correspondence, or other technological means - across national boundaries.

Indonesia has made legal provision for locally based co-operation with foreign universities to “improve and enhance the performance of higher education” and to “maintain, develop, empower and expand science, technology and/or arts”. Marginson (2004) includes Indonesia as intermediate nations with inadequate domestic capacity active as an importer while relatively undeveloped as an exporters. This means that although Indonesia has poor per capita basis, it has emerging middle classes increasingly able to invest in cross-border education. Marginson (2004) also indicates that in Indonesia there has been widespread adoption of twinning, franchising and other partnership arrangements between local institutions and English-language providers, especially from Australia and the United Kingdom. His observation is supported by the presence of the decree of Indonesian minister for education and culture number 223 /U/1998 which regulates cooperation with foreign universities including twinning program. At present Indonesian government is preparing laws to anticipate the implementation of free trade. One of the will cover the requirement that to cooperate with foreign universities, 60% of study programs at the university should get A accreditation.

Sadiman (2004) observes that up to the present, we can see that trade in education services (TES) happening in **Indonesia**, even though not as many as in Singapore, Malaysia

and Thailand. Tadjudin (2005) indicates that there are no accurate figures, but it is estimated that about 20,000 Indonesians study abroad each year. The number of students taking part in some kind of cross-border education within the country is estimated at about 5,000. Compared to the number of students in Indonesia, these numbers are relatively low.

The former Director of Directorate General of Higher Education, Satryo Sumantri Brodjonegoro, in the sixth Conference of Asia and Pacific Higher Education, 2007, revealed that 50% of 81 public higher education and 30% of private universities has had partnership in the form of students and faculty exchanges with foreign universities. He further said that universities from Austria, Swiss, and Germany had opened a branch IN a university in Serpong. ANTARA (2007) reported that 6.000 Indonesian students study in various universities in China.

University of Indonesia is offering international classes for undergraduate programmes on engineering, psychology, medicine and computer science under twinning programmes for a double degree with selected Australian universities: Queensland University of Technology, Monash University, The University of Queensland, and The University of Melbourne, Australia. Trisakti School of Management, Jakarta is joining hand with One Learning Place Singapore in offering Diploma and Undergraduate programs on Management and Accounting.

Netherlands Education Centre (NEC) in Indonesia is actively promoting high quality education with competitive tuition fee on more than 1150 study programs for undergraduate and postgraduate at universities in the Netherlands. Since Dutch will be a problem for majority of potential students from Indonesia, they use English as medium of instruction. Twinning program between local universities also happens in Indonesia. Bandung Institute of Technology (ITB), the outstanding and the oldest higher institution in technology in Indonesia is helping a relatively young university (University Al-Azhar Indonesia) offering undergraduate program on engineering.

INDONESIA UNIVERSITY OF EDUCATION (UPI) READINESS FOR CROSS BORDER EDUCATION

Imrona observes that attitudes towards cross border education among higher education stakeholders in Indonesia can be divided into three categories. First, the liberal group tends to expect no limitation for foreign to trade in Indonesia. This group is led by private universities having cooperated and got benefit from cooperation with foreign universities. The second group is the optimistic-pessimistic who really want to cooperate with foreign universities but there are some rules limiting the cooperation and some misperception in societies concerning sciences so that the discipline and universities establish in eastern Indonesia lacks of applicants. The third group is the pessimistic group believing the cross border education will destroy the present Indonesian universities. Without foreign universities, many universities in Indonesia now get difficulties in acquiring their inputs. Let alone with the presence of foreign universities in Indonesia.

Indonesia University of Education (UPI) belongs to the optimistic sides believing that cross border education will benefit all stakeholders. To anticipate the presence of foreign universities in Indonesia, UPI has complied the quality assurance system endorsed by the government, namely accreditation, EPSBED, and internal quality assurance. Almost all departments have been accredited, EPSBED data are renewed annually, and internal quality assurance team has also been appointed in 2006. At the level of university, internal quality assurance is administered by internal quality assurance team (SPM), by quality control team at the level of faculty, and by quality control task force at the level of department. The tasks of quality control team are endorsing quality system management through the administration of self assessment, quality manual preparation, standard operating procedures and their implementation.

With the quality management system developed, UPI steps forward for cross border education. Cross border education programs currently in progress at UPI are:

1) Darmasiswa program: Indonesian government provides scholarships for foreign scholars to learn Indonesian language and cultures in Indonesia. At the moment there are 15 students coming from Columbia, the Philipines, Madagascar, China, Korea, Turkey, and Tajikistan.
2) The language center of UPI has been in cooperation with Australian Defense Force for 3 years. ADF will regularly send around 60 staff to learn Indonesian Language and Culture at UPI.
3) Funded by International Cooperation Agency, Directorate General of Higher Education, UPI has a twinning program for masters degrees with Monash University in Quality Assurance and Leadership.
4) History department has also a joint journal publication with Kinabalu university, Malaysia
5) Through Japan International Cooperation Agency, some faculty members of UPI have also been invited to teach or studied in some universities in Japan.
6) UPI also carries out annual international conferences attended by scholars from other countries.

To study further the readiness of UPI faculty members concerning cross border education, a questionnaire consisting of perception towards cross border education has been developed and distributed to 66 members of UPI quality assurance team. The results indicate that 49.2% of the respondents consider cross border education as opportunities, 33.8% as something unavoidable, 6.2% as a need, and only 10.8% considers it as a threat.

Table 2
The Presence of Foreign Universities in Indonesia

No.	Indicators	Frequency	Percent	Valid Percent	Cumulative Percent
1.	unavoidable	22	33.3	33.8	33.8
2.	Needs	4	6.1	6.2	40.0
3.	Threats	7	10.6	10.8	50.8
4.	Opportunities	32	48.5	49.2	100.0
5.	Total	65	98.5	100.0	
Total		66	100.0		

Sectors that will be most likely and least likely threatened by cross border education is the maintenance of religious and cultural values, sustainability of local universities, poor standard, access towards cross border education, disparity in quality. They are not quite concerned with cross border regulations, poor staff competence, capacity building, credibility of the foreign universities and brain drain.

Table 3
The Most Crucial Problems in Cross Border Education

Key Problem Indicators	N	Mean
1. The maintenance of religious and cultural values	66	3.27
2. Competitiveness and sustainability of local higher institutions	66	4.24
3. The fulfillment of national and international standard	66	4.39
4. Opportunity to get education for those under privileged	66	4.41
5. The gap in quality between local and foreign universities	66	4.68
6. Lack of laws regulating cross border education	66	6.00

7. The gap in competence and income	66	6.42
8. Lack of capacity building	66	6.55
9. Credibility of degree provider	66	7.14
10. Brain drain	66	7.21

The models of cross border education mostly agreed by the respondents are twinning, while branch campuses are not quite endorsed. Articulation model in the form of credit transfer is more preferred than let say corporate program. The detail can be observed in the following table.

Table 4
Cross border higher education model

Indicators	N	Mean
1. Twinning	64	2.30
2. Articulation	63	2.92
4. Franchises	63	3.57
5. Distance learning	63	3.92
6. Corporate program	64	4.06
7. Branch campuses	63	4.27

When the respondents were asked about the preparation that should be done by a university, they answered that the most crucial factor is quality of the faculty staff including their English skills, teaching and learning facilities, and the change of stakeholders' mindset. The four factors are considered more important than the establishment of center of excellence, quality of teaching, and cross cultural understanding.

Table 5
The Most Crucial Factors for Changes in Cross Border Education

Indicators	N	Mean
1. the quality of faculty staff	49	2.73
2. the ability of faculty staff in English	49	3.10
3. the standard of facilities	49	3.33
4. the openness of stakeholders' mindset	50	3.76
5. Establishing center of excellence	49	4.51
6. the quality of teaching, research and community development	50	4.76
7. Improving the faculty staff cross cultural understanding	50	5.76

The respondents consider that the most salient benefit from cross border education is capacity building and human development. These two variables are more important than for example creating business or attracting foreign students. This situation may due to the faculty staff awareness of the quality of their institution.

Table 6
The Benefit of Cross Border Education

Indicators	N	Mean
1. Capacity building	65	2.15

2. Human development index improvement	65	2.85
3. Management system improvement	65	3.63
4. Encourage national development	65	3.85
5. Create businesses and jobs	65	4.00
6. Attract foreign students	65	4.42
Valid N (listwise)	65	

The respondents also perceive that the university as a whole has a good commitment towards cross border education. The university system commitment towards capacity building, relevance, transparency, accountability, cross border education, and contribution to public good are good, while commitment to quality assurance and high quality higher education across borders is only average.

Table 7
Commitment to Cross Border Education

	N	Mean	Meaning
1. capacity building	64	3.91	Good
2. relevance	65	3.80	Good
3. transparency	65	3.68	Good
4. accountability	65	3.61	Good
5. cross border education	60	3.59	Good
6. contribution to public good	64	3.57	Good
7. quality assurance	65	3.41	Average
8. high quality higher education across borders	65	3.27	Average
9. all commitment to cross border education	60	3.55	Good
Commitment: 1: poor, 2: fair, 3: average, 4: good, 5: very good			

CONCLUSIONS

To this end, it can be concluded that cross border education already crosses Indonesian borders even though not as massive as those in India, China, Malaysia, and Singapore. Even though the responses of higher education stakeholders concerning cross border education are varied, the presence of cross border education is somewhat needed to improve the capacity of Indonesian universities. The key for cross border education is quality. Indonesian higher education system stipulates every university to administer quality management either externally or internally. The trend now is that higher institution which is not aware of quality assurance will be left behind not only by the system but also by its stakeholders and its existence will be threatened. In the case of UPI, even though internal quality assurance is a new practice, the impacts are already apparent. The change of mindset towards quality culture is in progress. Faculty members responsible for quality assurance believe that the university system has a good commitment to cross border education and international cooperation.

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Ensuring Continuous Academic Mobility in a Borderless World: The Open University Malaysia Experience

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Abstract

As calls for educational advancement and multi-literacies increase globally, so too does the challenge of providing education to a more varied group of learners and consumers of knowledge. Such initiatives are often underscored by the affordances of academic mobility, that is, the ability to provide for learners from a distance through adaptive technologies and greater mobility of content and academic expertise. This paper discusses a number of challenges that have surfaced in the quest for academic mobility across geographical borders as well as across academic programmes. Additionally, the paper demonstrates how continuous academic mobility may be attained so as to yield a more fulfilling educational experience for adult distance learners. In order to provide a context for discussion on these matters, the experiences and lessons learned by the Centre for Graduate Studies, Open University Malaysia (OUM), are analysed using Dimmick and Coit's (1982) Taxonomy of Decision Making Process. The paper also presents some suggestions for overcoming the many obstacles, issues and challenges that have been brought to bear in the process of making the educational collaboration across borders a stimulating reality.

INTRODUCTION

In recent times, distance education institutions have summarily attended to the challenge of providing for the educational needs of a diverse group of adult learners. In tandem to this, instructors and other academics have worked systematically to provide for learners' multifarious needs, both through on-site means as well as through various channels of communication. Central to this call for educational advancement and multi-literacies is the notion of *academic mobility*, that is, the ability to provide for learners from a distance through adaptive technologies and through greater mobility of content and academic expertise. Taken a step further, *continuous academic mobility* ensures the provision of

unremitting support not only in terms of time and space, but also in relation to the cognitive and scholarly demands of academic pursuit consistent with postgraduate study.

In the context of OUM, academic mobility in a borderless world refers to the delivery of education to students in all the 61 learning centres in Malaysia as well as other parts of the world through a variety of delivery modes (face-to-face, distance techniques, e-learning) and through different administrative arrangements with collaborative partners. Despite the use of the term "borderless world" to mean the disappearance of state and national borders, the fact remains that cross-border education does emphasize the existence of borders. The importance of borders is highlighted when it comes to regulatory responsibility, quality assurance, funding, and accreditation (See Knight 2005: 2; De Wit, Jaramillo & Knight 2005: 13). Students (and teachers) traveling to study (teach/work) in a foreign country must fulfill immigration needs; educational institutions partnering with foreign institutions to offer joint educational programmes or degrees must seek approval from the relevant state authorities. Academic partnerships between foreign partners foster student/people mobility, programme mobility as well as institutional mobility if carried out with good governance, that is, consistent management, cohesive policies, processes and decision-rights for a given area of responsibility.

This paper discusses the various challenges that have surfaced in the face of providing for academic mobility across geographical borders as well as across academic programmes. Of particular relevance to this discussion are the experiences of the Centre for Graduate Studies (CGS), Open University Malaysia (OUM), a relatively young but vibrant face in the post-graduate distance education realm.

It must be pointed out that along with this effort toward ensuring continuous academic mobility in a "borderless world", a number of challenges have surfaced. In order to provide a context for discussion on these matters, the experiences and lessons learned by the Centre for Graduate Studies, Open University Malaysia (OUM), are analysed using Dimmick and Coit's (1982) *Taxonomy of Decision Making Process*. This taxonomy[i] makes it possible to focus on the individual, organisational and institutional levels of analysis.

THE CASE OF OUM

Individual Level

What is the purpose of providing academic mobility to OUM's target clients? Besides answering to the call by the Malaysian higher education sector to turn Malaysia into a regional hub for higher education (Ahmad Faiz 2004), OUM is also playing its role to help develop a learning culture, and to help Malaysia realize her vision of becoming a value-based Knowledge Society by 2020. One of the ways is to promote and provide an opportunity for all members of society including the young and old, urban and rural, the physically handicapped and senior citizens, to pursue lifelong education.

[i] The taxonomy lists nine levels of analysis, viz: intra-individual/cognitive, dyadic, formal/informal group, intra-organizational, market, supra-organizational, industry, societal/ national, supranational/pan-national levels. The taxonomy allows for research to be conducted at "between levels" and "within levels" of analysis.

Table 1: Profile of Postgraduate Students at OUM in September 2007

Profile	f	%	
Sex			
Male	1069	55.2	
Female	866	44.8	
Age			
30 and below	418	21.60	
31-40	763	39.43	
41-50	505	26.09	
51-60	226	11.68	
61 and above	23	1.19	
Marital status			
Single	380	19.64	
Married	1053	54,42	
Others …	502	25.94	
(did not state)			
Citizenship			
Malaysian	1914	98.9	
Non-Malaysian	21	01.1	
Geographical			
Location	400	20.7	**
Selangor	263	13.6	The other countries include the
Sabah	263	13.6	following:
Sarawak	243	12.6	
Wil. Persekutuan	122	6.3	China
Kelantan	104	5.4	Canada
Perak	97	5.0	United Arab Emirates
Johor	94	4.9	Indonesia
Terengganu	69	3.6	Maldive
Pahang	57	2.9	Morocco
Negri Sembilan	52	2.7	Oman
Pulau Pinang	41	2.1	Saudi Arabia
Kedah	32	1.7	Singapore
Melaka	12	0.6	Sudan
Perlis	6	0.3	Thailand
Putrajaya	3	0.16	
Singapura	13	0.6	
**Lain-lain	64	3.3	
n.a.			
TOTAL	1935	100	

– Data do not include international students registered outside Malaysia

On the local front (See Table 1), there are currently about 30 international learners who are either working in Malaysia and registered with OUM, or registered as personalised learners from their individual country of origin. Table 2 shows the postgraduate student population in Malaysia and the other four learning centres overseas between late 2003 and early 2008.

Table 2: Number of OUM Students in Master's and Doctorate Programmes, 2003-2008

Learning Centre	**Total No.of Students**		**Graduated**	
	Masters	Ph.D	Masters	Ph.D
USTY, Yemen (wef May '05)	168	-	-	-
AOU, Bahrain (wef Jan '05)	592	40	20	-
UNRI,Indonesia (wef May '05)	4	-	-	-
TEG, Singapore (wef Nov '07)	-	7	-	-
OUM centres in Malaysia (wef Sept.'03)	1841	248	72	-
TOTAL (as of Feb.2008)	2677	295	92	-

A total of 27 students have quit the Ph.D programmes, and 218 from the Master's programmes—these have been excluded from the above table. Reasons for quitting are manifold—some are personal in nature, while some are programme related. A total of 25 students have completed their Masters (more are in the process of completing) and would be graduating in August 2008.

However, a history of sorts was made in Bahrain when 18 pioneering MBA students of Arab Open University-OUM graduated at the First Convocation witnessed by the Malaysian entourage (comprising of OUM team, including the President-Vice Chancellor), representatives of the Ministry of Higher Education (including its *Ketua Pengarah*), representatives from various Institutions of Higher Education in Malaysia, and invited guests from the Ministry of Education, Bahrain, including the Minister of Education and the Chairman of the Higher Education Council of the Kingdom of Bahrain. It was a memorable cross-cultural experience for Malaysians and Bahrainians alike, apart from making OUM's presence felt in the Kingdom of Bahrain. The event enhanced the corporate image of both collaborative partners and proved to be a catalyst in speeding up the recognition of AOU as a recognised Learning Centre for OUM.

The situation in Yemen is different from AOU Bahrain. Where the pace is faster at AOU, the laid-back atmosphere in Sana'a, Yemen, has demanded a form of administrative intervention from OUM to ensure quality education for all courses and programme management.

In general, OUM postgraduate students comprise professionals and non-professionals, namely, medical officers, engineers, managers, teachers, nurses, clerks, police personnel, sales executives, accounts executives and a range of other occupations in the public and private sectors. There are currently over 70 full time academic staff at OUM and over 3,500 tutors/facilitators to service the learning centres either face-to-face and/or online. Each one is aware that he/she has the responsibility of carrying out OUM's mission—to give to all Malaysians easy access to quality education, and to understand the needs and expectations of the internal and external public of OUM, namely, the students, staff, tutors, facilitators, the community and the various stakeholders of the institution. The internal staff are constantly reminded of their pledge to uphold the shared values of the institution, namely: integrity, caring, innovativeness, dedication and professionalism. Some are also registered as students and this, hopefully, would add to their ability to empathise with their fellow learners.

Organisational Level

OUM is the seventh private university in Malaysia[ii] but the first open university in Malaysia. As a global player in open distance learning[iii], OUM continuously adapts and adopts new information and communication technologies (ICT) including the state-of-the-art in mobile and digital broadcasting technologies, to ensure effective delivery of academic programmes.

OUM is Malaysia's first open distance learning institution that is owned by a consortium[iv] of eleven public universities in Malaysia. It was officially launched in August 2002 and opened its doors to the pioneering batch of undergraduate students in August 2002. The Centre for Graduate Studies (CGS) was established in June 2003 to manage postgraduate programmes in collaboration with the various Faculties. As a relatively young stakeholder in the education industry, OUM first opened its doors to postgraduate students in Malaysia in September 2003 and across international borders in 2005. In September semester 2003, three postgraduate programmes (Master in Business Administration, Master in Management, and Master in Information Technology) were offered. By January 2008, CGS is offering 10 Master's and 5 doctoral programmes to over 2600 students in Malaysia and overseas.

In a relatively short span of time, OUM has worked in collaboration with a number of academic partners--Arab Open University (AOU), Manama, Bahrain; University of Science and Technology (USTY), Sana'a, Yemen; Trent Global (TEG), Singapore; and Universitas Riau, Pekan Baru, Indonesia. A number of other collaborations are also in the pipeline.

[ii] OUM was incorporated as a private university under the Private Higher Education Institutions Act 1996. Its vision is to be a leader and innovator in open learning. Its mission is to be the leading contributor in democratising education; to develop quality education thorugh multimode learning technologies; and to develop and enhance learning experience toward the development of a knowledge-based society.

[iii] As an open learning institution, OUM subscribes to the following principles: flexible entry requirements to provide more opportunities for members of society to pursue their aspirations; a learner-friendly academic system where the constraints and needs of working adults are well-understood; a learning mode that incorporates learners' interaction with lecturers, online learning and self-study, thus enriching learning experiences.

[iv] The shareholders and owners of OUM are UM, UKM, USM, UiTM, UPM, UTM, UUM, IIUM, UNIMAS, UMS, and UPSI.

Supra-Organizational Level

Two postgraduate programmes are offered in collaboration with French universities, namely the University of Paul Cezanne, Aix Marseille III, France in Master of Information Science (MIS) in Competitive Intelligence (CI); and with the University of La Rochelle for Master in Information Technology (MIT-ULR). The programmes are facilitated by Malaysian academics as well as their French counterparts. These two programmes involve facilitator mobility whereby the seminar sessions are conducted at the Kuala Lumpur Learning Centre. Where the courses involve the French professors, arrangements are made (including flight, accommodation and emoluments) to ensure that they attend the 20-hour face-to-face sessions in Kuala Lumpur. The snag arises when the schedules for the seminar sessions have to be changed at the eleventh hour because of unforeseen circumstances on the part of the "flying lecturer".

The students undertaking MIS-CI and MIT-ULR are willing to pay more in fees to take advantage of getting a double degree, one that is conferred by OUM and another by the respective French University. The degrees are also recognised in France.

Societal/National Level

In 2006, the National Accreditation Board (LAN), now known as the Malaysia Qualifications Agency (MQA), and Public Services Department (PSD) awarded full accreditation and recognition respectively to two Diploma programmes (DM, DIT), 11 baccalaureate degree programmes and 3 Master level programmes (Master of Business Administration--MBA, Master in Management--MM and Master in Information Technology--MIT), bringing the overall total to 16. Between November 2007 through March 2008, CGS has also undergone the evaluation process for accreditation of three other postgraduate programmes – Master in Multimedia Communication (MMC), Master of Environmental Science (Integrated Water Resource Management) (MES_IWRM), and Master of Education (M.Ed). And the process continues for each of the other postgraduate programme.

The accreditation and recognition awarded to the postgraduate programmes may not be important for those in the private sector, but is very crucial for those professionals who are currently serving in the public sector. This is one of the reasons for discontinuation of postgraduate studies by some OUM students, and for a decline in the M.Ed student intake for 2007 and 2008. The accreditation panel currently comprises academics in the relevant academic discipline from the public Institutions of Higher Education, who are more often so used to the conventional mode of teaching. The closest experience they may get to open distance learning (ODL) mode is the off-campus long distance learning currently implemented in their dual mode campuses. This poses a point of contention for OUM.

Pan-National Level

OUM has also made inroads to other countries such as Sri Lanka, Bangladesh and Maldives by providing customised professional development courses through the international arm of its Institute of Professional Development (IPD).

In 2006, OUM has signed a total of five Memoranda of Understanding (MoU) and three (3) Memoranda of Agreement (MoA). These include the MoA with Ta'aheel (Dubai, UAE) and Islamic Development Bank (Jeddah, Kingdom of Saudi Arabia); and MoU with the National Institute of Accountants Australia and Ministry of Higher Education (Kingdom of Saudi Arabia). Strategic collaborations have also been forged at the level of the OUM Group Management with 28 institutions of higher learning from countries such as the United Kingdom, France, Australia, Indonesia, Saudi Arabia, South Africa, Yemen, Egypt, Bangladesh, Korea, and Sudan.

In terms of intellectual discourses, OUM has also been active in its networking through institutional memberships such as the Asian Association of Open Universities (AAOU) and the South East Asia Association for Institutional Research (SEAAIR).

CONCLUDING REMARKS

Needless to say, the cross-border experiences have enriched OUM and made it better prepared for future challenges. The many lessons learned can help OUM in its future plans to ensure continuous academic mobility for students, facilitators, workers and other personnel. Additionally, OUM (and CGS) will also need to increase its understanding and appreciation of the cultural diversity among its corporate citizens and students. In the process, OUM will continue to be challenged by the complex and multi-faceted global dimension of higher education, in particular, the future collaboration in open distance learning. Strategic plans will continue to be made to overcome obstacles, issues and challenges that have been brought to bear in the process of decision-making.

As highlighted by Knight (2005), "the complexities involved in working in the field of internationalization require additional knowledge, attitudes, skills, and understandings about the international/intercultural/global dimension of higher education….These competencies need to be developed and recognised for academics, administrators, and policymakers" to ensure sustainability (and due recognition) of the academic programmes at both the domestic and global levels.

There will continue to be a global demand for higher education, especially lifelong learning and professional training, and despite the presence of many different education providers, (including commercial companies, private for-profit institutions, for-profit entities of public institutions, and "degree mills"), quality providers with high academic standards will find its rightful niche in the competitive education industry.

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Borderless Education Best Practices in Southeast Asia: The Key to Regional Prosperity

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Abstract

Studies conducted by multilateral development institutions such as the United Nations, World Bank and ADB indicate a direct correlation between a country's investment in education and the level of socio-economic development, as measured by GNP, GDP, and Quality of Life indicators. Southeast Asian countries, like Singapore, Malaysia, and Thailand, have included education among their top priorities, as evidenced by government and private expenditures for this sector, and have developed at a faster rate than their neighbors.

At the same time, education is being globalized, which means that countries in the region must keep up with the latest technologies and trends in the delivery of education.

Computerization has lead to the creation of borderless classrooms and education without borders, in which the human beings' capacity to educate themselves is seemingly limited only by their willingness and ability to effectively employ information technology in the field of education.

The open university uses time-tested classroom methods as well as pioneering approaches in distance education. This concept has significantly reduced the cost of education for both students who need not leave their place of work or residence; and institutions of learning who now need not spend tremendous resources on buildings and other facilities, since the classes are being conducted off-campus with the use of computers.

This paper will make cross country comparisons in the best practices in borderless education. It will dwell on the significance of the open university concept to developing

countries like the Philippines, whose main hope in catching up with the rest of the region lies in their ability to deliver affordable, world-class quality education on a sustainable basis, to a broad segment of their population. The open university is an appropriate template in education for developing countries.

Keywords: Cyberspace, Education without borders, Globalization, Government Expenditures, Gross Domestic Product, Gross National Product, Information Technology, Multilateral Development Institutions, Open University, Private sector expenditures, Quality of life, Socio-Economic development, Template

INTRODUCTION

Studies conducted by multilateral development institutions such as the United Nations, World Bank and ADB indicate a direct correlation between a country's investment in education and the level of socio-economic development, as measured by GNP, GDP, and Quality of Life indicators. Southeast Asian countries which give top priority to education have developed at a faster rate than their neighbors.

RESEARCH OBJECTIVES

This paper will make cross country comparisons in best practices in borderless education. It will dwell on the significance of the open university concept to developing countries like the Philippines, whose main hope in catching up with the rest of the region lies in their ability to deliver affordable, world-class quality education on a sustainable basis, to a broad segment of their population.

The open university will be discussed as an appropriate education template for developing countries which must creatively use their resources to survive in a competitive global environment, where knowledge capital is at a premium, and where developing the human resource is key to national, regional, as well as global prosperity.

METHODOLOGY

This paper will identify best practices in distance education in Malaysia, Thailand and the Philippines. It will describe the advantages and positive impact of distance education on target beneficiaries.

In Malaysia, it has been reported that distance education is being utilized in mainstreaming impoverished sectors of society. In Thailand and in the Philippines as well, distance education is focused on enrollees in university degree courses.

MAIN FINDINGS AND RESULTS

The range of study modes in education extends from the traditional to the information and communication technology – based approaches. In between these two modes can be found the different styles of borderless education.

Similarly, the types of attendance or learner participation in the education process also vary, from internal or on-campus, external or off-campus, to the multi-modal which combines features of campus and web-based education.

In general, physical attendance characterizes traditional education; while physical distance between the mentor and learners is bridged by borderless education.

The different study modes also define the types of interaction: learner-instructor, learner-learner, learner-content, and learner-technology. The common element of all types is 'learner,' indicating the focus and raison d'etre of any learning system. (Hagel and Shaw, 2006)

Education is being globalized. Countries in the region are exerting efforts to keep up with the latest technologies and modern trends in education. Universities and other learning institutions feel that they have to produce graduates who can compete not only locally but in the regional and global markets as well.

The delivery of education has been observed to be technology-driven. The invention of paper, the printing press, and the computer and other tools of information technology have revolutionized the service of education.

In this decade, the developments in the field of education have been more rapid than perhaps any time in history. Computerization has created borderless classrooms and education without borders, in which the human beings' capacity to educate themselves is seemingly limited only by their willingness and ability to effectively harness information technology.

The open university has also significantly reduced the cost of education for both students who need not leave their place of work or residence, and learning institutions who now need not spend tremendous resources on buildings and other facilities; since classes can be conducted off campus with the use of computers.

DISCUSSION

The Malaysian experience underscores one of the major goals of distance education. It is the creation of effective formal and non-formal programs for the poor and marginalized.

The common problems faced by the impoverished workers are: vulnerability to exploitation, poor working conditions, lack of protection for home workers, instability of jobs and income, and the deterioration of agriculture vis-à-vis a growing industrial sector. In this socio-technological setting, information and communication technology (ICT) helps to create the enabling environment for poor rural workers to engage in economically productive, home-based work activities.

ICT addresses the need of poor rural learners to balance family, learning, and work requirements. Home work is cost-effective because it avoids costs related to transportation, clothing, child care, meals, etc. The use of ICT in home-based livelihood and education activities provide relief for the poor.

Lee Lee Loh-Ludher notes the educational levels of home workers. About 48% of them have primary education; 39%, secondary; 3%, post-secondary; while 10% have no formal education at all. Home workers comprise a significant portion of the DE learning population.

Around 55% of home workers (who are potential e learners) own mobile phones, 30% have access to mobile phones of other family members, and 27% use computers and internet. (Lee Lee Loh-Ludher, 2007)

According to Lee Lee Loh-Ludher, the reasons for the limited use of higher-end ICT include lack of capital, which restrains their ability to procure equipment; and lack of skills, which limits their ability to utilize already available ICT. These limitations are slightly mitigated by the fact that 10% have access to community computers or internet centers operated by non-government organizations.

Information and communication technology can transform homemakers into home workers. By the same token, home workers can be made e learners by ICT. Thus ICT-based distance education can have a significant role in the education and mainstreaming of the marginalized. At the same time, networks and organizations empower both the home workers and the e learners. Support groups are instrumental not only in generating livelihood opportunities for home workers, but in the education of e learners as well. (Lee Lee Loh-Ludher, 2007)

In this socio-technological context, community centers can serve as learning centers, as well as venues for public awareness raising and economic activities. Distance education can therefore be a potent tool for community development. By expanding the people's livelihood and educational opportunities, ICT-based distance education can enhance the lives of people in impoverished rural communities.

Moving on to Thailand, where eight higher education institutions offer distance education programs and courses, the university presidents are reported to have arrived at a consensus that DE will continue to gain importance in relation to other study modes. With a growing student population, DE can fill the gaps between supply and demand in education. At the same time, adequate financial support coming from the public and private sectors is considered a *conditio sine qua non* for sustainable distance education. (Keerati Tansantien, 2003)

According to Dr. Tansantien, the university presidents have also noted the benefits of DE. Distance education meets the time and place requirements of students. DE improves the public image of universities as being modern and technologically up to date. With ICT-based distance education, universities can contribute to both education and development process.

Last but not least, DE programs can be made cost-effective, in terms of reduced travel and maintenance costs for students. At the same time, savings in buildings, facilities and equipment accrue to providers of 'schools without classrooms.'

It has been observed that higher education is a fast-growing socially-oriented activity. Demand for higher education grows with increasing student populations, as well as with the human resource requirements of the global economy. The open university concept, distance education and other offshore learning strategies are key elements in meeting the growing demand for higher education, in Thailand and in the region as a whole. (Keerati Tansantien, 2003)

From the demand end, the open university concept supports the growing number of students. From the supply end, it compensates for the limited capacity of the system to provide the hardware and software of education, in terms of equipment, facilities and buildings; as well as faculty, teaching materials, and curricula.

In this regard, Dr. Tansantien mentions the experiences of two outstanding universities. Sukhothai Thammathirat Open University is the first HEI in Thailand to offer distance education graduate and undergraduate programs.

Suranee University of Technology has a borderless education project which offers courses through the world-wide web. Truly, the world is not only our home but our campus as well.

The Thai experience shows that when the mentors and learners are separated by time and space, distance education can provide teaching and learning activities through a combination of multi-media elements. These elements include: radio, television, video tapes, audio cassettes, video conferencing, audio conferencing, e-mail, telephone fax machines, internet, computers, and print media. (Keerati Tansantien, 2003)

Since these facilities are also present in other countries of the region, they can, in varying degrees, replicate the Thai experience in borderless education.

In the Philippines, while there are other players, the University of the Philippines is spearheading efforts in distance education. This relates to UP's leadership role in the production of new knowledge through ground-breaking research. This particular thrust of the University is aimed at solving problems in Philippine society, including those pertaining to poverty and education. (Cao, 2008)

Chancellor Sergio S. Cao stresses that as a research university, UP is also concerned with the dissemination of new knowledge far and wide, an area where the use of ICT has become of strategic value.

In line with this vision, the UP Open University was established in 1995 to provide wider access to quality education by offering both degree programs and non-formal courses through distance education. It also aims to develop a system of continuing education to sustain professional growth and improve technical skills for those who cannot easily leave their jobs or homes to engage in full-time studies.

The UP experience shows that digital provide can be a tool for the creation of novel approaches to mentoring as well as fast-tracking community development.

UP Open U provides a face-to-face meeting between mentors and learners four or five times in a semester. With on-line tutorials, it is now possible to do course work even if a student is based in a territory outside the Philippines. The few study sessions provide opportunities for DE students and mentors to interact.

Two-way communication between teachers and students exist through such means as: e-mail, telephone, computer, teleconferencing, and video.

The qualities of a successful DE student include: his/her willingness to do independent and self-motivated self-study, which is required in a learner-centered system. The student must also possess good study habits and time management skills.

CONCLUSION AND RECOMMENDATIONS

Due to space limitations, this paper only discusses the borderless education experience of three countries: Malaysia, Thailand, and the Philippines. However, from their collective experience, it is already apparent that distance education can be utilized in the delivery of informal education to the marginalized, as well as higher education to those seeking to earn academic degrees from universities. It demonstrates the versatility of borderless education in servicing practically all sectors of society.

Given the global trend toward borderless education, ASAIHL schools should dedicate more time and resources to develop the Southeast Asian region as a center of borderless education.

In this regard, the following **recommendations** can presented for your consideration:

1. ASAIHL member-institutions should share among themselves their best practices in borderless education.

2. ASAIHL as a regional organization should consider the creation of an ASAIHL web that will transform our region into a global virtual campus.

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Language Pedagogy in the Age of Globalisation: A Malay Experience

...learning principle virtually ignored... performance before competence
(Paul J.Gee 2007: 111)

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Abstract

Current language pedagogy would be significantly different compared to the language learning practices of the previous decade if cognition is a speech community's specific response to a given existential reality (Tham 1990). The changing interests and needs of the learners could influence significantly the approaches to the acquisition of foreign languages in the current age of globalisation. Language learning in this discussion focuses on Malay knowledge as process more than content. The Malay language pedagogy advocated is concerned with the ability to empower the learners to integrate with others in a multilingual setting. The visible motivation that drives Malay language learning through the specific visual media indicates a positive outcome. The technique has included a tangible language measurement as part of formal education. Despite the gregarious nature of this specific learning activity, the paper reports that the rate of cultural intelligence (CQ) intelligibility remains unaccountable not until actual language performance is observed in specific settings.

Keywords: Language Pedagogy, Cultural Intelligence, Video Clip, Malay Teaching

1.0 Introduction

In his National Day Speech Rally address to the nation on 19 August 2007, the Prime Minister of Singapore, Mr. Lee Hsien Loong had announced a special language programme enabling students in secondary schools to learn Malay as a third language. The curriculum policy initiated by the Ministry of Education in Singapore allows students who qualified for 4 or 5 years of secondary school education the opportunity to acquire Malay as an additional subject. Until 2007, 6 out of 10 students enrolling a third language did not complete it at O level in their secondary school education (Channel U news broadcast, Media Corps Singapore on 20 Aug. 2007). The updated curriculum policy promises tangible academic motivation for the completion of a third language. A contribution of 2 credit points towards polytechnics entry requirement is accorded to Malay as third language at O-level.

Following from the National Day announcement, Malay language pedagogy in Singapore enters into a new phase of language education in 2008. This late language acquisition management (see Baldauf et al. 2008:235, 246) revitalises Malay education as a relevant avenue to attaining higher education. Miriam Meyerhoff (2006: 108) identifies three accompanying factors contributing to ethno-linguistic vitality, namely status, demography and institutional support. The status of Malay as an official language strengthens with the counting of Malay language grade in the entrance requirement to tertiary institution. Singapore Malay, hence, becomes a prime example of ethno-linguistic maintenance with a new education policy that enhances the economic value of Malay acquisition. The alleviation of Malay to a contributing subject for higher social mobility in current language situation challenges the notion of possible Malay devaluation in Singapore (cf. Collins 2002: 113-114). The current development in curriculum policy is a positive intervention reflecting top-down attempt in revitalising Malay language at the national level. At the same time, the language acquisition management enhances the maintenance of multicultural communities in Singapore.

Revitalising Malay language education in Singapore goes hand-in-hand with developing Malay language pedagogy. In the age of globalisation, learning Malay should then be useful for new possibilities rather than a collective mental reference of ancient artifacts (Sew 2008a, 2007a). Current focus in language pedagogy would be significantly different compared to the language learning practices of the previous decade, if cognition is a speech community's specific response to a given existential reality (Tham 1990). The changing landscape of language education with a vested interest for vertical social mobility significantly influences the learning direction in the teaching of Malay as a foreign language.

In line with global pragmatics, the focus of Malay language learning shifts to knowledge as process more than content. Language pedagogy in this discussion focuses on the ability to empower the learners to integrate with others in a multilingual setting. Correspondingly, developing cultural intelligence (CQ) in Malay pedagogy resonates with the collective sense of being; progressing beyond geography boundaries towards an interconnected community (Steger 2003). CQ is broadly defined as understanding of unique characteristic of each person (Earley et al. 2006: 21). The elaborate definition of CQ encompasses three major components, namely, cultural strategic thinking, motivation and behaviour (Earley at al. 2006: 23, 121-122). CQ-based language pedagogy is advocated as a relevant model of viewing knowledge as process. This discussion maps Malay pedagogy with the third component of CQ within the context of Malay language pedagogy.

2.0 Prelude to Malay Language Pedagogy

CQ-based knowledge process is viable in Malay pedagogy with the inclusion of ICT although it does not exclude content from formal learning. CQ is relevant to language learning in general and Malay acquisition in particular. The theoretical standpoint is that learners experience multiple worlds based on different languages to compare and contrast the relationships between language acts (cf. Gee 2007: 112). A CQ-designed Malay lesson via video clip becomes a viable channel to compare language acts. At the same time, the lesson is an alternative in lieu of lab-based listening in language education. The use of video clip as a listening resource may offer a remedy to Bernard Spolsky, who considers the deadening drills of audio-lingual method as *a potential monster in language teaching* (2008: 1). With CQ in mind, language educators could consider linking the learner's culture-specific mind with other forms of language-cultures (cf. Sew 1997). In terms of CQ, early pedagogical intervention is upheld to prevent cultural autism among language users through language education (see Earley et al. 2006: 96, Sew 2008a).

The discussion informs on classroom practice that addresses issues arising from language acquisition management. Teaching practice in a dialectic relationship with policy is of utmost importance in educational linguistics (cf. Hult 2008: 18). Based on Malay lessons at Centre for Language Studies (CLS) at National University of Singapore, an episode of Malay pedagogy conducted at tertiary level is put to scrutiny. The discussion begins with a survey of some existing teaching traditions before introducing CQ as the modus operandi of a particular Malay unit. Video clip as an information and communication technology (ICT) tool is incorporated as a stimulatory for the introduction of CQ in Malay learning. Bearing in mind the need of diagnosis in formal learning (Huhta 2008), the discussion also examines the use of written question as measuring tool in this CQ- and media-based Malay pedagogy.

2.1 Existing Pedagogical Tradition 1: the London observation

Based on his classroom observations, Ben Rampton (2006) notices that the traditional IRE structure of classroom talk, i.e. *teacher initiates, pupil responds, teacher provides evaluation*, did not work well due to the intractability of the students. Rampton (2006: 119) writes:

"*…teachers were inclined to be tolerant of the excesses of the apparently keen, and this is likely to have intensified the exclusion of the disengaged, but as long as the alliance held up, at least some sense of progress and value could be derived."*

The common teacher-initiate-student-respond question and answer pedagogical technique seems to by pass the disengaged students easily. This results in verbal encouragement-cum-reinforcement for the active or extrovert learners and alienation-cum-passivity for the reserved or introvert learners in language classroom. The pedagogy dynamics of IRE may swing to one extreme of indifference and aggravates the inequality of learning due to mismatch between learning methodology and learner differences. Despite its weakness, the discussion maintains that IRE is a direct pedagogy method for gurus to assess students' verbal and learning progress. The method may be utilised effectively if the laissez faire IRE approach is modified to a directed IRE method. In an orderly sequence each student could be given the chance to respond to question under directed IRE. This would create an evenly engaging learning atmosphere rather than a monopolised responding session in the classroom.

2.2 Existing Pedagogical Tradition 2: Tasmanian's IT concern

In relation to Malay language pedagogy, Ismet Fanany (2003: 165) points to a need of selecting ICT wisely as students may learn about the function of ICT more than the target language. Another caveat to ICT-mediated pedagogy is the advent of endless enquiry by students to instructor via electronic media, which is indeed counterproductive to conscientious learning. Against the cautionary remarks, current Malay pedagogy could derive benefit from a blend of ICT and interactive language activities in classroom delivery. Possible pall factor incurring from misappropriation of ICT in online lessons cautioned by Lisa Botshon (2006: 99), however, does not mar ICT as part of integrated pedagogy for current learning.

Based on the data in 2006, Yu (2007: 425) informs that 61.4 % of Chinese internet users blog, which amount to 75.565 million bloggers.[1] Interestingly, McLaren (2007: 411) reports that 1 million people had experienced web marriage, a popular practice among Chinese. Internet culture is part of youth culture further allowing for ICT based pedagogy to transcend individual difference towards an interconnected community of practice. Digital literacy in language classroom could create materially and intellectually significant learning experience for both tech-savvy and non-tech savvy adolescents. Malay students at CLS, who have blogged their learning experience, identify with the power of ICT in learning beyond the traditional medium of pen and paper. Upon inspection on Amy Soh's blog, the recorded learning experience is provided. There were eight weekly entries in Soh's Malay blog, which started since January 2008. Here are the first two blog entries (http://amymalay.wordpress.com/):

1st Entry January 23, 2008 by amymalay

Sekarang hampir pukul enam petang hari. Saya rasa sangat letih tetapi cikgu menuruh *(menyuruh)* kelas saya mengeblog. Saya tidak suka mengeblog dan saya tidak pernah membuat ini.Saya tidak suka mengeblog dan *(atau)* semua kerja komputer kerana saya tidak baik *(pandai)* dengan teknologi.

[It's almost six in the evening. I felt tired but the teacher asked the class to blog. I don't like blogging and I have never done this. I don't like to blog or any kind of computer work because I am not good with technology (my translation)]

Idea for project? January 26, 2008 by amymalay

…Saya berfikir mengeblog ialah baik kerana itu membesar vocab melayu saya. Itu juga membaikkan grammar melayu saya apabila cikgu memberi comment.

[I think blogging is good because it expands my Malay vocabulary. It also improves my Malay grammar when the teacher offers his comments (my translation)]

*I really appreciate and thank Cikgu Sew for your efforts in helping us unconditionally through our journey of learning malay!! Hope my writings have not caused too much of a headache for you! =)

The excerpts above show a number of learning-related matters in relation to the use of blog as a student-centred tool for sustained practice in Malay acquisition. Non-IT-savvy students may discover the joy of blogging from learning Malay although there may be reservation initially. The use of blog as an ICT tool to develop and promote language learning is an effective and convenient approach. This is a two-bird-with-one-stone strategy since blogging is part of young learner's culture and the continuity of practice for language acquisition is met. Notice that the errors in the blog are rectified in brackets after the guru posted comments to the entries. The constraints of time and space is transcended in blog-based Malay pedagogy. From the language pedagogy standpoint, Malay gurus may find the inclusion of blog a welcome to one's teaching repertoire because ICT realigns Malay teaching to the learning profile of their students.

[1] A local research group estimates that there are 17000 bloggers in Singapore. http://blog.harro.com/2007/01/25/how-many-blogs-are-there-in-singapore/

2.3 Existing Pedagogical Tradition 3: The Chinese Method

In response to the caution on guru-led (IRE) teaching that alienates the disengaged learners, this discussion turns to Confucian learning as a pedagogical alternative. Wu Zongjie (2007: 4-6) informs that it was the student rather than the guru who initiates the discussion as recorded in the Analects. Wu further explains that Confucius rarely took initiative to ask students a question; rather it was always the student who must have something to say first before the guru can think of offering or not offering advices. This ancient wisdom that the teacher in the students emerges when the time is ripe, however, requires reinterpretation.

Wu's observation shows that Confucian-based inquiry in learning is a solid foundation for the pursuit of knowledge as content. In language acquisition, communication skills delivered through practical instructions based on specific-tasks are necessary. Inevitably, CQ or cultural intelligence becomes an important aspect of language education whenever dialoging is involved. Language students could be acquainted with pragmatic-sensitive interpersonal interactions in the target language setting. Based on this premise, knowledge as process could be a core component in complementing the Confucian-based enquiry in language learning.

This combination of CQ- and media-based pedagogy if incorporated with simple technique of directed questioning could further reinforce the learning outcomes in a language classroom. The remainder of this discussion explores a Malay lesson that incorporates CQ into ICT integrated pedagogy with diagnostic measurement. The combination provides an enriching learning experience of Malay befitting formal foreign language education at tertiary level.

3.0 Malay Discourse through ICT

Arguably, understanding the Malay ways of speaking is part and parcel of acquiring Malay CQ. Shi-xu (2005: 20) identifies ways of speaking as discourse. Discourse, in this respect, is constitutive of and integrated within contextual reality. Daily expression noted from the ways the Malay speech community uses flora in metaphorical reference, infusing sub-morphemic rhyming in discourse, and applying compounding descriptor in colour terms become part and parcel of Malay verbal performance. Samples of these expressions are as follows:

Flora-based metaphors	Literal translation	English Glossary
Keladi bunting	Swollen Yam	Pregnant
Miang kelabi	Itchy Yam	Indecent Behaviour
Tahun jagung	Corn Year	Three to four months
Setahun padi	A year of rice	Six months

Sub-morphemic rhyming	Literal translation	English Glossary
Lintang-pukang	Cross cutting	Helter-skelter
Hingar-bingar	Noisy noisy	Very noisy
Kelam-kabut	Gloomy foggy	Chaotic
Simpang-siur	Corner nonce word	Hustle and bustle

Colour compound	Literal translation	English Glossary
Kuning langsat	Yellow + langsat (fruit)	The yellow colour of healthy skin
Kuning air	Yellow + water	Beige
Hitam manis	Black + sweet	Dark colour of skin
Putih melepak[2]	White + nonce word	White as snow

The above ethnographic schemata offer insights to Malay learners, who could be ignorant about the intricacies of discourse as an amalgam of language-culture in Malay. The illocutionary force of such phrases may not be appreciated enough without viewing their use in actual discourse setting. A video clip of Malay interaction demonstrating the speakers in their face-to-face verbal performance becomes a relevant resource for Malay acquisition. The clip supplies an authentic reality of indirect Malay communicative acts (Sew 2008b).

Visually, the Malay cultural scripts included in the selected Malay video clip contain valuable socio-pragmatics of daily discourse. These Malay verbal transactions transcend the boundaries of history, literature and religion in main stream Malay studies, which may be predetermined by the value judgment of the authors (Sew 2008a, Lankshear and Knobel 2005). Furthermore, the clip provides good listening practice based on native pronunciation. The viewing of the clip replaces audio lab listening, which is normally carried out individually with the aid of headphones in a mechanistic manner. Immediate discussion between learners and their teacher following the clip provides effective intervention to any listening difficulties that may occur amongst the learners.

By renewing modern Malay discourses by means of a video clip of traditional Malay romantic setting, this discussion rejuvenates learning with the cultural voices of native speakers. The discourse actors in the video are seen as *others* by the learners of Malay as foreign language (cf. Shi-xu 2007: 7). By examining cultural-specific styles of speaking in the selected discourse of Malay media, the guru re-enacts the socialisation of Malay relation-building exemplifying indirect cultural intelligence (Sew 1997). Additionally, the Malay pedagogy presents a rich view of language analysis complementing the acquisition of grammar with actual verbal performance. Coupled with ethnographic styles of speaking, sentences tailored to the strictest grammar rules could transform into meaningful acts of communication. Developing cultural meaning in the process of fitting grammatical sequences into the macrocosm of Malay verbal interaction reflects a performance epistemology (Lankshear and Knobel 2005: 173).

Performing discourse is indeed a gregarious human enterprise if it is communicated appropriately as depicted in the clip of Malay romance. Through the use of media, the learners of Malay see a folk window, as it were, displaying the pleasure of meaning making in the Malay language classroom. The Malay visuals highlight CQ-related pitfalls that may be avoided to foster language-specific interpersonal intelligence. Performing good discourse involves empathizing with the particular ethnic speech styles and acknowledging gender difference as portrayed in the visuals.

[2] *Melepak* in the Malay compound colour term for *putih melepak* is not the same as *melepak* (loitering) because this central vowel [e] of the former is a schwa which is a variant of the front [e] in the latter (see M. Yunus Maris 1980: 6-7).

The symbolic dimension of intelligent speaking beyond grammar rules becomes a facet of logic transcendence in pedagogy (Lankshear and Knobel 2005: 192). Cultivating empathy for Malay CQ is a symbolic learning development of interpersonal intelligence engendered in the comprehension of daily Malay acts in discoursing (Sew 1996). Learners are led to consider the style of presenting a verbal motion by observing language-cultural routines in interaction including apt metaphorical reference in emotional expressions (Sew 1997). Gradually impressed upon the learners, who observe that performing Malay discourse among the dyads is a form of interpersonal bonding in pedagogy, illustrates the process of logic transcendence (Sew forthcoming, Lankshear and Knobel 2005).

3.1 Using Malay Video Clip as Resource

The video clip of *Raden Mas* used in the Malay lesson conducted actually lasted 37-second. The students were exposed to the Malay verbal performance twice at the beginning of the lesson. It is observed that many students were more interested in copying the sentences written for them on the board. Time should be allocated for the learners to write down the three phrases provided as follows:

Pangiran: *Lihatlah Mas Ayu, sungguh indahnya alam di malam ini di bawah sinaran sang rembulan*.

[Look Mas Ayu, how beautiful the nature tonight under the rays of the mighty moon]

Mas Ayu: *Ya Pangiran. Kimbang di air turut ikut menikmati sinarannya*.

[Yes Pangiran. Even the hyacinth on the water has followed suit to enjoy the rays]

Pangiran: *Sungguh banyak bunga di taman yang beraneka warna tetapi kiambang inilah yang memikat hatiku*.

[Very many flowers in the garden with multiple colours but this hyacinth has indeed attracted my heart]

Distraction to the listening practice was minimised after ensuring that the utterances of the two actors were recorded. Providing the background to the video clip including the name of a neighbourhood in Singapore[3] that bears the same name with *Raden Mas* along with its myth has galvanized the students in five classes to follow the video clip closely. The difference in experiencing verbal performance and reading written phrases was contrasted. Subsequently, the students underwent two more rounds of dialogue tracking.

[3] See communal activities at the *Raden Mas* neighbourhood in Singapore: http://sg.news.yahoo.com/cna/20080314/tap-334947-231650b.html

In the first tracking, the students decoded the written phrases broadcast without the visuals. In the second tracking, the full viewing of video clip was delivered. Visibly, the students began to realise that communication acts representing the phrases imbued with emotional substances were more meaningful. The viewing of the video clip offers a mental projective stance to the learners to play the actor by allowing them as projective beings (cf. Gee 2007: 99). Emotional intelligence underscored the interpersonal and intrapersonal intelligences in verbal discourse (cf. Gardner 1993, Lazear 1999). The notion of CQ became clearer to the students and knowledge as process developed in the ICT-based Malay pedagogy.

The next segment of the ICT-based pedagogy was the DIY (Do It Yourself) portion of Malay learning, which included verbal exchanges between students themselves. The gregarious experience from re-enacting the communication acts provided a realisation that joyous and positive ways of being necessitate healthy living advocated in Malay language-culture (Sew 2008b, 1997, 1996, forthcoming). The experience of speaking a foreign language generated an element of fun. At the same time, the students were reminded that all discoursing should endeavor to achieve positive intrinsic and extrinsic outcomes.[4]

3.2 Measuring Malay Learning

Progressing from the DIY portion is the measurement of the student's comprehension of the content in the video-clip. A worksheet is designed to complete the formal learning in Malay pedagogy. The video clip is played twice for the students to answer five simple Malay questions in the format shown below:

Helping words:

Perbualan: conversation *Kiambang*: hyacinth *Suasana*: condition

1. *Terangkan suasana malam ini*. [Explain the condition tonight]
……...(2m)
2. *Apakah yang bersinar?* [What is it that shines?]
……...(2m)
3. *Kiambang hidup di mana?* [Where does hyacinth live?]
……...(2m)
4. *Terangkan bunga di taman.* [Describe the flowers in the garden]
……...(2m)
5. *Apa yang memikat hati Pangiran?* [What attracts the heart of Pangiran?]
……..(2m)

[4] The joy of daily discoursing is reinforced by the creation of Malay characters such as *Cerita Pak Pandir, Mat Jenin*, and *Lebai Malang* in classical folklores. Although the hilarious characteristics signaled a strand of inferiority in relation to standard western social psychology, nevertheless these are anecdotes of lighthearted folk psychology prompting happy ways of beings for the speech communities.

The use of this learning measurement has discovered more interesting learning points. Many students do not understand the instruction word *terangkan* (explain), which is derived from the suffixation of *terang* (bright) with *-kan* (causative suffix). The combination of the Malay morpheme and suffix produces a Malay directive. The meaning of *explain* as a metaphorical semantic extension beyond the meaning of *bright* in Malay becomes an additional information in learning.

Question 5 remains a puzzle to many as the students are not sure if the heart of *Pangiran* is attracted to *Mas Ayu* or the water hyacinth. The confusion, however dissipates as soon as the students are reminded that the question word *apa* (what) does not correspond to human being in the Malay discourse of question and reply. The students notice the use of *hati* (liver) in the common expression for heart as the container of emotion in Malay, which is similar to Mandarin.[5]

4.0 Concluding Remarks

The discussion informs on an amalgamated Malay pedagogy incorporating a video clip as ICT tool and a worksheet as measurement tool. The process of including CQ in Malay learning is initiated from the viewing and re-enacting of communication acts in Malay verbal performance. While the gregarious nature of learning generates a positive turn of fun and conscientious learning it is not clear if this experience could guarantee any lasting sensitivity and intelligibility on Malay discoursing. Verbal hygiene requires sustained practice and a change of mindset, which is beyond the capacity of a 90-minute language lesson at the tertiary level. More language-culture practice is necessary to cultivate CQ as a way of professional conduct for speakers of Malay as foreign language.

Nonetheless, the ICT-based Malay pedagogy is a relevant teaching repertoire for language education for the universities of Southeast Asia. The methodology incorporates media-based experience in the course of foreign language training. The content knowledge of acquiring Malay vocabulary and phrasal construction as well as process knowledge on verbal styles of indirect speaking are reinforced by verbal practice and questions set as guided measurement. Secondary school education that includes Malay as third language may consider this report as a lesson prototype for developing pedagogies befitting the language curriculum. The teaching and learning of Malay may consider the fun element, which is an important factor to engage the young learners, irrespective of secondary or tertiary education.

[5] The metonymic function of *hati* in *hati saya tak senang* (my heart is uneasy) refers to troubled or unhappy feeling rather than the onset of a liver failure. Furthermore, *jatuh* (fall) *hati* (liver) means falling in love, *susah* (difficult) *hati* (liver) means sad, *senang* (easy) *hati* (liver) means happy, *sakit* (pain) *hati* (liver) refers to grudge, *busuk* (stink) *hati* (liver) denotes wicked, *kecil* (small) *hati* (liver) refers to rebuke, *kecut* (rumpled) *hati* (liver) means cowardice, and *panas* (hot) *hati* (liver) denotes anger (cf. Sew 2007b).

Acknowledgement

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Borderless Higher Education: Need to Be Reviewed and Revised for the Betterment of Southeast Asian People

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Abstract

The growth of information and communication technologies has brought new higher education to Southeast Asian countries. Southeast Asian people have access to the source of knowledge around the world. However, it is only one-way higher education: the education that Southeast Asian people mainly receive ideas, knowledge and actions from the Western world and tremendously caused problems in Southeast Asia region.

The paper will discuss the problems of one-way education in Southeast Asian countries. The concept of two-way education will be proposed for the betterment of Southeast Asian people. Finally, the author will also propose the CCPR Higher Education Model as the other alternative activity for Southeast Asia region.

Keywords: Higher Education, One-way Education, Two-way Education CCPR Model.

Meaning and Scope: Higher Education Transfer with No Constraints

The word Borderless Higher Education may have as many definitions as the number of the people who defined it. Nevertheless, the author considered that Borderless Higher Education (BHE) means the higher education system that all countries can transfer to each other without political, economic, social and technological constraints. According to this definition, differences in politics, economy, society and technology will not be obstacles for many countries to quickly get access to BHE and exchange it with each other as in the present time.

The definition and the scope previously mentioned did not occur in the past and if they come into existence, it will take a lot of time and great efforts to solve problems such as differences between the democratic political system and the socialist political system, marketing economy and centralized activities, and even between open and closed societies. Consequently, higher education of each country cannot be transferred to others despite their readiness in technology and communication.

According to this definition, the whole picture of borderless higher education or borderless education seemed to begin with the collapse of the Berlin Wall that brought about the borderless communication of knowledge, ideas and international activities.

Forms of Borderless Higher Education: From Overseas Study to On-line Education

As a matter of fact, the system of higher education itself has already been international or borderless. However, it is not really borderless because of the political constraints. When the world political system is open, Borderless Higher Education will completely emerge.

Presently, we can clearly see that existing borderless higher education has at least 4 main forms, namely

1. Overseas Study
2. Partnership Programs
3. Offshore Education
4. On-line Education

Overseas Study has been the oldest form of borderless education since we had the communication with foreign countries even though there were some problems concerning regulations and criteria of each country. Partnership Programs were later developed by the collaboration of each country in producing graduates and doing research together. Part of the study may be taken in one country and the other part in the other country. Nowadays, this system widely occurred. Offshore Education or the establishment of offshore universities is extensively emerging now in parallel with On-line Education for students who live in one country to take on-line education of another country (Srisa-an, 1998).

Conditions and Problems of Borderless Higher Education: One-way Higher Education

The system of Borderless Higher Education has created continuous growth and development in Southeast Asia region since the Colonial period. Distinguished values of Borderless education are

1. **Keeping up with Global Changes.** Learning through Borderless Education by sending people to continue their studies overseas, implementing partnership programs or having on-line education enabled Southeast Asian community to keep up with global changes, not to lag behind other regions and to adapt themselves well to the world.
2. **Modernizing Southeast Asia.** Since there was communication with foreign countries, particularly European countries, the system of Borderless Higher Education has modernized Southeast Asian people and territories and improved their living and social system.
3. **Having Sufficient and Various Goods and Services.** Because of BHE, European and American knowledge system, academia and technology are regularly and adequately transferred to Southeast Asia. Goods and services that occurred extensively have provided sufficient conveniences to Southeast Asia region.
4. **Having a Better Living.** The growth of Borderless Higher Education resulted in better knowledge and understanding of the life style and activities of Southeast Asian people. With new technology from the West, they have a better and more modern living.

Anyway, the constraints of Borderless Higher Education which distinctly occurred is the one-way system that made Southeast Asian people unable to depend on themselves. They imitate, become consumerist and lack new ideas (Sinlarat, 2005).

The remarkable phenomenon is the overseas study. It is found that only Southeast Asian people continue their studies in Europe, America and Australia; oppositely, very few people from these countries study in Southeast Asia. Partnership Programs are the programs through which Southeast Asian universities collaborate with Western universities. Regarding the offshore education system, we found that only Western countries opened their campuses in Southeast Asia. In the on-line education system, most data are obtained from the West as well.

Creating Balance with the CCPR Model: the Direction that Should Be Taken

In order to make the concept of borderless higher education proceed with efficiency, values and equality, the author considered that we must create the two-way Borderless Higher Education system. This means receiving the European thinking system and simultaneously transferring Southeast Asian thinking through internationalization.

To change into the two-way system, it is essential to have new higher education in Southeast Asia, and one alternative which may occur is the CCPR Higher Education Model. The model that enhance higher education in Southeast Asia to have ideas. knowledge, and products for transferring to other countries outside Southeast Asian Region.

1. **Critical Higher Education.** The significant starting point of the alternative higher education in Southeast Asia region is to produce graduates with critical mind so that they will understand the problem of one-way education, see through it and are determined to seek the way out in the future.
2. **Creative Higher Education.** Higher education in Southeast Asia region must be developed into Creative and Innovative Organization. They should not be only the institutions that principally receive western knowledge and ideas. Learning and instruction must be earnestly developed in higher education institutions of Southeast Asia.
3. **Productive Higher Education.** Higher education of Southeast Asia region must yield production and must not only consume western higher education all the time. Research and inventions must be strongly supported (Sinlarat, 2007)
4. **Responsible Higher Education.** Higher education in Southeast Asia region must really review their roles and responsibilities to see whether they have truly assisted in creating peacefulness and prosperity in the region or not and how much glory and advancement they have genuinely created for Southeast Asian people.

Conclusion: One Goal, Sharing Path

For the new model of higher education to move toward real Southeast Asian values and meaning, the author would like to propose that we the people in higher education share the path for the same goal.

First, will it be possible for us to declare the CCPR Model, the new direction of higher education of Southeast Asia, under the name of "Bangkok Declaration" in Bangkok?

Second, will it be possible for us to declare the new direction of higher education of Critical Higher Education under the name of "Hanoi Declaration" in Hanoi? This means higher education institutions (HEIs) in Vietnam with takes lead in critical higher education.

Third, will it possible for us to declare the direction of Creative Higher Education under the name of "Kuala Lumpur Declaration" in Kuala Lumpur? This means HEIs in Malaysia may take lead in creative higher education.

Fourth, will it be possible for us to declare the direction of Productive Higher Education under the name of "Singapore Declaration" in Singapore? This means universities in Singapore may take lead in Productive higher education.

Fifth, will it be possible for us to declare the direction of Responsible Higher Education under the name of "Vientiane Declaration" in Vientiane? This means university in Laos will take lead in Responsible higher education.

Initially, the author contemplated the work and the activities in 5 countries. Actually, we still have many items to consider and undertake. Even if each country in Southeast Asia takes just 1 item, it would be too hard to accomplish.

Finally, the author does not mean to say that the CCPR is already complete and that there is no need for further consideration. The author only wants to emphasize that we must seriously think about what we will do by ourselves and do it creatively for the well-being of the people and the countries in our region.

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Guru vs. Google: Changing Face of Higher Education in Thailand

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Abstract

After centuries of little change, the role of the Guru or a teacher as it has been traditionally defined and practiced in Thailand and the rest of South East Asia is on the verge of becoming an anachronism. Now it is Google, not the Guru who has all answers to the big questions of life and learning. New and emerging pedagogies are harnessing the power of Internet and Communication Technologies (ICT) at a very fast pace. New trends in eLearning and mLearning are bringing about dramatic changes in the global educational landscape, transforming the breadth, depth, quality and opportunities for learning from anywhere for any one and at any time. Has the current trends in higher education in Thailand have caught up with what is happening in the West and the neighboring countries such as China, Hong Kong, Malaysia, Singapore and India?

Keywords: Borderless Education, eLearning, eReadiness, Guru, Google, Global Market, gLearner, Infrastructure, Internet, Language, mLearning, Research & Development, World Wide Web.

INTRODUCTION

Globalization is center stage in the contemporary world. New and emerging technologies are harnessing the power of World Wide Web at a very fast pace. In Borderless Education the learner-centricity and the quality of programs, courseware and delivery systems is becoming a key facet of higher education [1]. As Thailand gears up for Borderless Education, addressing issues of connectivity and capacity, developing high quality courseware content complying with international standards has become very crucial.

In Thailand eLearning[1] and mLearning[2], as it is throughout the world, is *evolutionary*. The first signs of change in the Thai political, economic and educational environment emerged in the late 1990s when private enterprise rose in importance and government launched the new

[1] eLearning: The process of learning enabled by the use of software and Internet tools

[2] mLearning: The process of learning enabled by the use of mobile devices such as “Smart phones”, PDA’s and iPods. For example, several US universities have over 60 courses based primarily on the use of iPods

Information and Communication Technology ICT programs. Since that time the student profile in Thailand has drastically changed in its social, cultural, and economic context. Those who fail to recognize the student's changing profile, from that of traditional learners to a global learner (gLearner) run the risk of failure in a very competitive global market of Borderless Education. New developments in Borderless Education are forcing the Thai universities to focus on the quality of their academic programs and courseware not only to attract student from neighboring countries but also become more competitive. To participate in the increasingly competitive global education market of higher education Thai universities need to recognize three major forces discussed in the three sections as follows: Section-1 outlines the language issues, especially the use English language as the main delivery medium of the Borderless Education. Sections-2 deals with new paradigm of Guru vs. Google and examines the limitations of traditional higher education and reflects upon the eReadiness framework and reforms needed in Thai universities and Section-3 briefly discusses the implications of lack of focus, coherent national policy, investment and recruitment of foreign talent in Thai universities for Research and Development (R&D).

Using data derived from a recent mLearning survey at Assumption University and statistics from various resources including current eReadiness report from Economist Intelligence Unit, Global Information Technology report and Internet-world-Stat this paper will focus on these three challenges and opportunities for Thai universities for participating in a very competitive global education market.

1. LANGUAGE OF BORDERLESS EDUCATION

In the growing Borderless Education market the use of English language in Thai universities is the first and the foremost of all the challenges. De-facto language of the internet is English. As shown in Table-1 the majority of content on the World Wide Web is distributed in English language [2]. In other words, for Thailand the historical lack of foundation in English is a critical disadvantage.

Table-1 Top 10 Languages in the Internet*

LANGUAGES	**% of all Internet Users**	**Internet Users by Language**	**Internet Penetration by Language**	**Language Growth in Internet (2000 – 2007)**	**2007 Estimated World Population for the Language**
English	30.20%	376,708,552	18.40%	165.40%	2,042,963,129
Chinese	14.70%	184,001,513	13.60%	469.60%	1,351,737,925
Spanish	8.50%	106,529,930	24.10%	331.60%	442,525,601
Japanese	7.00%	87,540,000	68.00%	85.90%	128,646,345
French	5.00%	62,211,627	16.00%	410.00%	387,820,873
German	4.90%	60,761,834	63.00%	119.30%	96,488,326
Portuguese	4.10%	50,828,760	21.70%	570.90%	234,099,347
Arabic	3.70%	46,359,140	13.60%	1575.90%	340,548,157
Korean	2.70%	34,430,000	46.00%	80.80%	74,811,368
Italian	2.60%	32,860,087	55.20%	148.90%	59,546,696
TOP-10 LANGUAGES	**85.00%**	1,042,231,443	20.20%	217.30%	5,158,804,027
Rest of the Languages	**16.50%**	206,125,983	14.60%	534.70%	1,415,478,651
WORLD TOTAL	**100.00%**	1,248,357,426	19.00%	245.80%	6,574,666,417

*Source- Internetworldstat.com

The lack of usage of English language in Thai universities has also created a huge vacuum which has been filled by practices lacking international standards and accreditation benchmarks leading to substandard degree programs, courseware and educational practices. Instead of creating their own high standards many Thai universities as a result have willingly assumed an inferior role of becoming gateways for the foreign universities. In addition, lack of a strong English press, news papers, magazines and mass media has further diluted the university academic environment in Thailand.

Tallying the number of speakers of the world's languages is an increasingly difficult and complex task, particularly with the push in many countries to teach English in their government funded schools, colleges and universities. Private schools and universities in Thailand and elsewhere in Asia promote English as the medium of instruction. How many people actually use English language in their daily lives remains a controversial issue? David Graddol in his Future of English Report prepared for the British Council in 1997 estimated a total of 750 million L1 (first or native language) plus L2 (second or nth language) speakers of English. Since the submission of his report in 1997 the frantic growths of internet technologies have drastically altered this statistics. Another researcher Prof. Braj Kachru in his new book Asian Englishes claims that India and China combined have over half a billion "users" of English [3].[3] Children all over the world are the early Internet adopters if they are given the chance to surf. Fig-1 below uses data from the first two columns of the Table-1 given above to graphically show the changing trends in the usage of languages on the internet.

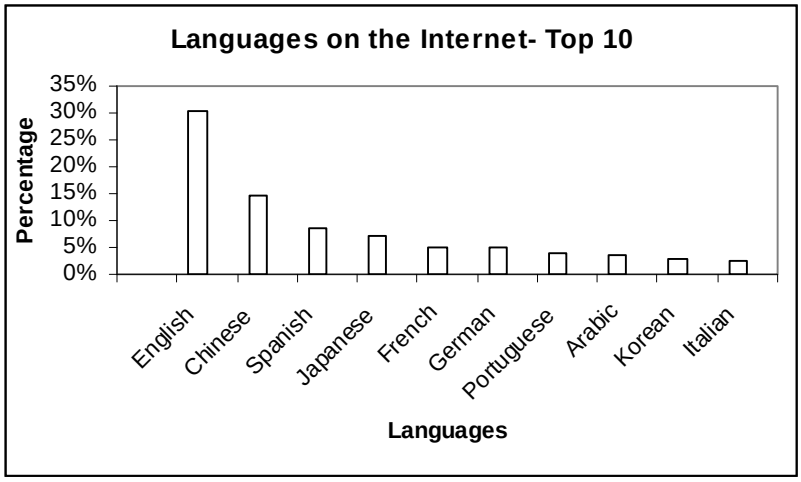

Fig-1 Top 10 Languages in the Internet

The content on the World Wide Web is predominantly available in English language. Unfortunately, excepting for a few universities located in Bangkok, others have been slow to embrace this fundamental element of the Internet. Thai universities responding in part to student demands have been slow to develop high quality and efficient eLearning courseware. These two factors, the lack of an effective English learning paradigm in majority of Thai universities combined with an inefficient and poorly constructed curriculum drastically lower their status in the Borderless Education market. Thai universities need to fully commit to higher standards for Borderless Education by developing a much stronger focus on enhancing their English teaching-learning models.

[3] A native of Kashmir, India Prof. Kachru holds joint professorships in linguistics and comparative literature at the University of Illinois at Urbana-Champaign, USA where he has taught for the past four decades

2. GURU vs. GOOGLE

The First Law of Internet states that all the answers to one's query are available on the Internet. Therefore the quest is no longer about where to find a good Guru but learn how to frame the question on the Google? With increasing use of new communication technologies in higher education in the West the role of Guru is becoming peripheral. Although usage of the Internet and resources such as Google, Yahoo, Wikipedia, YouTube, MySpace and Second-Life and many other web services has increased in Thailand, most of the Thai universities still continue to take pride in the traditional "Sage on the Stage" model and keep allowing the delivery of didactic and stale programs and courses. Another important issue is concerned with the slow pace of reforms in the Thai higher education. These reforms include the effective usage of new ICT solutions available for increasing the quality of higher education [4]. The results of a recent survey conducted at Assumption University and discussed below indicate the poor usage of ICT in higher education.

2.1 Assumption University mLearning Survey

College of Internet Distance Learning (CIDE) at Assumption University conducted an on-line survey to gauge the opinion of students about usage of mobile devices in their education[4]. First part of the survey targeted students who currently posses a mobile device and the second part targeted those who currently do not posses a mobile device but would like to own one in the near future. This on-line survey was conducted from September 2007 to December 2007. This paper only uses a very limited data to illustrate how students actually feel about the state of ICT in their university. Fig-2 below gives the gender of 186 respondents who participated in the first part of survey.

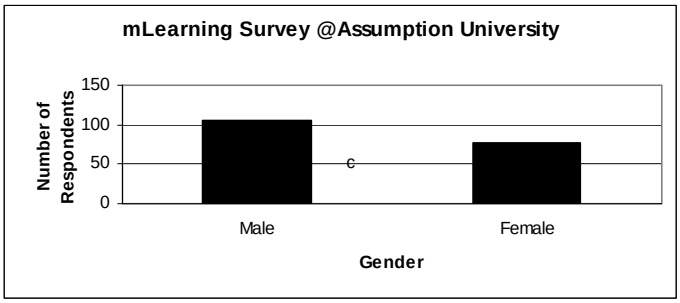

Fig-2 Gender of Students

Most of the young people enrolled in the universities use a mobile device for communication and other related services. Fig-3 illustrates various mobile devices owned by students participating in the survey. These mobile devices are capable of providing various services that could be utilized by the universities to enhance the quality of education.

[4] Details of the survey can be found at the Assumption University website: http://el.au.edu/mlearning

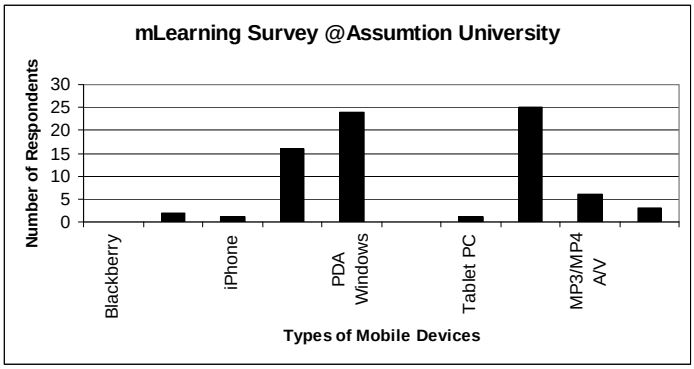

Fig-3 Types of Mobile Devices

In this survey Question-19 in particulate relates to the usage of mobile devices in higher education. The students were asked to rate the 12 parts of this question on the scale of 1-10 (1 = lowest useful, 10 = highest useful).

Q19- Which of the following applications would you consider as the most important and useful for you, if implemented to be used on your mobile devices? (1 = lowest useful, 10 = highest useful)

1. RECEIVING SMS FROM MY UNIVERSITY ABOUT NEWS AND ANNOUNCEMENTS
2. LISTENING TO AUDIO LECTURES ON MY MOBILE DEVICE
3. WATCHING VIDEO LECTURES ON MY MOBILE_DEVICE:
4. READING EBOOKS AND ARTICLES ON MY MOBILE DEVICE
5. READING LECTURE NOTES AND POWERPOINTS SLIDES ON MY MOBIL DEVICE
6. IMPROVING MY ENGLISH SKILLS
7. TO COMMUNICATE WITH TEACHERS
8. TO COMMUNICATE WITH_OTHER STUDENTS
9. PLAYING EDUCATIONAL GAMES
10. ACCESSING UNIVERSITY WEBSITE ON MY MOBILE_DEVICE
11. REGISTERING FOR MY COURSES USING MY MOBILE DEVICE
12. PAYING UNIVERSITY BILLS BY MY MOBILE DEVICE

Responses for this question illustrated in Fig-4 clearly indicate that the majority of the students would like the university educational system be enhanced to make use of the various features of mobile devices. Just this one important question posed to students in the survey indicates that the universities need to invest more money and efforts in the efficient usage of current technologies already in the hands of the students. Majority of the students participating in this survey think that implementing “RECEIVING SMS FROM MY UNIVERSITY ABOUT NEWS AND ANNOUNCEMENTS” (Part-1) and “REGISTERING FOR MY COURSES USING MY MOBILE DEVICE” (Part-11) will be very useful.

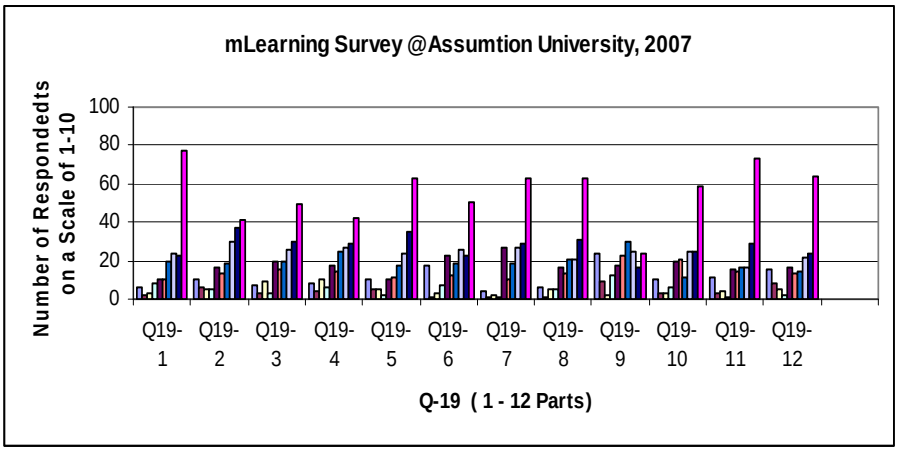

Fig-4 mLearning Survey Results

Thailand e-Readiness and its Impact on Higher Education

Economist Intelligence Unit's 2006 eReadiness rankings of the 68 countries published in 2006, Denmark retained its top position, followed by the USA, Switzerland, and Sweden. The next five countries, in order, were UK, Netherlands, Finland, Australia, Canada and Hong Kong. Overall, Europe remained the dominant eReadiness region worldwide. Singapore was ranked 11th. Thailand was ranked 47th in 2005 and it climbed to 44th place in 2006 [5]. In spite of the drastic improvements in their economies, China, India and Thailand are far behind in terms of adopting new and emerging technologies for borderless education. However, these rankings also show that the divide in terms of broadband development among Europe, USA and Asia is gradually diminishing. In recent years North Asian countries, such as South Korea and Japan, have become world leaders in terms of broadband usage.

Table-2 World eReadiness Rankings 2006

Country	**World Ranking**	**Score**	**Country**	**World Ranking**	**Score**
		Out of 10			**Out of 10**
United States	2	8.88	France	19	7.86
United Kingdom	5	8.64	Japan	21	7.77
Australia	8	8.5	Taiwan	23	7.51
Canada	9	8.37	Malaysia	37	5.6
Hong Kong	10	8.36	**Thailand**	**47**	**4.63**
Singapore	13	8.24	India	53	4.25
New Zealand	14	8.19	Philippines	56	4.04
Ireland	16	8.09	China	57	4.02
Korea	18	7.9	Indonesia	62	3.39

In a more recent survey of the World Economic Forum's 2007-08 Global Information Technology report Thailand ranked 37th out of 122 countries for the development and enforcement of laws relating to ICT, including electronic commerce, digital signatures, consumer protection, infrastructure, security, transparency, innovation and skills essential to enhance the eReadiness of the country [6].

Table-3 Global Information Technology Report-2007

Countries	Score 2006	Rank 2006-2007	Rank 2005-2006	Evolution
Malaysia	4.74	26	24	-2
Hong Kong	5.35	12	11	-1
Singapore	5.6	3	2	-1
India	4.06	44	40	-4
Thailand	**4.21**	**37**	**34**	**-3**
Indonesia	3.59	62	68	+6

While the Internet usage has grown in Thailand, the broadband access has been languishing. Broadband penetration remains low at less than five subscribers per 1,000 people. According to the ITU[5] as of August 2007 there were 8,465,800 people in Thailand using the internet and as of September 30, 2007 out of the total population of 67,249,456 in Thailand only 105,000 people have broadband connection. Although slow but increased adoption of broadband technology will facilitate liberation of higher education, which presents an exciting opportunity for transforming the business of education in Thailand. Particularly exciting is the improved broadband connectivity that may help many Thai universities in creating sophisticated eLearning courseware that is interactive, engaging, and capable of producing rich learning outcomes for a greatly expanded population of learners, locally, nationally and regionally.

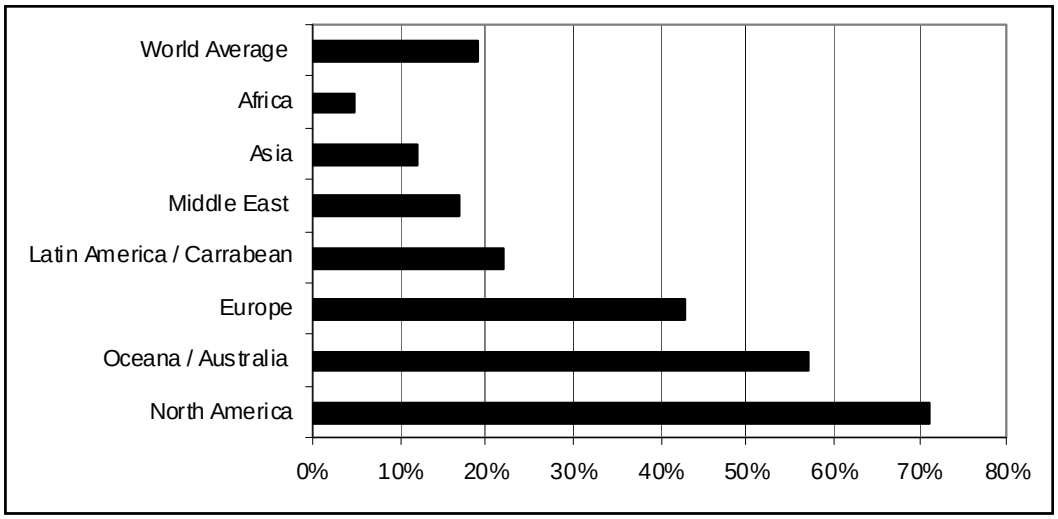

Fig-5 World Internet Penetration November 2007

2. RESEARCH & DEVELOPMENT (R&D) IN THAI UNIVERSITIES

The third challenge is in the area of Research and Development (R&D) investment in Thai institutions of higher learning. By and large Thai universities have remained academic in nature. Their traditional role has been to offer programs and services leading to an academic degree. Engaging in research, creating and owning patents have not been the main focus of

[5] ITU is the leading United Nations agency for information and communication technologies. As the global focal point for governments and the private sector

the Thai universities. Patents and intellectual property rights are major issues in the borderless education market. By comparison universities in China, Hong Kong, India, South Korea, Malaysia, Singapore and Taiwan have made substantial contributions to their own economic strength by rapidly becoming research oriented institutions.

By launching its IT 2010 plan the Thai government is aiming to build its human capital to promote innovation, invest in information infrastructure as well as promote information industries of the future. If the investment in the IT 2010 plan continues it may help Thailand's technological capability from being a dynamic adopter and consumer to becoming a potential Research and Development (R&D) hub in the region. This challenge is not possible to meet without huge investment in the Research and Development (R&D) in the major universities.

In another Global Competitive Index Information issued by World Economic Forum's 2007-08 out of 131 countries or economies on the 5th pillar of Higher education and training Thailand ranked 44 with a score of 4.38 out of 10. In the same report the local availability of specialized research and training services the ranking is 62 with a score of 5.07 which is not adequate to compete in the business of higher education [7]. Various factors that influence this low score include most arcane and ineffective immigration policy and laws, lack of national policy and funding to attract foreign talent to work in Thai universities. Unless Thailand opens up its borders for more foreign investment and recruit and retain foreign talent to engage in Research and Development (R & D) it will lag behind. However, it is possible that the current changes in the Thai political climate will lead to major reforms in higher education leading to improved conditions for Research and Development (R & D).

CONCLUSION

In conclusion it could be said that globalization of education is changing the nature of higher education in Thai universities. Globalization of higher education, its links and relevance to the Western countries in which the higher education is very competitive are somewhat tenuous because the forces of competition are being created by the world outside Thailand. No matter how much pride the Thai universities may have in their tradition and culture they can not afford to remain on the receiving end. There is little double that the process of globalization is exercising a significant influence on the world of higher education.

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The Challenge of Cultural Divergence to Economic Convergence

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Abstract

Many universities in Southeast Asia have become international, within a globalised context. However, there are problems, which if not dealt with will lead to difficulties. A major problem is the diversity of national cultures, because even in a converging economic world strongly divergent cultures remain. The home culture of a university when mixed with foreign cultures of students and teachers can cause cultural confusion.

There is no unifying theory of how people learn, but it is accepted that national culture has a distinct effect on teachers and learners. A major theorist on the importance of the diversity of cultures is Gert Hofstede. The main conclusion of his empirical research in 63 countries was that cultures could be distinguished and compared according to four major dimensions. Although his research was conducted more than thirty years ago, Hofstede was adamant that cultures do not change quickly, and would remain divergent for a few hundred years. Other sources say that there is some evidence of convergence, but strong differences remain.

Contextualisation has become an important concept in the last two decades. Cultures remain a significant context within which universities have to operate if they are to be international. Students and teachers, local and foreign, need to be exposed to the diversity of cultures. Cultural confusion should be used positively, grappled with, so that culture shock is converted into cultural engagement. A useful model for this engagement is contrastive analysis, used for forty years by qualified teachers of a foreign language, and used also in other fields. It systematically analyses a pair of languages to identify their differences and similarities so as to improve language learning, and could be used for culture instead of language.

Used in this way, the categories for exploration could include Role, Function, Gender, and Hofstede's Dimensions. 'OD' (Organisation Development) has long been used to explore organisational culture, and many of its techniques would be appropriate to national culture. As universities have a research function, that too could be used in conjunction with contrastive analysis and OD.

The strengths of this proposed approach are that there exists a strongly-based set of cultural dimensions (Hofstede), a longstanding contrastive analysis method, appropriate tested techniques from OD, a research function in universities, and often Faculties of Management. The weaknesses of this approach are criticisms of Hofstede's methodology, and a chance of conflict resulting from cultural engagement rather than understanding, unless there is preparation, experienced leadership, trust and patience.

Cultural diversity is a problem in international universities. It will not disappear. It is a challenge. Cultural engagement will not be easy. But for a university to truly claim to be international, the challenge must be faced. In itself that would be a learning experience, leading to review and revision.

Keywords: *economic convergence, internationalization of universities, cultural divergence, cultural shock and confusion, cultural engagement, contrastive analysis, Organisation Development.*

Economic Convergence & International Universities

Economic globalization has swept almost all countries. It is a multi-dimensional concept but is based on non-restrictive free trade between countries. It has been driven by the need for USA and Europe to expand beyond their own sated economies, and the desire by other nations to advance their own economies. It leads to the convergence of economies, binding them together. It has also led to the internationalisation of universities, for which foreign students are actively sought; and the international dimension of their degree courses is heavily promoted to local schools and families. Some degree courses include exchange programmes, in which students (and sometimes teachers) spend at least one semester in a foreign country.

Internationalisation is also a multi-dimensional concept. After reading the brochures of many universities which claim to be international, the concept includes the following: international standards, use of English, a mixture of local and foreign teachers and students, courses which include theory and practice from several countries, and networking among students. Only a few brochures, mostly for 'International MBA' courses, specifically include some mention of learning other cultures. Undergraduate courses often include basic, first year, courses in the history and cultures of the world, but the class numbers for these fundamental courses are usually huge giving little opportunity for intensive exploration.

Every year Thailand sends thousands of its students abroad for university studies, and thousands of foreign students enroll in Thai universities. That reflects world patterns. A report by UNESCO in 2006 stated that 2.5 million university students were studying overseas, an increase from 1.75 million in 1999 (Tan, 2006). It is not Americans who go abroad much. Africans top the list, plus Arab and Chinese students. Singapore, Malaysia, and Thailand seek to be educational hubs, concentrations of international students. Thailand increasingly attracts students from China and India. China also attracts foreign students, mostly from Korea and Southeast Asia (Tan, 2006). In a single edition of 'The Economist' for November 10 2007, there were advertisements by 14 higher education institutions around the world offering international programmes. Thus, a consequence of globalisation's economic convergence is the trend towards internationalisation of universities.

Diversity and Divergence of Cultures

However, economic convergence and international universities do not necessarily mean cultural convergence. National cultures are many and varied. It has long been recognized that culture is important when considering organizations which have an international aspect (Adler,1991). Culture includes nearly all dimensions of social interaction. It binds people together as a recognisable group, by belief, attitude, knowledge, values and behaviour.

There is no agreed definition of culture, but that put forward by Geert Hofstede, the best-known theorist of the diversity and significance of national cultures, is: "culture is the collective programming of the human mind that distinguishes the members of one human group from another. Culture in this sense is a system of collectively held values" (Hofstede,1981:24). By value he means "a broad tendency to prefer certain states of affairs over others" (Hofstede, 1981: 19). These values in turn affect behaviour. The mental conditioning of each person from infancy onwards through interaction with the family and others in the community causes that person to hold a cultural set of values which then affects that person's response to the environment. Hofstede adds two important qualifications. The first is that whatever a person's culture, the actual behaviour in a given situation is affected by the nature of that situation (1981: 15, 26). The second is that sub-cultures also have an influence, e.g. "the subculture of an organisation reflects national culture, professional sub-culture, and the organisation's own history" (1981: 27).

Next, a warning against stereotyping. Trompenaars (1993: 25) makes the important point that "people within a culture do not all have identical sets of artefacts, norms, values, and assumptions". Adler (1991) also makes the point that diversity exists within as well as between cultures. Tayeb (1988) regards the failure to recognise this intra-cultural heterogeneity as a drawback to many cultural studies. Hofstede (2001) was aware of this danger, and said that cultural differences describe averages or tendencies, not characteristics of individuals. It is also debatable whether there is such a thing as a national culture, when so many nations contain so many internal strands of religion and race (Korman, 1985). Hofstede would claim that despite these differences there is an aggregate sameness which is identifiable and distinguishable from those in other nations (Westwood and Everett, 1987).

With these warnings in mind, let us consider the work of Hofstede, a Dutchman who made an international study of work attitudes in 63 countries in 1969-73. Southeast Asia included Indonesia, Malaysia, Philippines, Singapore, and Thailand. He administered 116,000 questionnaires world-wide (not including China and Russia which were then closed communist nations). From the data bank this produced, he found highly significant differences in work behaviour between different countries, and claimed that it was national culture which explained more of these differences than did other factors such as age, gender or position. From these studies he derived four dimensions of culture: Individualism-Collectivism; Power Distance; Uncertainty Avoidance; and Masculinity-Femininity. He correlated these findings with data from 38 wide-ranging comparative cross-cultural studies by other researchers. Hofstede's model is at the macro level, although he often goes into micro detail in his writings.

The *Individualism-Collectivism* dimension indicates the extent to which people's values and attitudes are determined by a concern with themselves (Individualism) or in which people place priority on group concerns (Collectivism). *Power Distance* is the extent to which people accept that power in organisations is distributed unequally, those with low scores on this dimension demanding justification of inequalities, whilst those with high scores accept hierarchical order. *Uncertainty Avoidance* is the degree to which people feel uncomfortable with uncertainty and

ambiguity. Those with strong feelings prefer to maintain rigid codes of belief and behaviour and are intolerant to deviants, while those with weak feelings have a more relaxed atmosphere and tolerate deviance. Hofstede's final dimension is *Masculinity-Femininity* and is focused on how a society allocates social roles. His tortuous description would now be considered sexist for he describes masculinity as a preference for achievement, heroism, assertiveness and material success, whereas femininity is a preference for relationships, modesty, caring for the weak, and the quality of life.

On all of Hofstede's four dimensions, Thailand and USA are in opposite corners. Thailand has large Power Distance, strong Uncertainty Avoidance, is Collectivist and Feminine. USA has small Power Distance, weak Uncertainty Avoidance, is Individualist and Masculine (Hofstede,1991: 52,86,99,123,129,141).

Convergence or Divergence of Cultures?

A frequent assumption is that culture is transferable and adaptable, and that as the structure and technology of organisations across the world look increasingly similar, these organisations will operate independently of the effects of national culture (Wilson and Rosenfeld,1990; see also Lawrence,2007). To take the opposite position that no country can copy another, because of different histories and social composition, is to adopt a divergent philosophy, that national cultures are so different that they can be a hindrance (absolute or relative) to one nation copying another (Kerr et al 1970). The debate is often presented as exclusive: either convergence or divergence. These positions are now seen as two extremes: they can be seen not as opposites but as two ends of a continuum (Kirkbride et al 1989).

Child (1981), in examining the micro level issues of convergence, found that organisations worldwide were maintaining their cultural uniqueness. However that was in 1981, and there is the possibility that even distinctive cultures have not survived the turbulent years since then. Although still expressed as sustaining values, many of the elements of culture in ASEAN countries are said to be undergoing irreversible changes (Lopez, 1995: 35).

Chong (1987) talks about the fluidity of cultures. Culture meets a need, otherwise it would not be such a significant influence. If those needs change, so must the culture to keep pace. It is thus possible to regard a nation's culture as a means by which people collectively adjust to the environment to ensure a continued viable social existence. It is therefore subject to change, a kind of Darwinian social evolution of culture as "culture is the manifestation of necessary adaptations; it represents man's varied ways of accommodating to the changing environment" (Westwood and Everett, 1987, p191). Indeed MacCannell (1992, p3) claims that there is a non-controversial assumption that "the cultures of the world have been radically displaced by and forever altered by the movements of peoples". He welcomes this radical hybridisation of cultures as a prerequisite for the creativity needed to survive in economic globalisation. There is also the concept of cross-vergence proposed by Ralston et al (1993)

Hofstede (1991) is no proponent of convergence, but rather appropriateness and understanding. For if together we are to manage and survive in our one world we need increased consciousness of the constraints of our mental programming versus those of others. He believes that such consciousness can be developed, and while we should not expect to become all alike, we can become more cosmopolitan in our thinking. However, he says that nations (like Thailand) which are high on Uncertainty Avoidance and high on Power Distance

will find it difficult to co-operate with foreigners. He sees little evidence of convergence, and indeed his prophecy is that countries will remain very diverse for the next few hundred years.

A Brief Look at Thai Culture

As one would expect in such a long established society as Thailand, the culture is complex and intricate. Thai culture has been nourished and shaped by a variety of philosophies and practices. Some, like Buddhism, have been imported and been adapted to local forms. Others, like the Thai language are hybrids in which an indigenous core has been enriched and diversified by outside influences (Lithgow,2000).

In a book published in 2005, all its expatriate contributors had lived in Thailand long enough to gain some understanding of how things work. In his introduction, the Editor states that Thailand has "a history and a culture as rich, and sometimes richer, then, many western nations, and retains an identity that is purely Thailand, despite its diversity… Western values do not apply here – it is not the West, it is Thailand … Check your western values in left luggage on arrival. Your Western cultural baggage is not needed here. Thailand is different" (Rogers, 2005:18,19). This goes too far in its condemnation, and ignores the reasoned positive attempt at mutual understanding advocated in this paper.

An American with experience of Thailand wishes he could bring every budding business executive to Thailand to learn and experience Thai graciousness and compassion (Klongtoey,2000). He is convinced that Thailand has something to teach the rest of the world about service and working together. Certainly, but it needs the cultural engagement advocated later in this paper.

An examination of Thai culture was made by Thai academics, in a 1998 book edited by Pongsapich. It is generally acknowledged that Buddhism is the basis of most aspects of Thai culture: "There is little to say about Thai culture if we take Buddhism away – it is all pervasive" (Podhisita, 1998:34). To take one of Hofstede's four dimensions, to say that Thais are individualistic does not have the same meaning as in most cultural theorists, including Hofstede. In the Thai context it refers to the belief that the individual is an end in himself and ought to realise the self and cultivate his own judgement, notwithstanding the weight of pervasive social pressure in the direction of conformity; it is very different from American 'individualism (Komin,1991).

It would take up too much space even to list the cultural characteristics of Thailand or any other Southeast Asian country, or to compare them with a similar list from other countries. Many books have been written on this topic in many countries, mostly by foreigners who are intrigued by the differences and try to puzzle out what and why they exist. For Thailand, the books by Mont Redmond (1998), Niels Mulder (2000) and Denis Segaller (2005) are well known. Thai authors (writing in English) are Amara Pongsapich (1998) with an excellent collection of chapters by Thai researchers, and the book by Kriengsak Niratpatanasai (2004) which is a compilation of columns which he began writing for the Bangkok Post in 2000. An older book from a Thai author is by Suntaree Komin (1991). Her impressive empirical study has immense data, concepts, and explanations. Earlier still, is a book by Robert Mole produced in 1973 based on a research project by the United States Navy and Corps for American servicemen stationed in Thailand.

Thai culture is changing. In the 1998 book by Thai researchers, Komin discusses this, based on empirical research from a sample of 2,500 subjects from all segments of Thai society. **C**ulture, is learned: "But culture is not static, so the world view changes in response the changing of perceptions, ideas and values of the society at a given time (Komin,1998:208). Lawrence (2006) cited changing attitudes to litigation in Thai culture. Changes in Thai culture should be explored in the cultural exchange advocated, as should those of other countries.

Cultural Confusion

Guide books to most countries are available in abundance. They contain a chapter on local culture, mostly about etiquette, helpful to tourists but inadequate for long-stayers. 'Culture Shock' became an identifiable concept in the 1970s, probably because of the increase in international travel. It became the topic of a series of popular travel books for most countries in the world. An example is 'Culture Shock in Thailand' (1990) jointly written by a Westerner and his Thai. wife, Robert and Nanthapa Cooper, who define it as "a state of mind in transition; a state in which the individual's senses adapt to new stimuli and he becomes aware that his behaviour … can be misinterpreted as odd, rude and even hostile. It is a period in which his experience of life does not relate to life around him" (p6).

This politely states only half the problem, for there is also shock at some of the behaviour of the locals, because it is so different from his own. Also, although this state is transitory, as Cooper claims, it settles into confusion, a continuous wondering why life is so different. Even the behaviour that he approves of is confusing, because human beings are curious and want to know the underpinnings of that behaviour. The things he does not like he is too polite to ask and the locals are unwilling to say. Confusion sets in and becomes part of life. In an international university, it is not just the general behaviour of the local populace that can be confusing, but also that of the local lecturers, students, and administrators with whom he is in daily contact. In a university of all places, devoted to learning and especially to learning how and why, this situation should be recognized and action taken. The cultural misunderstandings which develop, if ignored, breed supposition and suspicion, and are a hindrance to effective communication and working together. They are a hindrance to education in an international context.

We underestimate the degree to which we are products of our cultures. Confronted by another culture, distress arises when our initial delight at the exotic changes into confusion (Draine and Hall (1991). An article by G.M. Guthrie, 'A Behavioural Analysis of Culture Learning' (quoted in Draine and Hall,1991, p202-204) describes five significant factors regarding learning how to function in a second culture:

1. One's first culture is acquired early, and is usually fixed by the age of five.
2. New culture patterns are learnt more easily by children than by adults.
3. One's first culture determines habits of valuing.
4. One's first culture introduces errors in interpretation of the second culture
5. One can express best his deepest values in behaviour patterns that are of long standing.

To function well in different culture, or with people of other cultures, requires a 'feel' for situations so that the correct behaviour comes naturally, but this takes time and experience, and much frustration (Cooper, 1990). A culture shock schedule is described by Draine and Hall (1991), the first month being a paradise because of the interesting and often charming differences, but soon followed in the second month by a decline into physical and mental anxiety because of confusion. Not until the fifth month does understanding make life happier, but relapses often occur. The average stay of an expatriate in Indonesia is 2-3 years, the period of time psychologists suggest that it takes to really settle into a different culture (Drainer and Hall, 1991).

International students who go to study in a different culture, can be at a foreign university for as little as one semester. Even if they are there for three or four years, much time and energy has been absorbed by coping with cultural confusion. Many universities arrange 'cultural evenings' but almost entirely these are about the culture of art – dances, architecture, paintings etc.. Praiseworthy, but not enough, and not tackling the really important part of culture.

The home culture of a university can clash with the cultures of foreign ideas, students, and lecturers, causing confusion rather than understanding. How a university is run is likewise affected by culture. The clash and confusion of cultures is a challenge which has to be recognised by international universities, so that adequate responses can be identified and tried.

As an example of cultural differences, in the West it is expected that students will challenge their teachers, question their ideas, and ask for clarification. In many Asian countries such behaviour is considered to be disrespectful, rude, and crude. In an international university, with students and teachers from several cultures, there could be cultural confusion for students and teachers. Similarly, the administration services in a university, such as human resource management, communication, provision of equipment and its maintenance, quality evaluation, registration, and dress regulations on campus, will be affected by culture, and could cause confusion and frustration to teachers and students from other countries.

Meeting the Challenge of Cultural Engagement

There is a temptation to ignore the confusion of cultural diversity because it is a messy business, having to explore the roots of several cultures. The mutual exploration itself could be offensive. But it must be faced if international universities are serious about their international credentials. The performance standards of Thai universities are measured and audited, and although they include the preservation of Thai Culture, it is doubtful if they include engagement in cross-cultural exploration. Yet contextualization is known to be an important concept, recognizing major elements of a situation within which an activity takes place. In an international university one important context is the diversity of cultures.

The challenge for these universities is to face the problem, to actively undertake cultural engagement. In a sense, they already recognize this cultural context, in the teaching of English. Contextualisation is fundamental to teaching a foreign language. One technique is Contrastive Analysis, which is the comparison of two languages in order to identify and correct errors that speakers of one will demonstrate when learning the other. It became a popular method in the 1960s and 1970s and is still used. For example, Thais learning English have to cope with the oddity of definite and indefinite articles, which do not exist in Thai. Americans learning Thai have to cope with the difficulty of five tones, as English is not a tonal language.

Robert Lado (1988) was the originator in 1957 of contrastive analysis in linguistic settings. He also became aware of cultural differences, not merely differences in language, and how these could affect learning. "Attention to the individual and his or her cultural and linguistic background is a strength" (Lado, 1988, p.viii). He writes about students from abroad in a foreign university, the cultural differences encountered, misunderstanding across cultures, and cross-cultural clichés (stereotyping). He advocates cross-cultural understanding as "this is the objective of any teacher who assumes no superiority of either culture and seeks to achieve full communication and prevent misunderstandings. Such a teacher seeks to understand the

contextual meaning of the words, actions, behaviour, and beliefs of the members of other cultures so that full communication can take place" (p 70). The aim is not a cultural switch (attempts to adopt a second culture and shed or suppress the other). Although he advocates the use of contrastive analysis of culture (p.76), he acknowledges that contrasting two cultures is not easy, because cultural meanings and expectations function on a great variety of levels, among them an individual's role e.g. student, professor, administrator (p 72).

Connor (1996) also links contrastive analysis in linguistics with culture, because language and writing are cultural phenomena. She investigates the topic of contrastive rhetoric in language writing, the whole of Chapter 6 being entitled 'Writing as an activity embedded in a culture'. She describes discoveries made about the embeddedness in culture of discourse and writing: "An interdisciplinary interest in cultural literacy has produced important insights about relationships among orality, literacy, schooling, and instruction, and cultural tendencies (p.103). These two authors, Lado and Connor, among others, acknowledge culture to be an important factor in language learning, which adds to literature such as Hofstede's on its importance in organizations where diverse cultures mix (and thus to international universities, where instruction is in English, English is taught as a second language, and which include foreign students and teachers). Other authors have found new applications for contrastive analysis, such as Baars (1994) who uses it for experimental psychology.

Contrastive Analysis in Cross-Cultural Education

Linguistic contrastive analysis identifies similarities and differences between two languages, using categories, such as grammar and phonology (plus others). When used for cultural engagement in a university, other categories must be identified. These could include:
Role (function and hierarchical position of the learner, e.g. student, teacher, administrator);
Situation (e.g. job, support services, communication, social, religion, politics, the nation);
Gender (cultural differences between male and female);
Hofstede (his four dimensions).

Many organisations use 'OD' training (Organisation Development) which usually focuses on organizational culture, and relationships between people, the aim being to identify and deal with hindrances so that they work together better towards the achievement of agreed organizational and individual goals. It would be hard to avoid the issue of diverse national cultures if OD training is a feature in an international university. Similarly, an attempt to introduce OD solely aimed at analysis of diverse cultures would inevitably encounter issues of organizational culture.

Techniques used in OD training include survey-feedback, team building, and diagnostic activities. Contrastive analysis is concerned with both the identification and analysis of the differences and similarities of cultures, to promote understanding and better working relationships. Thus, the OD techniques would be relevant. They are based on initial research, usually by an OD practitioner. Research is an important function of universities: how appropriate and convenient for an international university wanting to tackle cultural engagement. A newer, organic, approach is recommended by Seel (2000). This is to use participative inquiry rather than external diagnosis. Some techniques he uses, for individual work or in pairs or small groups, are: *Use of Metaphors; Heroes v. Villains, Headlines, Tell Stories, Invent Awards, Visitor from Mars, Task Simulation.* Most international universities have a Faculty of Management which should be able to provide expert advice and assistance.

Strengths & Weaknesses of Cultural Engagement

Strengths: Hofstede provides a framework of four dimensions, and international comparisons. Contrastive analysis similarly provides a framework which is geared to action. Language teachers are used to its concept and practice, and are usually native speakers of English with an accumulated experience of operating in another culture. Teachers of their own language in Asian countries know their own culture intimately in a practical way through their daily lives (though not necessarily in a systematic way). Universities have an important research function which could be used to identify cultural issues. The approach advocated in this paper has a noble aim: to generate mutual understanding of the differences experienced by students and teachers in international universities.

Weakness: There are many criticisms of Hofstede's methodology, his four dimensions, and his conviction that cultures change very, very slowly. For such a topic, his reliance only on a quantitative questionnaire ignored the rich possibilities of supplementing it with a qualitative study. Other researchers have produced more dimensions. For example, Triandis (1981) indentified 20 dimensions (which include Hofstede's), and found that cultural differences can be expressed at four levels: perception, cognition, action, and values. Komin (1991), in an impressive empirical study, produced nine value clusters in the Thai cognitive system.

Contrastive analysis was widely practiced in the 1960s and 1970s but fell into disfavour as it represented the discredited behaviourist approach, however, the 'weak' version of contrastive analysis is greatly used (Lawrence,2000). Also, native-speaker teachers of English, and native-speakers of Asian languages, have not usually made a systematic examination of their own culture, and may therefore not be able to engage in contrastive analysis except after training. Furthermore, active cultural engagement may provoke the sort of conflict and confusion it seeks to diminish, for the people who must work together on cultural engagement begin already embedded in their own cultural differences and misunderstandings (Vallaster, 2005). Excellent preparation and leadership are required, plus trust and patience.

Conclusion & Recommendation

Cultural diversity is a problem in international universities. It will not disappear. It is a challenge. It is possible to become bicultural, similar to becoming bilingual, acquiring skills to function well in another country, or with people from another country (Draine and Hall, 1991). There is no 'best culture'. All have their disadvantages and advantages, all are evolving although slowly and have parts which no longer seem appropriate in aggressive capitalist economies set in the context of a globalizing economy. The challenge for an international university is therefore to identify the cultural differences and prepare and help students who participate in exchange programmes or foreigners who register for entire courses. The final, most difficult part, is to plan how to implement all this, and review (and revise) how it actually works in practice.

Yet, the attempt should be made by international universities around the world if they are to merit their international status. This is a formidable challenge, but, it must be faced, for it is not enough for an international university merely to attract foreign students and teachers, and fit them into an existing system of higher education, or merely to send their local students abroad.

It could be argued that this is a most important function for them. Actually trying to do it will be a learning experience in itself, from which adaptations and techniques will emerge. Nothing ventured, nothing gained. "The path towards understanding is a million miles long and so narrow in places that each man must pass alone" (Cooper,1990, p6). It need not be alone, in an international university.

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Accessibility and Opportunities in Tertiary Education: Borderless and "Pedalaman"

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Abstract

Currently, the infrastructure in much of East Malaysia and the eastern coast of Peninsular Malaysia are still relatively undeveloped as compared to most parts of Malaysia. As a result, for many decades people living in these very remote areas ("pedalaman") have been deprived of a good quality of life including education. In its attempt to democratize education and make education available to all, Open University Malaysia (OUM) conducted a special programme for teachers teaching in these areas of the country. This paper addresses responses to the provision of this learning opportunity despite inaccessible and difficult conditions that they are in. Responses are gathered via questionnaires and interviews sent to them in five different locations using the 5-point Likert scale. Students are asked about teaching methods, contents, delivery, audio-visual and other teaching aids, such as myLMS, SMS, telephone, fax, e-mail to determine the viability of the programme and its suitability to this group of learners. The results indicated that the in spite of all the hardships, the teachers are very keen to pursue knowledge and will seek any available means to attain knowledge. Hence, the programme is indeed viable and should be spread to other "pedalaman" areas of the country.

Keywords: Open and distance university, very remote areas, Likert Scale, teaching methods

For decades, people and school-going children, living in the very remotest area of the country ("pedalaman") have been deprived of a good quality of life including education. In an attempt to democratize education and make education available to all, Open University Malaysia (OUM), in collaboration with the Teacher Training Division, of the Ministry of Education, conducted a special programme for teachers teaching in this part of the country. These teachers, 183 in all, were placed in five different teachers training colleges, three colleges in the east Malaysian states of Sabah and Sarawak and two in Peninsula Malaysia. As an initial step, the group had to undergo 14 weeks of intensive courses (covering seven courses, equivalent to 21 credit hours) and should obtain at least 2.00 academic level.

This paper addresses responses to the provision of this learning opportunity despite inaccessible and difficult conditions that they are in. Responses are gathered via questionnaire and interviews sent to them in five different location using the 5-point Likert scale. For this study, the respondents are restricted to 52 learners (all based at Keningau Teachers College, Sabah) and they are identified accordingly as stipulated in the college manual. Students are asked about teaching methods, contents, delivery, audio-visual and other teaching aids, such as myLMS, SMS, telephone, fax, e-mail to determine the viability of the programme and its suitability to this group of learners.

The Study

Respondents:	51 in-service teachers
Entry Rerquirement for the programme:	Malaysian School Certificate, have served for 5 years and more as a teacher
Gender:	Male: 36
	Female: 15
Age:	40 years and above: 25
	35-39 years: 16
	30-34 years: 07
	below 30 years: 03
Area identified:	"Pedalaman" (interior)
Face-to-face encounter:	Keningau Teachers College, state of Sabah, Malaysia; spent 14 weeks for intensive courses
Instruments:	Questionnaire
	Interviews

Out of 183 respondents from the five colleges, fifty one respondents are identified at the Keningau Teachers College. Keningau is two-hour drive from the state capital of Kota Kinabalu, Sabah. Currently they are majoring in social science and minoring in physical education and visual arts. The respondents come from far flung areas of the state where most of their schools are situated. One student, however, is from an area called Lawas , in the neighbouring state of Sarawak. He has to travel for 8 hours before could reach the college.

Having undergone 14 weeks of intensive courses and having achieved a grade-point average of 2.00 points and above, these students enrolled themselves into a four-year degree programme with Open University Malaysia, in collaboration with the Ministry of Education. To get the degree they have to accumulate 120 credit hours in eight semesters. In a normal setting a student pursuing the Bachelor in Teaching programme will receive their lectures once in a fortnight, two hours per subject and five times per semester. In all they will receive 10 hours of lectures and tutorials. Since this is a special group, their lectures will be conducted during the school holidays, in the month of March, May and November of each year. Apart from the face-to-face interaction, students will be exposed to other means of information-gathering, chiefly, e-mail, SMS, myLMS, telephone and fax. On registering each student will be given his/her call number as well as password. Using these two facilities they should be able to interact not only with their friends and lecturers, but they will have access to books, journals, magazines, thesis or dissertation, found in OUM's digital library. A required text, that is, the module for each course will be given to each student and this covers content areas per se. Such is the scenario 'pedalaman's' students will undergo when they attend classes or when they are on their own.

Two separate instruments are used in the conduct this study, the questionnaire and interviews. The questionnaire and interviews are well structured to determine nature of the programme, accessibility and opportunities pertaining to tertiary education and usage of various technologies to expedite their teaching learning activities. Apart from the background information, questions pertaining to academic matters (calculated on a 5-point-Likert scale) like the following are put to the students to get their necessary responses. Such questions are like:

1. The quality of teaching delivered by the lecturers at the college during the tutorial period is excellent?
2. The learning environment is conducive and comforting.
3. I am happy with the time allotted for tutorials, revision and examination?
4. The examination question set for each course is moderate.
5. The examination question is related to learning outcomes.
6. The assignment format given to us is well planned and structured?
7. The date set for us to receive the modules is on time.
8. The class schedule is well-laid out as planned.
9. My communication with the programme coordinator is excellent.
10. My communication with OUM's administrator is fine.
11. I am happy with the delivery of this programme.
12. Lecturers at the college have done their homework well.

Apart from the preceding responses, questions on the strengths and weaknesses of the programme, some of the things most demanding when pursuing this programme as well as the content of the modules are also put forward for their responses.

The interview questions are mostly based on personal information with regards to family background, career in the teaching profession and one's own desire to pursue the current programme. With regards to teaching experience, 45 respondents had a total teaching experience of more than 10 years, 6 respondents had 6 years of teaching experience and none below five years. When asked number of children each had, on the average each had between four to six children. The interview questions also cover use internet facilities (especially the myLMS, e-mail forum, e-library) and other facilities created/ offered by OUM, answers move from positive to negative. As expected, the negative answers are well-received because such internet facilities are not available in these remote areas where they are teaching. However, once they venture out, traveling to the city or to the college, they will use every possible means at their disposal to make the necessary communication with their lecturers, friends, education officers and others. They will also find time to access the necessary information for their assignments and related subjects. In fact they cannot even use their mobile phone in those areas, what more the internet accessibility. However, what draws the researcher to tears and emotions was the respondents readiness to pursue their studies despite the hardships they have to encounter and despite being away from their loved ones when they are teaching in the remote schools but also when attending classes during the school holidays. Their sacrifices should be duly respected and honoured.

Looking at the data (as outlined in the appendix 1 and 2) we can see 50 respondents come from Keningau area, while one is from Kuala Lipis, in the state of Pahang. There are 36 males and 15 females, with an age range between 30 years to above 40 years old. Fifty of them are married while one remains a bachelor. A majority of them had a teaching of more than 10 years.

When referring to Appendix 3, readers will get a better picture of this group of students. For example, when asked about the school enrolments, the lowered number reported is 40 students (question 10). And when asked about their school (question 11), that is which category has it been placed, majority said B category (21 respondents), that is the middle category among the 'pedalaman' schools.

The following are some other major questions answered by respondents:

Question 14: with regards to electricity – 23 respondents said they do not have electricity connected to their schools
Question 17: on teaching aids – 44 respondents said they have only blackboard
Question 18: on monitoring – 41 said their headmaster monitors them
Question 21: on what level they are teaching now: 15 respondents they are teaching level one
Question 33: on contacts with OUM – use of phone when line available
Question 34: on use of MyLMS/e-library – 49 respondents said they are not available

Conclusion

The study has shown that despite respondents' own drawbacks and hardships, in many areas; having to teach in the very interior of the country, that is, in the 'pedalaman', having denied all the equipments which would necessitate maximize teaching and learning, and other hazards and difficulties, this group survive the ordeal. They felt that the programme, not only should be retained but need to be expanded to other 'pedalaman' areas, thus catering more students in the interior of the country, especially in the state of Sabah and Sarawak. They are also very keen to pursue knowledge and will seek any available means to attain those knowledge. Based on the result of the study, inaccessibility to modern technology, such as telephone, computers (use of e-mail, to access OUM's MyLMS , such as e-library, forum, chit-chat and other facilities) this group felt indebted to the Teacher Training Division of the Ministry of Education and to Open University Malaysia, for giving them the opportunities , not only to excel themselves academically but to make themselves better equipped in the teaching profession. Such an attitude augers well for the teaching profession, more so, for this group who failed to enter the universities in their younger days. The researcher believes that the programme is indeed viable and should be spread out to other parts of the country.

The Challenges and Implications of Globalization in the Field of Higher Education: A Sociological Treatise

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Abstract

Leaders of state universities and colleges (SUCs) in the Philippines and in other developing countries entail facing several challenges like the culture of the University, budget and/of financial constraints, to name a few. But one of the most pressing issues at present that they have to grapple with is how they could make their students globally competitive, as well as how their universities could meet quality and international standards as far as their curricular programs are concerned. Amidst the above concerns, this study attempts to present and analyze the challenges of globalization in the field of higher education (HE).

This study, which is qualitative in nature, made use of the secondary data analysis as its sole mode of data collection. Different books, journal articles and related studies had been analyzed to come up with the needed data. The research was done at the University of Queensland, Brisbane, Australia.

Out of the said secondary data, three major challenges of globalization to HE stand out. These are: (1) The rapid increase in market globalization and technological advances leads to an increasing demand for access to tertiary institutions in order to meet the increasing requirement for professionally or technically trained population (Beltran-Villava 2001; Almarcha-Barbado; Sadlak 1998); (2) Globalization also challenges higher educational institutions "to create new educational systems that are designed for an era of increasing cultural and economic globalization" (Banathy in Jenlink 2001); and (3) State educational institutions are also forced to adopt an international standard (Room 2000).

As a result, the aforementioned challenges pose serious implications to the functions of education, practice leadership, and/or university management as a whole, notwithstanding other factors that may affect them in the process like budget constraints.

With the said challenges and implications, higher educational institutions have to transcend beyond the realm of traditional functions of education. They need to forge linkages with the rest of existing social structures in the society if their functional imperatives and the said challenges are to be realized and addressed.

Introduction

In the era of globalization, being officials of the State Universities and Colleges (SUCs) in the Philippines in particular and in other developing countries in general entail

facing several challenges like the culture of the University, budget and/of financial constraints, multiple accountabilities, to name a few. But one of the most pressing issues at present that they have to grapple with as leaders in higher education is how they could make their students globally competitive, as well as how their universities could meet quality and international standards as far as the curricular programs are concerned.

Amidst the above concerns, this paper attempts to present the functions of education, and further analyze the challenges of globalization, more specifically in the field of higher education (HE). Contrary to the parochial concept that globalization is limited to the economic arena, it also affects other social institutions, specifically the HE.

Methodology

This study, which is qualitative in nature, made use of the secondary data analysis as its sole mode of data collection. Different books, journal articles and related studies (more or less 900 studies and 47 articles and/or book reviews) had been analyzed to come up with the needed data. The research was primarily done at the University of Queensland Main Library, Brisbane, Australia.

To start with, a brief discussion on the functions of education from the structural-functionalist perspective, which is provided in the next section would be helpful in understanding better the challenges and implications of globalization to HE.

The Functions of Education

Higher educational institutions, i.e. colleges and/or universities, play vital functions that contribute to the stable operation of society. Parsons, the founder of the Department of Sociology at Harvard University, notably regarded these institutions as one of the subsystems in a society that serves the latency or the pattern maintenance function (Ritzer 1988) – one of the four functional imperatives that is necessary for the whole society to operate. On one hand, Merton, a student of Parsons, further distinguished two types of functions – the manifest (overt) and the latent (covert), which would be the bases of presentation of the functions of education in this section.

The Manifest Functions of Education. Some goals of education are regarded as manifest functions, i.e. the intended goals and consequences of activities within an institution. There are several major manifest functions of education. These are as follows (Macionis 1999):

1. Socialization. As society grows more complex, the required knowledge becomes so vast that a distinctive system of formal education, employing specially trained personnel to prepare children for adult roles, emerges. The family still remains as an important agent of socialization. But formal learning, which includes teaching students the student role of learning specific academic subjects, dominant cultural values and norms of the society, are passed to the professional teachers in training and to the students in the service.

2. Cultural Innovation. Education can become an agent of social change. It stimulates intellectual inquiry and critical thinking that may result in the advancement of science and technology.

3. Social Integration. In a society where the population is composed of diverse ethnic and religious groups, education promotes social integration by inculcating into the students at least a sense of common identity.

4. Social Placement. Schools are responsible for identifying the most qualified people to fill available positions in society. As a result, students are channeled into programs on individual ability and academic achievement. Graduates, in turn, receive the appropriate credentials for entry into the paid labor force (Kendall 1998).

The Latent Functions of Education. While education has manifest functions, it also has latent functions, or that which are hidden, unstated and sometimes have unintended consequences. It serves at least three latent functions, to wit: (1) child care - schools relieve single and two-career parents of some child-care responsibilities; (2) restricting some activities – schools consume a lot of time and energy, thereby often promoting conformity for teenagers at a time when the risk of unlawful behavior is high; and (3) establishing relationships and networks – a lot of people form life long friendships, and even meet their future spouses in school. It may also create valuable career opportunities, once the students are affiliated with a particular school.

In the next section, globalization poses serious challenges to HE, which may test, alter or add more to the functions of education, and which are important from the standpoint of university management.

Findings and Discussion

The challenges of globalization in higher education. The world today experiences a set of economic, cultural, and political processes, which call for supranational connection (Taylor et al. in Ka Ho Mok 2000). According to Urry (1998), the consequences of these processes are felt even in all the fields including higher education.

There are more than 900 studies and 47 articles and book reviews on higher education and globalization. This is an indication that globalization, indeed, seriously affects the domain of HE. The commonalities in such collections of literature can be summarized in three specific issues or challenges of globalization to higher education. They are:

1. The rapid increase in market globalization and technological advances, leads to an increasing demand for access to tertiary institutions in order to meet the increasing requirement for professionally or technically trained population (Beltran-Villava 2001; Almarcha-Barbado; Sadlak 1998).

The number of students in higher education in the world increased from 51 million in 1980 to about 82 million in 1995, representing an increase of 61 percent of the typical HE-bound age group of 18-23 enrolled in various types of HE institutions (HEIs). In some 20 countries, the number of students enrolled in HE exceeds 1 million. Of these 20 countries, at least half are in developing countries mostly in Asia and South America.

In other words, globalization and its explicit demand for global competitiveness and flexibility (Mishra 1999) serve as a main driving force for such increase of students in HEIs.

Higher education institutions (HEIs) play a part in the formation of a globally competitive and flexible population in big numbers and of varied kinds, without necessarily assuming monopoly (Sadlak 1998). However, in order to make their students more 'globally competent learner(s)' (Zesotarski 2001, ERC Review) than the rest of the general citizens, HEIs must face the next challenge.

2. Globalization also challenges HEIs/universities "to create new educational systems that are designed for an era of increasing cultural and economic globalization" (Banathy in Jenlink 2001), or to meet the demand for the aforementioned population. But this is not a simple task to realize.

Realistically there are several factors that may influence or affect the creation of such new system. For one, in the process of creating a new educational system, a cultural or value conflict is likely to occur. This happens when HEIs/universities compete with technically specialized institutions for higher learning while maintaining their over-all goal of a balanced and comprehensive education (Almarcha-Barbado 2001), or their role as the gatekeeper of the core values of a nation (Smolicz 1998). For example, some state universities and colleges in the Philippines lack financial resources, and need to upgrade their standards to enable to eventually compete with other higher educational institutions. Most of the time, their only source of funding are government appropriations and trusts from corporate or private agencies. To return the favor, they may function to serve the economists' or capitalists' interest in the guise of promoting scholarship, instead of their own upheld values. To make the matter worst, Levin (in Zeszotarski 2001) maintains that the ideology of globalization reduces people, ideas, goods and services to mere economic value in the name of global competitiveness, thus lose the scholastic value of education. To avoid having the above cultural or value conflict, new educational systems need to be as comprehensive as possible – a new task or problem for state universities and colleges to address.

Second, HEIs/universities must also consider other factors or domains like economic and information technology, which are important in the creation of new educational systems. Zeszotarski (2001) on her review of the book Globalizing The Community College expands these domains. The economic domain, she argues that SUCs are being pushed to do more with less and to seek other (private) sources of revenue because of a decrease in state funding and the loss of their primary economic support. Gantam and Contreras (2001) also share the same idea by noting that because of economic restrictions, SUCs are confronted with the growing pressures to adopt an 'entrepreneurial logic' to increase revenue.

This actually happens in the Philippines. In the case of the SUCs in Region V, a severe budget cut by the government is experienced yearly due to national budget deficit (Manila Bulletin 2001; Maglalang 2001). With very limited budget, it is difficult to create or even develop extensive and new educational system that can address the challenges of globalization.

The development of new educational systems also calls for the advancement of the information domain. This refers to "information technologies such as email, voice mail, World Wide Web and internet, and computer applications for the management of administrative and instructional activities" (Zeszotarski 2001). It is sad to note the disparity

in the distribution of these technologies; while some have complete sets, others have not albeit one internet connection for their libraries.

3. State institutions are also forced not just with the dilemma to create a new educational system to fit the demand of the aforementioned economic and technological parameters, but also to adopt an international standard (Room 2000) in the process. While this might yield positive results like upgrading the educational standards, it exerts a downward pressure on local policy choices or the 'left-of-centre' approaches (Mishra 1999) and/or the traditional values. The call for the adoption of international standards essentially leaves HEIs with lesser options, although it is still unclear as to how far any scope for policy choice whether at international, national or sub-national level, is affected by the pressures of globalization and the processes of international standards-setting (Room 2000). In any case, regardless of whether or not local policies of HEIs as a whole are affected by the call for an international standard-setting, some tertiary institutions, like those in Mexico and in other parts of the world, employ the exchange of academic experiences, services, projects, and information as their strategy to achieve a truly international system (Perez-Franco & Cardena-Cabello 1998).

There are also other problems with regard to adopting an international standard. The budget constraint is the most pressing. In the case of SUCs in Region V, there are difficulties achieving what other tertiary institutions are trying to accomplish or have accomplished despite the limited resources. The government cannot even purchase enough books and computers for the students and repair the dilapidated buildings. In this regard, adopting an international standard in the form of accreditation will take a long time to achieve.

HEIs need also to cope up with the changes that accompany the process of globalization. McGinn (1996), for example, noted "the reduced ability of universities (in Latin America) to react to rapid changes." The Philippine situation is no different. The SUCs in Region V are typical examples in this case. In other words, the challenges globalization pose are too complex, and require a lot of planning and strategizing by the university leaders.

Another factor that has to be considered is the issue on who will set the international standard, and who would handle its actual implementation. Room (2000) suggests that the development of international standards and the convergence of national standards must be understood in terms of reference to the interest and strategies of various stakeholders, including national governments, social elites and the higher education institutions themselves. His suggestions however, are still problematic, considering the fact that globalization and international standard-setting are viewed as political processes (Room 2000). It would be arduous for all HEIs to accept one international standard and ruling even in the family of SUCs. Neither would the so-called best universities in the world would acquiesce to the idea, without losing their upheld values, standards, and cultural identity or prestige. The strife to compete for the top 10 rungs of the academic ladder as revealed by surveys on the best universities in the world is anything to go by.

Implications. Based on the above discussion, the following implications to higher education, specifically to practice leadership may be inferred:

* Education leaders need to prepare long-term strategic plans focused on the preparation of students for a global economy. This might mean revising the old curricular

offerings or programs, possibly enriched with overseas training and exchange programs, and more technological skills and knowledge preparatory to entry into the world of work.

* The new curricular offering must develop competencies that differ from the traditional general education objectives by including ones that reflect an awareness of the global dimensions of social, cultural, scientific, and economic issues" (Zeszotarski 2001, EBC Review).

* The HEIs administrators must address the general task of finding the best benchmark for international standard-setting and the solutions to the problems that might arise therein.

* The HEIs administrators need to participate in international higher education networks to gain important externalities (and economics of scale), considering that globalization is an irreversible trend (Gantman & Contreras 2001).

* Likewise, since it would be taxing for HEIs to create a new educational system as well as to achieve any level of excellence without increasing their resources, university leaders as well as policymakers are also challenged to increase their resource base (Gantman & Contreras 2001).

* Implicit in the context of globalization, education leaders are generally and explicitly challenged to transcend beyond the traditional functions of education. They must also possess the following qualities: knowledgeable on globalization issues, strategic planner, decisive leader and problem-solver, and being responsive, and flexible or adaptable to the challenges of times.

Conclusion and Recommendations

From the above discussions, it can be deduced that globalization is indeed a much more complex phenomenon. It needs viewing from the traditional economic perspectives to more encompassing viewpoints as defined and argued by some authorities, because it also brings serious challenges and/or implications to other fields, i.e. higher education, the agency which plays a vital role in responding to the increasing demand for globally competitive citizens. Its challenges are more complex, and call for "structural decomposition of the institution of higher education through policies oriented toward correcting educational deficiencies, changes in professional organizations, and identification of emerging mechanisms of cooperation …" (Aupetit 1996).

The challenges of globalization are never separated from other challenges on practice leadership. These include budget constraints or economic problems, information and/or technological changes, culture and/or value conflict, and standards between entities. Globalization also further implies that educational leaders like the other leaders in the fields of economic, information technology, politics, and so on, must possess certain qualities needed to face the challenges.

A significant apprehension implicit to the challenge of leadership qualities, is the fact that they are developed at a slower rate compared to the fast pace of globalization. Moreover, no leader can do everything for its members in particular, and for the success of their

organization and/or community in general. It is in this context that the importance of collaborative efforts between leaders and its members, be it in the market or economic arena, politics or government, information technology, educational setting, and the society as a whole, is deemed necessary.

Finally, SUCs in the Philippines and in other developing countries do not have many choices. Their presidents have to address in whatever way the inevitable challenges of globalization. In general, this would mean transcending beyond the realm of traditional manifest and latent functions of education through planned interventions. In particular, this would further mean a need for collaborative efforts between SUC leaders and their members, and the rest of existing social structures in society if the aforementioned challenges are to be addressed, if their functional imperatives are to be realized, and if borderless education has to be achieved.

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Borderless Education: A Challenge for Whom?

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Abstract

Modern education has been mainly organized for and by the nation-state. Considered by critics as traditional or mainstream education, state-based education has always aroused experiments of other directions and organizations of education in particular individually- and community- based education. These experiments are known as “alternative education”. Today borderless education is advocated by critics of the state- and nation- based education. To some extent, its advocates want to range it in the outfit of alternative education with the ambition to be the new prevalent model.

By assimilating borderless education to globalised or internationalized education, the present article shows that the globalization of education cannot but be base on private education from where national traits are erased. Such a model not only may increase social inequalities regarding education but also may endanger national cultures and their role do socialization of the individual. The article concludes that if modern information technology may be fascinating by offering an easy access not world knowledge, it should be at the same time put at the service of public education rather than at its destruction for the sake of social equality and social peace.

"The Paradox of Our Time"

We have taller buildings but shorter tempers; wider freeways, but narrower viewpoints. We buy more but enjoy less. We have more conveniences but less time; we have more degrees but less sense; more knowledge but less judgment; more experts yet more problems. We have multiplied our possessions, but reduced our values. We talk much, love too seldom, and hate too often. We've learned how to make a living, but not a life, we've added years to life not life to years. We've been all the way to the moon and back, but have trouble crossing the street to meet a new neighbor. We conquered outer space but not inner space. We've done larger things, but not better things. We've cleaned up the air, but polluted the soul. We write more, but learn less. We've learned to rush, but not to wait. We build more computers to hold more information, to produce more copies than ever, but we communicate less and less. These are the times of fast foods and slow digestion; steep profits and shallow relationships. These are the days of two incomes but more divorce, fancier houses but broken homes.

Prologue

The WTO concept of borderless education is not so new, as education without national borders has existed before the development of nation-states. With the birth of nation-states, dominant countries used to import scholars from other countries for satisfying their own needs. International educational cooperation and aid have always been put at the service of political and economic international strategies. The benefits of international education were then asymmetric and mainly captured by more powerful human groups. Today, the idea of borderless education is based on the belief that these relationships can be symmetric and that the internationalization of education can bring mutual benefits to the countries involved and overall to the individual involved. Borderless education seems to be a very narrow vision of education where modern technology of information and distant learning may put the world available knowledge at the disposal to all (Ryan, 2001: 119), This is of course a fairy tale that mixes up concepts and makes believe that access to information and education are equivalent and seems to ignore the real and complex relationships between education and globalization.
In Middle Age Europe, Universities were borderless by receiving scholars from everywhere and by using a common language: Latin. At least, two major traits of culture were shared by European spaces: the language of scholars and religions. With the development of nation-state, universities became national using national language and oriented at preparing political, economic, military and technical elite able to lead the nation. Today the organization of educational systems may follow the trend of globalization and be transformed into a borderless education, from where national and collective traits would be erased. Thus, education is becoming an individual and private matter as it is becoming international. Virtual teaching, international databases, and distant learning are some of the forms of this evolution and of the expansion of information technologies (Middlehurst, 2001). Borderless education, it is asserted, would serve the interest of every country and particularly of developing countries by elevating the level of education of the population; almost every international organization – from WTO; UNESCO, ILO or the Work Bank - advocate the development of education as a way of poor countries to catch up with rich ones (Srinoi Powatong 2546; Prawit Chaimongkol 2550). If there is no doubt that education has to be open to any inhabitant of the world, and that sharing some knowledge is fruitful, the danger of a borderless education is to ignore that education with or without borders is related to power, to social inequalities and to cultures. Ignoring these facts would be dangerous and would bring suffering to developing countries instead of the expected benefits. In this paper, the two way relationships between education and globalization are successively investigated in order to put the Thai situation in perspective.

Development of education and lack of skills: a Thai paradox?

The theory of human capital (Becker 1962; Blaug 1992) asserts that education increase labor productivity and individual incomes because it develops skills of the workforce. According to this theory the development of education in Thailand should have produced the skills in demand in the labor market. As we will show this is not the case. Is this a thia paradox or the demonstration of the flaws of this theory?

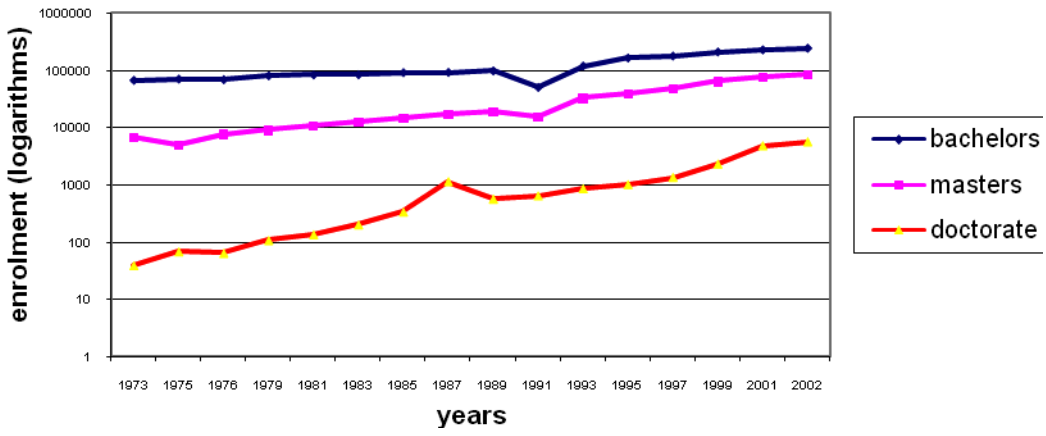
In the last 40 years the education level of Thai workforce has increased quite fast, reflecting - with a lag- the rapid expansion of education in the country. However, there is something as a consensus finding that Thailand is still short of skills in particular for intermediate management and for technological abilities. . . The prevalent economic growth patterns can explain better than the low quality of education these lack of skills. During the last 4 decades Thailand has built its competitive advantage on cheap labour and had industrial success stories as for example in the automobile industry or in electronic by becoming the

first world exporter of Hard Disk Drive (HDD) (Lecler 2550) . However this strategy is currently threatened both by the increase of Thai labor costs and by the development of cheap labour countries such as China and Vietnam. Thai enterprises and foreign investment are inclined to invest rather in those neighboring countries. From now on, Thailand must compete and built its competitive advantage not as before on cheap labor and low skills but rather on high labor productivity and decent wages. This could be achieved both by improving the quality of education and by implementing more productive technology and adequate labor management principles. The lack of skills would actually be reduced by enhancing learning by doing on the job thanks to the adoption of new technologies. However the workforce can develop its skills on the job if and only if it can acquire better cognitive skills delivered by the educational system. The incapacity of education to deliver proper knowledge and the ability to learn (what we have stamped cognitive skills) is today the major flaw of Thai economy. It is commonly acknowledged that the expansion of the education system has dealt mainly with enrolments, that is with the quantity of education rather than with the quality of education. If the quality of education is the capacity of educational institutions to deliver cognitive skills that is individual scholarship, capacity of reasoning, of criticizing and of learning by oneself, then indeed the quality of Thai education is quite low. . These findings of CELS coincide with those of the recent study conducted by ONEC (2549) which concludes that:

- There is a shortage of intermediate skilled operators since most students of vocational and technical education prefer to continue their education to bachelor's degree rather than work after the procurement of their vocational diploma.
- There is a shortage of technical skills which are delivered on the job
- There is a shortage of cognitive skills, particularly those attached to scientific culture, , critical thinking, and problem solving abilities .

Hence, Thailand displays a paradoxical situation in which the lack of skills parallels a rapid development of education. As shown in figure 1, enrolment has increased particularly in higher education since the sixties and the creation of new universities, Even Master's and doctoral degrees students are catching up in number bachelor degrees students

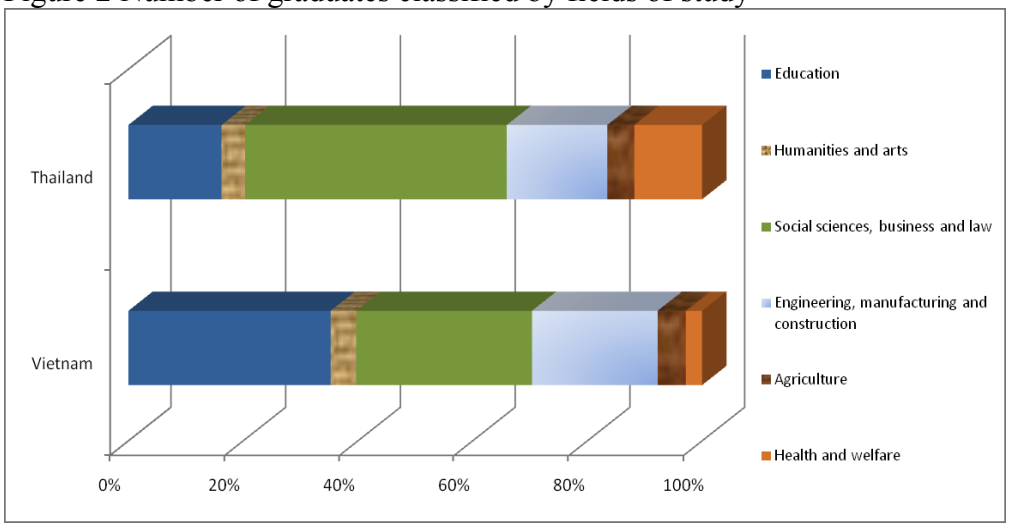
Figure 1 Number of students registered in higher education 1973-2003



Source: Office of University Affairs 1974- Source: Office of University Affairs1973-2003

This would indicate that Thailand can build its competitive advantage on a better educated workforce than new competitors and cheap labour countries as Vietnam or China. An empirical study reveals that the annual number of B.A graduates in Thailand is greater than in Vietnam (Phasina Tangchuang et al 2550(. This is true for graduates in social sciences, but not for specialties such as engineering, manufacturing or construction where Vietnamese graduates are more numerous in proportion than in Thailand. The UNCTAD has already made this same observation. It is also interesting to note that Vietnam is still developing its educational system and for that purpose is orienting its students more than Thailand towards educational studies and the formation of teachers and professors.

Figure 2 Number of graduates classified by fields of study



Source: Vietnam, UNESCO, year 2005; Thailand: Statistical Year Book 2004, applies to year 2004

The impact of Globalization on education

In their comprehensive study of the relationships between education and globalization, Burbules and Torres (2000) highlight that globalization affects three dimensions of social life :

1) The economic dimension through the transition from Fordist to post-Fordist forms of workplace organization and management , the rise of international markets and patterns of consumption and the education of barriers and impediments to the free flow of goods, workers and capital across national borders.
2) The political dimension through a decline of national-state sovereignty, or at least the erosion of the nationality of the economy and the weakening of the notion of citizen as an unified and unifying concept.
3) The cultural dimension , through a tension between the ways in which globalization brings forth more standardization and cultural homogeneity while bringing more fragmentation through the rise of locally oriented movements and the defense of national cultures.

In this context of globalization, many authors argue that universities should accompany this transformation by delivering not only cognitive skills - that are supposed identical whatever the place and the culture where the learning process takes place, but should also deliver skills directly related which international interaction and multi-cultural contexts (Armengol 2002; Suarez-Orozco & Qin-Hilliard 2004). This would give graduates the ability to work in foreign countries or with foreigner in multinational organizations and enterprises. All these authors in fact elaborate further the pioneer reflection of Robert Reich regarding the development of a world elite (Reich 1991).

Research on the opinions of employers regarding the graduates from higher education they employ (Phasina Tangchuang et al 2544; Harvie, D, 2004) shows that employers are well aware that the main flaw of graduates is a lack of l cognitive skills, that is a narrow scope of knowledge and scholarship, insufficient critical thinking ,inabilities to solve problems as well as a lack of reliability and responsibility .

McGrath (cited in Inoue, 2007) stresses the fact that for coping with globalization, education should deliver abilities to master an increasingly virtual technological environment and in particular "digital literacy", information management and communication, and distant learning.

In this view, skills enabling to work in a globalised work should be delivered by a education system reformed both in its curriculum and organizational dimensions. The market, it is said, is called to play a leading role. Thus, higher education should play a leadning role in preparing the elite to cope with globalization.

It is thus concluded that borderless education can provide more unequal education opportunity, corresponding to the rich and ignoring the poor or the less opportunity group.

Actually they advocate that universities should contribute to this development without underlining the real risk that universities let unattended national needs such as the formation of national teachers and professors imbedded in national education.

The role of higher education in the Globalization

For screening the future of universities in Thailand for the 21st century, Tangchuang & Mounier (2002) have based their analysis on a broad history of the world higher education from the 12th century to the 21st century elaborated by Marcus Ford (Ford 2002) and used by John Cobb for exploring the future of universities at a world level (Cobb 2002) . Marcus Ford finds that throughout its history higher education has followed successively 4 models that has also been combined: the Paris Model which major role is to serve the church; it begins with the construction of medieval universities such as La Sorbonne in1150; the Halle Model which major role is to serve the nation-state it was created by Frederick I of Brandeburg in 1697; one century after in 1810 the University of Berlin was created on opposite principles to those of the ¨Paris and the Halle models; its major purpose was to serve the development of knowledge by keeping at bay the influence of religion, politics and economic interests on scholarship orientation and methods;); eventually at the end of the 20 century public and private universities were transformed and developed for serving private economic interests; for this purpose they have been organized and managed as any business with paying customers and a logic of profit- making; this is the Phoenix Model of the United States which revives old Anglo-Saxon values of liberty attached to individualism and liberty conceived as the disappearance of central states the State, and in particular in the educational sphere. The regulation of the market, it is asserted, is more efficient and less socially biased than the regulation of the State. The phoenix model is the model of advocates of private education governed by the market which virtue is believed to improve the quality of education by allowing competition between educational institutions. In this view, - difficult to share- the development of a world market of educational services would pave the way of a better education.

Fielden (2001) observes that many countries are encouraging their national universities to go international in order to enlarge their own market of educational services. Today many universities try to increase their incomes and profits by attracting foreign students in their original premises as well as in the new campus and facilities they built abroad. For this purpose they have been claiming their autonomy from the State and have privatized their organization. They are now claiming their independence from their country of origin.

Many authors estimate that this evolution is beneficial to less developed countries which may receive better experienced teachers and professors, deliver more mature content of knowledge and adopt more efficient management methods. For instance in Europe, Froment (2003) argue that the exchange of students between European countries is useful not only to create the culture of this new entity but also to accelerate the formation of skills used at a world level.

Our viewpoint is that international education can be useful provided asymmetrical relationships are kept in control. Political international relations have always had an educational component where leading countries have attracted foreign students in their universities with avowable and less avowable motives of cultural, political and economic interests, not to mention "brain drain" policies. Today paying education and its internationalization may increase inequalities regarding education between the rich and the poor. This is true of the individual as well as the countries (Fielden 2001; Mounier 2006). Moreover globalization of education can endanger national identities and cultures and their socialization role as the hidden culture of a borderless education is that of rich and dominant countries (Armengol, 2002: 188-189; Davies, 2001)..

Conclusions

The internationalization of education is certainly difficult to deter so that developing countries have to prepare themselves to transform the possible handicaps into possible advantages. Opportunities offered by the expansion of international education have to be seized and well as threats stemming from it have to be monitored and kept at bay.

Opportunities

In its endeavor to improve labor productivity as a new way of monitoring labour costs, Thailand has to master the import, the management and the improvement of technology. The access to cognitive skills which have to be adequate for this purpose can be fueled by importing knowledge and professors to the country or by sending students to study in the countries providing such technologies and to learn research abilities as to adapt international technology. Japan and Korea in their times have developed such strategies (Srinoi Powatong 2546). There is no doubt that better understanding of engineers and researchers from technology exporting and importing countries can be a task of a borderless education.

Threats

We have seen that in Thailand the low quality of education tends to nurture an inflation of credentials where diplomas matter more than knowledge. Diplomas received from the education system do not reflect correctly the cognitive skills of their titular. Privatization of education fostered by its internationalization may develop this phenomenon provided what is important is that students are ready to pay to get their diploma. The reputation of educational institutions may be assessed by the profit made rather by the knowledge transmitted to their graduates. It is easy to check that some unscrupulous educational institutions advertise their capacity to deliver diploma through internet. This may be a caricature of the adverse effects of a bordeless education, but it is a real risk that should be fight against.

Thailand is particularly at risk because the increase of graduates of all levels from higher education is not mirrored by an increase of cognitive skills. Students are motivated only by the diploma not by the scholarship that should be associated to them. Professors and employers altogether observe this behavior and complain about it. They should probably address the question seriously with educational authorities in order to reverse this unfortunate behavior and the laxity of too many educational institutions which allows this behavior.

In the past, Thai students were studying abroad Masters and PhD programmes because of the lack of offer of such programs in Thailand. They had to comply with the requirements of the foreign institutions to get their diplomas. Today, at the same time when the country tries for good reasons to develop Master and PhD programs within the country, there is a process of investment of foreign higher education institutions in Thailand. Very weak regulation monitor this phenomenon, while at the same time Thai Ministry of commerce organizes the promotion for foreign students to study in Thailand. Education is becoming a tradable good with the only objective of making money by without any remaining references to the acquisition of knowledge and culture. As cultures remain mainly nationally shaped and as education is about the transmission of culture and of the possibility of enriching systems of symbols and representations (Bruner 1996), a borderless education become a particular dangerous way of education people. International information and modern technology have to be used to increase the resources dedicates to education but with a close monitoring of the meaning of educating in order to strengthen the coherence of human societies rather as a means to weaken them.

Recommendations

In order to keep at bay a borderless education that would surely threaten the role of socialization that education has to fulfill, governments should consolidate public education as the backbone of national education systems and monitor closely private institutions so that private benefits from education do not stem from endangering the coherence of the society through its openness to an education without culture anchorage or to the domination of foreign cultures mainly Americanized.

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Localization and Global Networking: Dealing with Borderless Education

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Abstract

Rapid globalization is one the salient aspects in this century. We can identify various types of globalization, including in the areas of politic, economy, social, cultural, and also education. One of the implications of globalization in the area of education is the borderless education, which has made the change on education context, from the traditional education with site bounded-learning into the borderless one. It is inevitable that the borderless education has brought challenge and opportunity to the higher education institutions across the world.

How to deal with it? Such kind of educational reform should be established to face the trend (Cheng, 2002). This ongoing reform must consist of two different but complementary aspects. They are the localization and global-networking. Localization here means the transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts. While global-networking means widening our cooperation with institutions around the world. Through localization and global-networking, students' learning would be facilitated in such a way that local and global resources, supports, and networks can be brought in to maximize the opportunities for their developments during learning process.

In 2003, Universitas Gadjah Mada initiated a new strategy in facing borderless education, and in the mean time we are in the process of accelerating it. We combine localization and global networking to solve the challenge of universal higher learning aims. We cooperate with numerous higher education institutions across the world to strengthen the global network, and we conduct the local community empowerment program to build knowledge-based society.

The experience shows that Universitas Gadjah Mada has been able to provide a better educational environment for the students with enrichment in resources and opportunities, and also a better standard of living for the community by implementing the local community empowerment program.

Keywords: globalization, borderless education, localization, global networking.

Introduction

The fast and huge transformations due to globalization and information technology are creating great impacts on the future of nearly every society, community, institution and individual in different parts of the world. Responding to the serious challenges from all these impacts and transformations, our education inevitably has to change fundamentally towards a new paradigm in order to pursue a new future for new generations as well as our society in such a new era of globalization and transformation.

The challenges of the new millennium such as the rapid globalization, the tremendous impacts of information technology, the international transformation towards knowledge-driven economy, the strong demands for societal developments, and the international and regional competitions have driven numerous educational changes in the different parts of the world (Cheng & Townsend, 2000). Policy-makers and educators in each country have to think how to reform education for preparing their young leaders to more effectively cope with the challenges in the new era. In facing the fast changing environment, many policy-makers and educators get confused with uncertainties and ambiguities and lose their directions in the rapid globalization. There is urgent need of a comprehensive framework for understanding the impacts of rapid developments and advancing implications for innovations in education.

In response to this need, Cheng (2000) has pointed the necessity of paradigm shift in education and reforms to meet the challenges in both local and international communities in the new millennium. The serious challenges in the new millennium include the rapid globalization, the tremendous impacts of information technology, and the international transformation towards knowledge-driven economy, the strong demands for societal developments, and the international and regional competitions. All these are in fact the challenges to the traditional thinking about the nature and developments of the world, the society and the human being, and asking for a new thinking about the future.

The traditional thinking assumes that the education environment is mainly characterized by the needs of local community, of which is slowly changing with moderate uncertainties and complexity. Thus, the boundaries of schools and the education system are assumed to be relatively stable and certain. Teachers and students rarely interact with the "real world" in their teaching and learning. Students enter the 'real world' only after graduation or leaving schools. Educational reforms are often limited and superficial mainly as a reaction to the raised public accountability and local concern. From this paradigm, the aim of education is to equip students with the necessary skills and knowledge to survive in a local community or to support the development of a society particularly in the economic and social aspects at a certain stage.

But according to the new thinking about the world and development, there is different thinking about education. The education environment is very fast changing and becoming very complicated and full of uncertainties and ambiguities. The boundaries of schools as well as the education system become unclear and disappearing. Students and teachers often interact frequently and intensively with the "real world" in learning and teaching (Townsend, 1999). Continuous educational reforms and developments are inevitable due to various local and global challenges emerging from this changing education environment. In this paper, author will try to share and discuss the strategies and experiences that Universitas Gadjah Mada has been doing this far to respond the borderless education. How the strategies are being implemented and what results they have carried out to implement the universal higher-education aims.

Changing Context in Education: New Paradigm of Borderless Education

Rapid globalization is the one of the most salient aspects of the new millennium particularly since the fast development of information technology in the last two decades (Brown, 1999). To different observers, different types of globalization can be identified even though most of the attention is in the areas of economy, technology, and culture (Brown & Lauder, 1996; Waters, 1995). According to Cheng (2000), there should be multiple globalization, including *Technological Globalization, Economic Globalization, Social Globalization, Political Globalization, Cultural Globalization, and Learning Globalization* in the new millennium.

Inevitably, how education should be responsive to the trends and challenges of globalization has become a major concern in policy making in these years. Cheng (2000) argued that not only globalization but also localization and individualization are necessary in ongoing educational reforms. Stamenka Uvalic-Trumbic, the head of UNESCO's Section for Access, Mobility and Quality Assurance said:

"The fast development of the knowledge society demonstrates that globalization, particularly the globalization of higher education, is irreversible and cannot be stopped. It can, however be tamed through regulation and policy coordination."

A paradigm shift of education for the new millennium can be initiated from the traditional site-bounded paradigm to the new paradigm of borderless education. In the traditional thinking, students' learning is part of the reproduction and perpetuation process of the existing knowledge and manpower structure to sustain developments of the society, particularly in the social and economic aspects. Education is perceived as a process for students and their learning being "reproduced" to meet the needs of manpower structure in the society. In the traditional paradigm, all learning activities are institution-bounded and teacher-based. Students learn from a limited numbers of institutional teachers and their prepared materials. Therefore, teachers are the major sources of knowledge and learning. Students learn the standard curriculum from their textbooks and related materials assigned by their teachers. Students are often arranged to learn in a separated way and are kept responsible for their individual learning outcomes. They have few opportunities to mutually support and learn. Their learning experiences are mainly institutional experiences alienated from the fast changing local and global communities. Learning happens only in education institution within a given time frame. Graduation tends to be the end of students' learning.

In the new paradigm, learning should be borderless and characterized by localization and globalization. Students' learning should be facilitated in such a way such that local and global resources, supports, and networks can be brought in to maximize the opportunities for their developments during learning process. Through localization and globalization, there are multiple sources of learning. Students can learn from multiple sources inside and outside their higher institutions, locally and globally, not limited to a small number of teachers in their institutions. Participation in local and international learning programs can help them achieve the related community and global outlook and experiences beyond education institutions. Also their learning is a type of networked learning. They will be grouped and networked locally and internationally. Learning groups and networks will become a major driving force to sustain the learning climate and multiply the learning effects through mutual sharing and inspiring. We can expect that each student can have a group of life long partner students in different corners of the world to share their learning experiences.

It is expected that learning happens everywhere and is life-long. Education is just the preparation for a high level life-long learning and discovery (Liu, 1997; Mok & Cheng, 2001). Learning opportunities are unlimited. Students can maximize the opportunities for their learning from local and global exposures through Internet, web-based learning, video-conferencing, cross-cultural sharing, and different types of interactive and multi-media materials. Students can learn from world-class teachers, experts, peers, and learning materials from different parts of the world. In other words, their learning can be a world-class learning.

Globalization here refers to the transfer, adaptation, and development of values, knowledge, technology, and behavioral norms across countries and societies in different parts of the world. The typical phenomena and characteristics associated with globalization include growth of global networking (e.g. internet, world wide e-communication, and transportation), global transfer and interflow in technological, economic, social, political, cultural, and learning aspects, international alliances and competitions, international collaboration and exchange, global village, multi-cultural integration, and use of international standards and benchmarks. Implications of globalization for education should include maximizing the education relevance to global development and pooling up the best intellectual resources, support and initiatives from different parts of the world for learning, teaching and research (Daun, 1997; Holmes, 1999).

Some ongoing examples and common evidences of globalization in education are web-based learning; use of the Internet in learning and research; international visit/immersion programs; international exchange programs; international partnership in teaching and learning at the group, class, and individual levels; interactions and sharing through video-conferencing across countries, communities, institutions, and individuals. Further, the development of new curriculum content on technological, economic, social, political, cultural, and learning globalization is also important and necessary in new education.

And localization refers to the transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts. Some characteristics and examples of localization are as follows: local networking; adaptation of external technological, economic, social, political, cultural, and learning initiatives to local communities; decentralization to the community or site level; development of indigenous culture; meeting community needs and expectations; local involvement, inter-institutional collaboration, and community support; local relevance and legitimacy; and concern for community-based needs and characteristics and social norms and ethos (Kim, 1999).

The implications of localization to education reform are to maximize the education relevance to local development and bring in community support and resources, local partnership, and collaboration in learning, teaching and research. Some examples for practice of localization include community involvement in education; privatization in education; public-institutional collaboration; assurance of institutional accountability; implementation of institutional autonomy, school-based management and community-based curriculum. The development of new curriculum content related to localization in technological, economic, social, political, cultural, and learning aspects of the society is also receiving growing attention.

According to the above new paradigm of borderless education, we should emphasize students' continuous self-learning the support of localization and globalization through information technology and various types of international and local networking. Mok and Cheng (2001) has proposed a theory of self-learning in a networked human and technology environment to show how students' individualized self-learning can be motivated, sustained and optimized through the wide local and international support from the borderless and networked human and technological environment.

Universitas Gadjah Mada's Experience

Universitas Gadjah Mada is the oldest and largest university in Indonesia. In 2003, Universitas Gadjah Mada initiated a new strategy in facing borderless education, and in the mean time we are in the process of accelerating it. We combine localization and global networking to solve the challenge of universal higher learning aims. Localization here means the transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts. While global-networking means widening our

cooperation with institutions around the world. Through localization and global-networking, students' learning would be facilitated in such a way that local and global resources, supports, and networks can be brought in to maximize the opportunities for their developments during learning process.

Local socio-culture and global-networking need to be arranged as a program not in contradictory characters but should be in complementary arrangements (Sudjarwadi, 2007). A unique approach planning to connect local socio-culture to global network is necessary. We cooperate with numerous higher education institutions across the world to strengthen the global network, and we conduct the local community empowerment program to build knowledge-based society. These strategies are in line with Universitas Gadjah Mada vision to take position in the changing world without uprooted from Indonesian socio-culture.

The Global Networking

To solve the challenge of universal higher learning aims, Universitas Gadjah Mada has been focusing its vision to be an international research university without neglecting its renowned community service commitments. To support the strategy, Universitas Gadjah Mada has been implementing the global networking by contributing in many university networks and also by establishing international collaborations with various higher education institutions across the world. During this decade, Universitas Gadjah Mada has established not less than 300 academic collaborations with many reputable universities and also university networks. This strategy is implemented to bring out a wider opportunity for students and lecturers to get a better, world-wide learning process. The activities implemented under these collaborations vary in type, i.e. the academic exchange program (included lecturers, scholars, students, experts, staffs); joint research program; twinning program (included double degree and joint degree); joint seminars, workshops, and training; etc. Recently, Universitas Gadjah Mada is affiliated in many reputable university networks namely ASAIHL (Association of Southeast Asian Institutions of Higher Learning), INHEP (Indonesia Netherlands High Education Partnership), SYLFF (Sasakawa Young Leaders Fellowship Fund), IAU (International Association of Universities), AUN (ASEAN University Network), USINDO, ASEA-UNINET, etc. Universitas Gadjah Mada also cooperates with international organization such as World Bank and ILO to conduct certain projects with regard to the quality improvement of the university.

Besides efforts mentioned above, in 2000 Universitas Gadjah Mada has also established The Indonesian Language and Culture Learning Service (INCULS) at Faculty of Cultural Sciences. Its aim is to provide courses and workshops for foreigners who are interested in Indonesian, Indonesian Culture and local languages. INCULS already offers to regular programs for the University of California (UC) and The United State Indonesia Society (USINDO) as well as Monash University and The Australian Consortium for In-Country Indonesian Studies (ACICIS). Students come from numerous countries such as Thailand, Vietnam, Singapore, Sweden, Belgium, Holland, Great Britain, etc. This institution has instituted greater opportunities for students across the world to take part in global networking. In the future, such program will be developed and enhanced to strengthen the global-networking among future leaders in several countries. These efforts have been done by Universitas Gadjah Mada to provide as many opportunities as possible to facilitate students in such way that global resources and support can be brought in to maximize their learning process. Further, they will be enhanced for promoting Universitas Gadjah Mada in the process of becoming a World Class Research University.

The Community Empowerment Program

University is one among four components to build a structure called resources for prosperity. It is called CSR (Corporate Social Responsibility). Especially in developing countries, a university should introduce additional word called USR or University Social Responsibility (Sudjarwadi, 2007). In the term of USR then a university has multi-obligations, one among the many obligations is a responsibility to support and empower local communities. It is an obligatory mandate to make local communities prosperous. To implement it, there is a University Program which all undergraduate student need to carry out a group work in the community. This activity has a load of three credit semester but it is not a field work. A *field work* is an activity to strengthen the mastery on a certain profession, while the working in community is called Community Empowerment Program. Empathy and concern to rural people and local resources is the purpose of the Community Empowerment Program. In this activity, students work in field in a group of multidiscipline for two months. In the field they have partners who are lecturers and local people. Together, they try to apply knowledge in the context of learning, research and services.

Working in field must be under a chosen theme on the development through co-creation among stakeholders who have the same concern with Universitas Gadjah Mada. One among other examples is a topic for introducing a new way of working based on co-creation with community. Although one group will work only for two months in a village, other groups will come alternately so that a continuous process for community empowerment will exist through working in villages.

Recently, Universitas Gadjah Mada has created an International Community Empowerment Program. The working model includes foreign students; among the countries whose students participate in this program are Japan, Korea, and Norway. The Institute for Research and Community Services, the organizing institute or called LPPM, now seeks to develop a model that will allow this program implementation abroad by interested institutions as well as increasing the number of students from abroad that participate in domestic Community Empowerment Program. Community Empowerment Program management is currently being standardized and is expected to be certified with ISO 19000-2000. Efforts are being made to achieve this in near future. The institute also desires more publication of Community Empowerment Program and if possible, the Community Empowerment Program is offered as an individual and independent program for foreign students. In a recent Regional Centre of Expertise conference, the Community Empowerment Program and its various aspects and areas were presented to a number of universities. Response and reactions had been of favorable admiration. There is an expectation to improve the program to meet international standards. This way, the Community Empowerment Program can be promoted as an effective form of student-based community service.

Through the program, awareness is gained for using knowledge to better manage local resources. A continuous process exists that new ways in learning and research in Universitas Gadjah Mada comes through many initiatives in many scenarios of learning innovation. It is assured to all students and lecturers, that the learning process followed is activity under the umbrella of, *think big act small* (Sudjarwadi, 2007). There is evidence that the innovation stepped by students and lecturers show improvements in passion and commitment for approaching community better future. It is believed that step by step approach will grow to wider coverage through regions in Indonesia. When critical mass of knowledge society exist and shows solution for prosperity, security, welfare and equity then a World Class University has done the correct tasks.

Conclusion

The new paradigm of borderless education that is contrastingly different from the traditional thinking can be used to rethink and re-engineer education. In the new millennium, our world is moving towards multiple globalizations and becoming a global village with boundless interactions among countries and areas. In fact, the ongoing education reforms in different parts of the world have already provided evidence that many countries are making effort in this direction through various types of initiatives in globalization and localization. Our learning and teaching will be finally borderless and characterized with globalization and localization with the help of the information technology and boundless multiple networking. We should promote a learning system in a networked borderless human and technology environment. Through this strategy, we will create unlimited opportunities and multiple global and local sources for life-long learning and development of both students and lecturers. We believe this will make students' learning process interactive, self-actualizing, discovery, enjoyable, and self-rewarding. Finally, all students will become borderless learners with unlimited opportunities for learning and development. They will fully enjoy life-long self-learning and actualization and become a leader with local wisdom.

Challenges continued and Universitas Gadjah Mada is in the status of continuing the learning process to be world class by doing solution of world problems where many wide rooms of opportunity exist in Indonesia. To connect to global network is a must and it is the chosen solution where UGM becomes a better learning institution to optimize contribution; although there are many constraints. Experience is learnt, it shows rooms to practice improvement of quality for responding the borderless education. The experience also shows that Universitas Gadjah Mada has been able to provide a better educational environment for the students with enrichment in resources and opportunities, and also a better standard of living for the community by implementing the local community empowerment program.

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Industry-Academe Linkage in Higher Learning: Symbiosis for Globalization

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Abstract

Two decades ago, engineering graduates in the Philippines were deemed by practitioners to be inexperienced on technologies and work environment of the industry. Thus, DLSU's College of Engineering (COE) deemed it necessary to institutionalize the efforts of industry and academe to make graduates' quality world-class through provision of industry-based activities.

COE conducted a one-year research and consultation with industry representatives then established the Industry-Academe Linkage Center (Linkage) in May 1987.The Linkage was manned by 6 faculty members reporting to a board of industry representatives. The initial task of the Linkage was to convince companies from the Philippines' top 100 to be members by signing a memorandum of agreement, accommodate the Linkage's requests for activities, and provide stipends to on-the-job-trainees. Later, activities expanded to joint researches, consulting, training, curriculum and funds development.

After 20 years membership ballooned as it was opened to any company who could help and be helped. Linkage objectives became more cause-oriented as concerns moved from urban to rural, and gravitated towards service to the underprivileged and environment. Graduates' job placements became efficient. Students and mentors became more technically equipped and concerned with their socio-environment. Industry also benefited from the Linkage as productivities increased thru low-cost and high-quality manpower provided by the students and faculty, and company recruitments of world-class engineers from COE became more productive.

Proof to the success of the Linkage is the establishment of a DLSU Linkage Office in 2000 that caters to the industry-academe cooperation of all DLSU units, and the establishment of similar centers in higher educational institutions in the Philippines.

Keywords: Changing Education Context, Quality Assurance, Industry-Academe

INTRODUCTION

In the 1980's, although the Philippine educational system was producing a substantial number of engineering graduates every year, many of these graduates were deemed by industry practitioners to be wanting in shop floor experience that would enable them to take on engineering jobs direct from graduation. Although many graduates had good theoretical foundation, most did not know how to apply them even in simple tasks of running machines, working with a project team or preparing operations reports, more so in working with advanced technologies. As a consequence, engineering graduates got better paying jobs in finance, marketing, and personnel administration, and not in the purported engineering areas such as manufacturing, exploration and construction.[1]

De La Salle University's College of Engineering (COE), desiring not to perpetuate this situation, realized that there should be a stronger tie between the academe and the industry. In the past, the COE's effort towards this end consisted of on-need arrangements by some students with some companies. These proved to be ineffective and inefficient. There was a need to institutionalize the cooperation between the academe and the industry.

THEORETICAL FOUNDATION

Thus in January 1986, a research was commissioned by COE to this author to benchmark with other universities on how they formalized linkages with industry. Unfortunately, all tie-ups with industry of the 20 reputable universities in Asia that were surveyed were inked ad hoc. In Europe and United States, some universities had offices under alumni and development office or office of research and external relations that formalized tie-ups with various companies [2]. Loughborough University and Boston University, recognized globally for the breadth of partnerships with companies of all sizes, and graduates with deep and wide industry exposure, had memoranda of agreement with their industry partners and utilized their alumni network extensively[3, 4] These two universities served as reference for the system that COE would set-up. Thus, COE administrators and officers of the alumni group and this author met several times to discuss the various proposals on how the linkages would be institutionalized.

DETAILS OF THE PROJECT AND EXPERIENCE

In May 1987, after one year of research and legwork, the Industry-Academe Linkage Center (Linkage) was established by COE. It was envisioned that the Linkage would spearhead the efforts by COE and companies to symbiotically cooperate to continuously improve the quality of the engineering graduates through provision of job-site activities such as on-the-job training(OJT), thesis, plant visits and term projects dealing with actual problems of the industry. [5]

The Linkage was headed by a director, a COE faculty member who was deloaded by 3 teaching units every term and assisted by 6 academic coordinators (faculty members from each of the six departments) who were given honoraria equivalent to one unit teaching load. The initial task of the Linkage was to convince companies from the Philippines Top 100 to sign-up as members of Linkage. As Linkage member, a company was required to accommodate the Linkage's request for students' job-site activities and highly encouraged to provide stipend to its on-the-job training students from COE. It also had to assign an employee as industry representative in charge of coordinating with the Linkage. To abate "birth pains", membership was limited to 10 companies for two years.

The director reported to and was a member of the Linkage board, comprised of the Chairman and 9 other board directors. Initially all the board directors were COE alumni who were high-ranking officers of the first 10 member companies of the Linkage. They were the same persons who helped convince their respective companies to be Linkage members. The board served as advisory and steering body of the Linkage.

In the first two years, most of the student activities were limited to plant visits and conduct of industry-based term projects. By 1989, the first set of 32 Manufacturing Engineering and Management seniors had their one-year OJT. One of these students was even sent to the United States for three months by his host company to complete his project.

The Linkage encountered problems that were eventually solved, such as:

1. Confidentiality. Companies were afraid that confidential matters, specially trade secrets, would be leaked out. Thus, they were advised to expose the students to territories or concerns that would not jeopardize confidentiality. In meritorious cases, companies had to weigh between the risks and the benefits they could get from sharing information. Further, if the student or faculty on OJT or research would be treated as a contractual employee, then s/he should be given access to information at least to the extent a contractual employee could and should have.
2. Health and Safety. The companies did not want to be liable to students or faculty who might meet an accident or get sick during their industry-based activities. A waiver form was developed to ward off these worries.

RESULTS OF THE EXPERIENCE

After 20 years of operation the Linkage has grown in size and in scope resulting from changes in its thrusts.[5]

1. **Membership.** Company membership grew from 10 to 170. The applicants numbered more than double but could not be accepted because they could not meet some of the membership requirements like assignment of an industry representative and submission of progress reports. The member companies were no longer limited to the Top 100 because of the realization that companies, more so of the small- and medium-scale, also needed the help that could be given by the COE faculty members and students, especially those into OJT. At present, 20% of the member companies are small- or medium scale. Some are even government units.
2. **Student Activities**. The need to increase the membership was mainly due to the exponential growth of student's demand for job-site activities.
    a. **OJT**. OJT is a two-unit graded course per term. OJT student cannot take any other academic or nonacademic subjects for the same term. An academic adviser is assigned for every set of 10 OJT students. The company representative to the Linkage and the practicum adviser facilitate and monitor the OJT stint of the student, using various forms such as letter of application, waiver, schedule form, weekly progress report, certificate of completion and evaluation form. The annual number of students who needed OJT for at least one term (3.5 months or 500 working hours) rose from 32 to about 500. Because of its benefits, COE decreed in 2002 that at least one-term OJT be mandatory for all its six disciplines. In addition, graduate students enrolled in Masters in Engineering Program were required to complete of a minimum of one-term OJT and an industry-based mini-thesis project.

b. **Thesis or term project.** A thesis or a term project is performed by a student or a group for a period of one to 3 terms. A project proposal coming from an IAL member-company is given to the students for research. A company representative serves as the contact person and adviser of the student(s). On the academic side, a faculty member of a specific department is assigned as adviser of the same student(s), as provided in the thesis guidelines.The Linkage facilitated about 50 thesis projects, and 150 term projects annually.

c. **Other student activities.** Plant visits by the academic community, campus visits by industry personnel, exhibits, trainings, lectures or workshops are coordinated by the Linkage on a need-basis.

3. **Other Cooperative Activities** expanded beyond students' needs such as faculty OJT, joint research, consulting, training and education of company employees, sharing of expertise by industry engineers and scientists to the academe, fund raising, and improving curricular or non-curricular concerns of COE. The Linkage also facilitates all cooperative activities between COE and any company, member or not. Its new thrust is to increase the number, industry-type, geographic location of companies that can help or be helped by Linkage activities. Due to the growing demands for these services, the Center for Engineering Sustainable Development and Research was created as an adjunct office of the Linkage.
4. **Socio-Environmental Concerns.** Although the Linkage was initially intended for the technological development of the COE students, the activities eventually gravitated towards service to the poor, underprivileged and environment. Its adjunct center has the phrase *sustainable development* in its name owing to the growing concern for society and the environment. Its activities have moved from Mega Manila to rural and even remote places of the country. Projects undertaken were not only geared towards improvement of industry productivity but also for community development.

This growth of Linkage has resulted to benefits of the academic community beyond the COE administration's expectations.

1. **Processing times** to implement these activities have been reduced from weeks to hours. For example, before the birth of Linkage, a request for plant visit to a prospective company would take at least a month on the average before it could be granted. In majority of cases, the request would be turned down. With the Linkage, a request for plant visit to a company member can be granted on the same day, provided all information in the request form are properly filled out.
2. **Graduates' job placements** have become productive. New graduates get to know if they will fit in the work environment of the companies or industries where they had their OJT or other industry-based activities. They are able to establish contacts or endorsers for their job application in these organizations. On the other hand, Linkage and the six departments are immediately notified of job vacancies.
3. **Graduates' reputation** has improved. In the past, COE graduates were thought to be inexperienced, did not want to wet their feet or soil their hands, or snobbish, simply because most of them came from rich families. Now, the industry is aware that the COE graduates are technically superior in theory and in practice, have good work attitude and are easy to work with.
4. **Socio-environmental responsibility** of students and faculty has deepened due to sustainable development projects facilitated thru the Linkage. Among the notable ones in the last five years are:

a. Design and installation of micro-hydro plants in remote areas of the country (that earned awards from the Department of Science and Technology and the United Nations)
b. Design and Installation of first Philippine solar car (that fared well in the 2007 Panasonic Solar Car Race)
c. Training series on micro-hydro plant development (that was eventually supported as a 3-year project by Japan International Cooperation Agency)
d. Technical assistance for *Sagip-Ilog* (Save-a-River Project) of Las Pinas City (that won recognition from United Nations)
e. Technical assistance to small and micro enterprises in programs such as PEARL (Private Enterprise Accelerated Resource Linkage) and ESEP (Entrepreneurial Support and Enrichment Program)

Further proof to this deepening responsibility is the increase in the number of students being given the Community Development Leadership Award by DLSU every graduation day from almost none to an average of two per year for the past three years.

5. **Funds** have been received by COE with Linkage assistance to finance laboratories, researches and scholarships. In the last two years, the main donors were Linkage member companies such as Shell, Ford Motors, Intel, Philippine Airlines and San Miguel Corporation.

Although the Linkage Program was aimed primarily to benefit the students and the academic community, the company representatives attest to have derived the following benefits:

1. All systems worked on by students (in term projects, theses and OJT) have substantially improved as students and faculty contribute new and fresh ideas.
2. Productivities have been increased thru low-cost and high-quality manpower provided by the students and faculty
3. Personnel recruitments have been facilitated since companies are able to screen potential employees from among the OJT students. Specific COE graduates' aptitude and attitude that are needed by the industry are now highly satisfactorily met.
4. Company representatives are able regularly provide suggestions on the curricular and non-curricular activities of COE, evaluate OJT student's performance during and after the training.
5. Company personnel are able to share their engineering and non-engineering expertise not only to COE but also to the communities being served by COE's socio-environmental projects.
6. The biggest benefit to the industry is the world-class quality of engineers they are able to inherit from COE. Because these engineers are skilled in using and even developing advanced or state-of-the-art technologies, they will play vital roles in their respective company's fight in the global arena.

The biggest beneficiary of the Industry-Academe Linkage is the world, in general, and the Philippines, in particular. Through the Linkage, the COE graduates are now more skilled, pro-poor and pro-environment. More of them work after graduation in engineering-related jobs and in companies in the Philippines, especially in rural areas. The COE faculty members are also better equipped to impart not only technical knowledge, but also socio-environment awareness while companies have become more productive, globally competitive and cause-oriented.

Proof to the success of the Linkage is the establishment in 2000 of a DLSU Linkage Office that caters to the cooperative activities by all colleges of DLSU, and the establishment of similar centers in higher educational institutions in the country. [6, 7]

FUTURE TRENDS

The Linkage envisions itself to facilitate COE's high-risk/high-gain researches with a focus on fundamental topics that would not have been undertaken by industry, and direct transfer of new knowledge between COE and industry [8]. It aims to enlist reputable companies abroad as industry partners, and non-engineering faculty or engineering faculty from other universities as members of its interdisciplinary research and consulting teams. It aims to integrate practicum activities even in distance/online learning. With all of these plans, it hopes to be the arrowhead in COE's pursuit of its vision to be the leading institution in engineering education, research and consulting in Southeast Asia.

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Either Blended or Single Media: Which Suits Distance Students?

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Abstract

Sukhothai Thammathirat Open University (STOU) offers open admission to all applicants. Those with weak mathematics backgrounds have difficulty studying university mathematics courses. A remedial basic mathematics program using textbooks and a CD ROM was introduced.

The objective of this study is to compare achievements between students who studied remedial basic mathematics using textbooks alone, a CD ROM alone and both textbooks and CD ROM.

The population were students who enrolled in Mathematics courses in semester 1/2007. The sample were 97 students who volunteered to join the project; 28 students studied from the textbooks only, 26 from the CD ROM only and 43 from both textbooks and CD ROM.

The instruments were mathematics textbooks, a mathematics CD ROM, a mathematics diagnostic test, a workbook, and questionnaires. The instruments were sent to each group of students. Of the questionnaires, 55 were returned: 27% of these from students who studied using textbooks only, 34.5% from students who used the CD ROM only and 38.2% from those who used both. The data were analyzed by using percentage, mean, standard deviation, paired-sample t test and ANOVA.

The Results

Students found that the textbooks and the CD ROM were very appropriate. They agreed that the textbooks and the CD ROM were very helpful. They agreed that the textbooks encouraged a disciplined approach to study and regular study habits.

The mean of the posttest was significant higher than the mean of the pretest of every chapter of every groups at a level of .05. When comparing the achievements of the three groups of students who studied textbooks only, CD ROM only and textbooks and CD ROM it was found that there were not significantly different at a level of .05. Therefore, there was insufficient evidence to

claim that either the blended or single media were best suited to distance students, but the media that students chose to fit their learning style may be the most suitable for them.
If distance students have the opportunity to choose media to suit their own learning style, they tend to be successful in their studies. Therefore, the university should pay attention to the need to produce variety of media.

Keywords: blended, media, textbook, CD ROM, distance students, basic mathematics

Introduction

Lack of basic mathematics knowledge is a major barrier to Sukhothai Thammathirat Open University (STOU) students. It results from the policy of open admission for all people without any entrance test. As a result, many students fail the university mathematics courses; Mathematics for Social Science, Mathematics and Statistics, Mathematics and Statistics for Business and Mathematics and Statistics for Science and Technology. Each of these is a core course for a specific program in the Schools of Economics, Management Science and Science and Technology.

The problem of low the pass rate in these courses delayed students completion of their programs and some dropped out from the university. The university had provided a regularly range of support programs for students. A remedial basic mathematics course as a bridging program for students was initiated. The remedial basic mathematics course was created in the form of textbooks and a CD ROM. It was assumed that providing multimedia would be good for students. They had the opportunity to choose media that was suited to their learning style.

As Moore and Kearsley (2005) said, traditionally, textbooks are the common medium for students because of their familiarity, low cost, portability and ease of use. They have been the most common medium used in distance education. They can allow students to study at their own pace and in their own time. This makes print, the technology of choice for many adult students. Moore and Kearsley also pointed out that text suffers limitations, as do other media, but that most can be overcome through good design. Print that is carefully designed at the correct level will enable most people with motivation to learn.

Bates (1995) said that for the reader is to obtain meaning from a text, interaction is essential. Ways to structure a students' response to the material may include: detailed measurable objectives, structured headings, self-assessment questions within the text, activities, summaries, past exam questions and model answers.

A CD ROM is a type of computer-based learning. Students work their way through pre-designed material, answering questions and choosing optional paths through the learning material. The computer program may utilize students' responses to questions to guide them through the material, and provide feedback on their responses to questions (Bates, 1995). Friesen (1991) reported increased motivation and sense of accomplishment of adult basic education learners using computers to learn, especially where the programs use innovative techniques for gaining and holding attention.

Students are able to use the CD ROM alone when working on a personal computer. The main strength of computer-based instruction is that it can provide a high quality opportunity for the student to interact with subject matter under his or her complete control. The teaching strategies may involve inquiry methods, simulations, and games (Moore and Kearsley, 2005). The material on the CD ROM may include text, animations, sound, pictures and video. The CD ROM may also contain links to the Internet enabling the use of email and web boards to allow interaction with the teacher and other students.

Curiosity about the relative effectiveness of textbooks and CD ROMs inspired this study into whether either blended or single media suits distance students best.

The objective of this study is to compare achievements between students who studied remedial basic mathematics using text books alone, a CD ROM alone and both text books and CD ROM.

Methodology

The study used a single group pretest-posttest design.

Population: The population were students who enrolled a course from four courses; Mathematics for Social Science, Mathematics and Statistics, Mathematics and Statistics for business and Mathematics and Statistics for Science and Technology in the second semester of 2007. The sample were volunteer students. Four hundred invitation letters containing details of the project were sent to students, a hundred to each course. Advertising about the project was also delivered by website, newsletter and newspaper. There were 97 students who volunteered to participate, 28 preferred textbooks only, 26 chose CD ROM only and the rest chose to study by both means, textbooks and CD ROM.

Instruments: There were four types of instrument used; 1) Textbooks, 2) A CD ROM, 3) A workbook, 4) A mathematics diagnostic test and 5) two sets of questionnaires. There were three textbooks; Real numbers, Geometry and Algebra. Each textbook was divided into chapters similar to STOU textbook, style and format. The contents in each chapter were divided into small units. They included contents' concepts, objectives, contents, examples, conclusions, exercises and solutions. The CD ROM contained similar topics as in the textbooks but had extra details such as sound which helped students understand mathematics better.

A mathematics diagnostic test was developed from the previous study. It was used before and after the students studied from the media. A workbook contained the pretest and posttests of each chapter as well as answer sheets. The two sets of questionnaires for students requested them to comment on the textbooks and the CD ROM. They were similar but specific to the medium used. The topics for student comments on the textbooks or CD ROM were 1) The Contents and Presentation 2) Examples 3) Exercises. Other topics concerned the advantages the students received and students' behavior in studying from the basic mathematics textbooks or CD ROM. Extra topic details such as sound were added to questionnaire on the CD ROM. Students demographics were also requested.

Data collection: The particular instruments and instructions were sent to each group of students. They were asked to do pretests and posttests and to complete the questionnaires and return them as the given address. Students were contacted by telephone, email and post to ask about their study progress or any problem they were faced with.

There were 55 (56.7%) students who returned questionnaires, 15 from students who studied using textbooks only, 19 from students who studied using the CD-ROM only and 21 from those who studied using both the textbooks and the CD-ROM.

Analysis: The data from questionnaires were analyzed by percent, mean, standard deviation. Pair-sample t test and ANCOVA were employed for the pretests and posttests. Students final exam scores were analyzed by Mann-Whitney U.

Results

The results were classified into four topics as follows.

1. Students' demographic: Students who participated in the project and returned questionnaires were mainly female (69%). The average age of students was 31. Nearly half (43.6%) held a diploma followed by senior high school (29.1%). Therefore nearly half (47.3%) had low income (less than 320 USD per month). More than a half (52.7%) rated their mathematical ability as moderate followed by 27.3% poor and 16.4% very poor.

2. Students' basic knowledge: All three groups of students', those who studied from textbooks only, CD ROM only and both textbooks and CD ROM, completed a diagnostic test for their basic mathematics knowledge before studying the contents**.** ANOVA was used to compare the means. It was found that their was no significant difference between the groups. The data was shown in table 1.

Table 1 Comparison of the students' mean scores on the diagnostic pretest.

Group	n	Mean	SD.	Source	SS	df	MS	F	p
Textbooks only	15	74.73	28.083	Between Groups	2319.265	2	1159.632	1.968	.151
CD ROM only	17	76.94	20.1943	Within Groups	28279.559	48	589.157		
Textbooks & CD ROM	19	89.74	24.397	Total	30598.824	50			

3. Students' satisfaction: Students were asked to comment on the textbooks and the CD ROM on the contents and presentation, examples, exercises, usefulness and their effect on study discipline. Students who studied from textbooks only and those who studied from both textbooks and the CD ROM found that the textbooks were very appropriate. They agreed that the textbooks were very helpful and promoted self discipline regarding study habits. Students who studied from the CD ROM only found that the CD ROM was very appropriate. They agreed that the CD ROM was helpful but they felt that it had little effect on their study habits. The students who studied from both textbooks and the CD ROM found that the contents were very appropriate but the examples and exercises were only moderately appropriate. They did not particularly feel that studying. from the CD ROM encouraged a disciplined approach to regular study. The data was shown in table 2.

Table 2 All groups of students comments on the textbooks and the CD ROM.

	Textbooks only		CD ROM only		Both Textbooks and CD ROM			
					Textbooks		CD ROM	
	Mean	SD.	Mean	SD.	Mean	SD.	Mean	SD.
Contents	3.98	0.490	4.00	0.596	3.81	0.817	3.70	1.205
Examples	3.76	0.568	3.75	0.739	3.71	0.773	3.48	1.188
Exercises	3.86	0.609	3.69	0.774	3.78	0.750	3.46	1.178
Usefulness	4.12	0.987	4.45	0.673	3.70	0.988	3.15	0.975
Discipline	3.73	1.016	3.45	0.711	3.52	0.932	3.54	0.77

4. Students' achievements: Before and after studying each chapter they did a pretest and a posttest. It was found that the mean scores of the posttests of all three groups were significantly higher that of the pretests at a level of 05. The data was shown in table 3.

Table 3 comparison of the mean scores between the pretest and the posttests of all three groups.

Group	Pretest		Posttest		t	p
	Mean	SD.	Mean	SD.		
Textbooks only	47.35	10.156	87.50	18.826	9.874	.001
CD ROM only	60.69	19.128	88.46	15.704	10.409	.001
Textbooks & CD ROM	65.11	20.265	92.69	15.7447	10.071	.001

All three groups of students, those who studied from textbooks only, CD ROM only and both textbooks and CD ROM, completed a diagnostic test of their basic mathematics knowledge after studying the contents**.** Pair-sample t test was employed to compare the means. It was found that their was no significant difference between the groups. The data was shown in table 4.

Table 4 Comparison of all groups of students' mean scores of diagnostic posttest.

Group	n	Mean	SD.	Source	SS	df	MS	F	p
Textbooks only	13	80.15	33.279	Between Groups	1797.859	2	898.929	1.202	.310
CD ROM only	15	88.67	20.322	Within Groups	34394.835	46	747.714		
Textbooks & CD ROM	21	95.10	27.681	Total	36192.694	48			

The pass rates of students who participated in the project and those who did not but studied the same courses were compared. The Mann-Whitney U Test was used to analyze the data. It was found that students who joined the program had a significantly higher pass rate than those who did not. The data was shown in table 5.

Table 5 Comparison students pass rate between students who participated in the program and those who did not.

Group (N)	Passed (N, %)	Fail (N, %)	Z	P
Participants (43)	25 (58.14)	18 (41.86)	3.284	.001
Non-participants (3,938)	1,347 (34.21)	2591 (65.79)		

Discussion

Generally textbooks and the CD ROM were effective. Students found that the textbooks and the CD were very appropriate and found that the media were useful. Their mean scores on the posttests were significantly higher than that of the pretests.

Both textbooks and the CD ROM were carefully designed. The media contained objectives, a system of headings and subheadings, self-assessment questions, activities and feedback (Bates, 1995 and Moore and Kearsley, 2005). Students were able to learn in small content steps and evaluate their understanding at the end of each topic. The basic mathematics textbooks and the CD ROM allowed them to work at their own pace.

Students had chosen their own media to suit their learning style. Being mature students, they appreciated the self-directed learning which involved independent study and self-responsibility (Moore, 1993 and Moore and Kearsley, 1996). They were able to study at any time and place when they felt like studying.

There was an interaction between the learners and the contents by doing exercises and checking the answers. They had prompt feedback which motivated them to learn (Friesen, 1991; Garrison and Shale, 1990 and Hannifin, 1989). Moreover, they were able to contact the tutor by telephone, email, web board as well as by post if they had any questions. Students who studied from the CD were able to link to the tutor while studying. Interaction is important for distance students who are isolated from their tutor

The mean scores of the posttests of three groups were not significantly different. Therefore, there was no evidence to claim which type of media best suits distance students. When comparing the pass rate, students who studied from the provided media had a significantly higher pass rate than those who did not but studied the same mathematics courses. This indicated that distance students who had remedial basic mathematics with different type of media were more successful in studying university mathematics.

Conclusion

Distance students who had weak basic mathematics should be helped by providing a choice of media for their remedial program. The university will get benefit from students' success and a low dropout rate and students will be happy to learn in the system. Therefore, the university should pay more attention to provide a mix of media to fit students learning styles. It is suggested that a mix of media should be provided to allow students to have the opportunity to choose those that suit their learning style as suggested by Daniel (2007).

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Performance-based Blended Learning Delivery for Online Curriculums in Thai Universities

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Abstract

Despite recent reports showing explosive growth in pure online modes of delivery and very little evidence of growth in blended course offerings, blended learning is generally regarded as a promising mode of delivery that combines the best of both worlds. In Thai universities, the majority of degree programs are offered in traditional mode while there has been increasing interest in a pure eLearning mode following the announcement of the regulation for degree programs in distance learning by the Ministry of Education in 2005. Blended learning, however, has been implemented only as experiments.

Incorporating the online mode into existing traditional degree programs has some limitations due to the requirement to comply with the regulations of traditional programs. A promising alternative is to incorporate traditional features into an online curriculum creating a blended program, which can be flexibly customized without much restriction. The approach is being practiced with favorable outcomes as measured by the satisfaction and learning outcomes of students compared to the pure online mode of delivery. In general, blended learning is more effective for Thai students than pure online learning, unlike students from other countries.

The role of teachers in Thai society has always been highly respected even at the same level as that of parents. Face-to-face sessions with instructors are, therefore, valued as highly important. In the proposed performance-based blended learning delivery, the role of facilitating instructors is expanded to continually evaluate performance, progress, and the needs of students. The proportion of face-to-face (or synchronous long-distance) class sessions versus online asynchronous lectures and activities is dynamically adjusted based on the perceived performance of the class. With this approach, blended learning can be customized for each course and student easily.

The discussion and proposed approach arise from the observations and experiences in teaching and managing an online degree program for Thai students. It presents one step in addressing a few of the many challenges that face or will face Thai universities in the eLearning revolution.

Introduction

Online learning has now become an essential part of the strategic planning of all education institutions worldwide. In Thailand, the emergence of online learning in higher education was realized only recently due to a lack of government support. Only after October 2005, could pure online curricula, be offered. (which are fully recognized by the government and the accreditation body) The first and second online curricula were offered by Assumption University. These were then followed by a few other online curricula of other universities, both public and private.

While online learning can serve very well the needs for education of groups of students whose lifestyles do not align with traditional face-to-face learning, the online mode of learning also benefits traditional classrooms. This so-called blended learning or hybrid learning has received much interest among educators because of its high potential in improving learning outcomes by combining or blending the best part of various learning mechanisms. In the beginning, blended learning was perceived as easy to implement, and thus, dramatic growth was anticipated. A recent report by Sloan Consortium instead reported declines in the percentage of course sections taught in blended learning mode from 2003-2005 in the United States (from 6.8% to 6.6% to 5.6%).

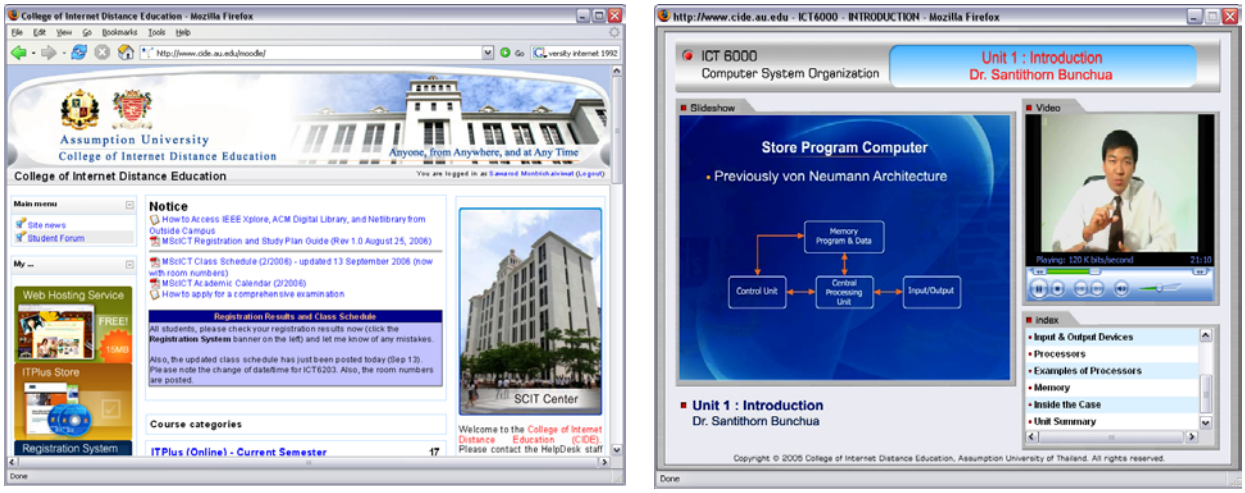
Various definitions of blended learning exist. Generally, it refers to learning the combines face-to-face learning with online learning to improve learning outcomes. And, in contrast to many beliefs, blended courses are usually implemented specifically as blended courses, not as a transitional stage in the move from traditional face-to-face learning to online learning.

In this paper, the implementation of a blended program at Assumption University, the Master's Program in ICT in particular, is discussed. The latest implementation represents an alternative to the implementation of the blended mode, which results from the need to supplement pure online courses with face-to-face tutoring class sessions.

The Online ICT Program at Assumption University

The Master's Program in Information and Communication Technology (M.Sc. in ICT) is the second eLearning-mode program offered in Thailand, following the M.Sc. in Management, also offered by Assumption University. The program was first offered in May 2005 as a traditional program with the intention to implement it as a pure online program once the government recognized the eLearning mode of study in Thailand. Students studied in a blended mode since online material was provided for all courses in the program and a web-based LMS was used extensively. The main channel of delivery was still through the class room in face-to-face lecture sessions. Although, by some definitions, this may not qualify as blended learning, lots of emphasis was placed on the online component to test the entire system before actual implementation, and so it was considered blended learning by the program administrator.

Following the recognition of eLearning by the government in October 2005, the ICT program transitioned into a pure online program in May 2006. Through a full year of experiments, the online component was launched successfully with no major problem. The effectiveness of the online curriculum was evaluated with satisfactory results. The ITPlus LMS, which is based on Moodle, and the Power-V application for video-based lecture delivery through video streaming technology are illustrated in Figure 1.



(a) ITPlus – Web-based LMS (b) Power-V – Streaming Lecture

Figure 1 Major components of the eLearning system used by MScICT in 2006

eLearning and the Nature of Thai Students

The abrupt transition from blended classes (classrooms with online components for all material and activities) to pure online classes had an interesting impact on students, especially certain groups of Thai students. Although the evaluation results showed high satisfaction towards the online learning implemented, the level of communication and interaction between instructors and students and among students themselves was very minimal. In addition, the learning outcomes of certain students were not entirely satisfactory.

As generally understood, successful online learning demands self-discipline and the characteristics of a motivated self-learner. Many students, especially Thai students, are accustomed to the traditional learning style where instructors are an important figure that effectively guides the learning of the students. For these students, frequent face-to-face sessions with an instructor, either in person or in a classroom setting, are crucial to their learning. The instructors continue to play a very important role, not only to facilitate the understanding of the course material but also to improve, motivate, and inspire the students. This is especially important in Thai society where instructors are generally regarded as among the most respected figures for students. The role of instructors is no less important in graduate studies than in undergraduate studies and lower levels.

Performance-Based Blended Learning Delivery

To address this problem, the program transitioned back into blended mode although not as a mandatory route for all students. The program keeps its benefits as a pure online program for those students who need those benefits. For example, students living in remote areas or other countries can still benefit from the pure online mode of delivery without the need to travel or visit the campus or study centers. The blended component was then added to the program to assist students with the need for a face-to-face mode of delivery.

The question arises as to how a blended course can be designed. A number of frameworks, recommendations, and best practices are available that help in the design of an effective blended course [**Error! Reference source not found.**,**Error! Reference source not found.**]. These strategies, although quite effective, are time-consuming and

must be planned, designed, and customized for each course. Other approaches start with the traditional course and augment it with online components. They still need planning, design, and customization, which is also time-consuming.

Given the availability of online courses, the program administrators chose to implement the blended program by using face-to-face tutoring sessions to augment the virtual classroom. To be able to adapt to any course in the program without much planning and customization, the tutoring sessions are organized by the instructor when he or she feels there is a need based on students' performance. Therefore, the instructor, who is called a facilitating instructor in a pure online class, needs to continually and actively evaluate students' performance and assess the situation. With this approach, effective courseware is used as the main delivery channel and face-to-face sessions are delivered based on the overall performance of students. The proportion of online learning and face-to-face sessions is adjusted dynamically at execution time and on a per course basis. The factors that affect the dynamic of the blended delivery or the proportion of online vs. face-to-face sessions are primarily the performance outcomes of students, which include:

- The outcomes of recent assignments
- The decreasing number of visits to the online material or LMS
- The decrease in students' participation in the discussion forum
- Etc.

Other factors include:

- Requests for tutoring sessions by students
- The level of difficulty of some material
- Quiz or examination is approaching
- Etc.

The assessment of the above factors relies heavily on the experience of the instructors. The process can be summarized in

Figure 2.

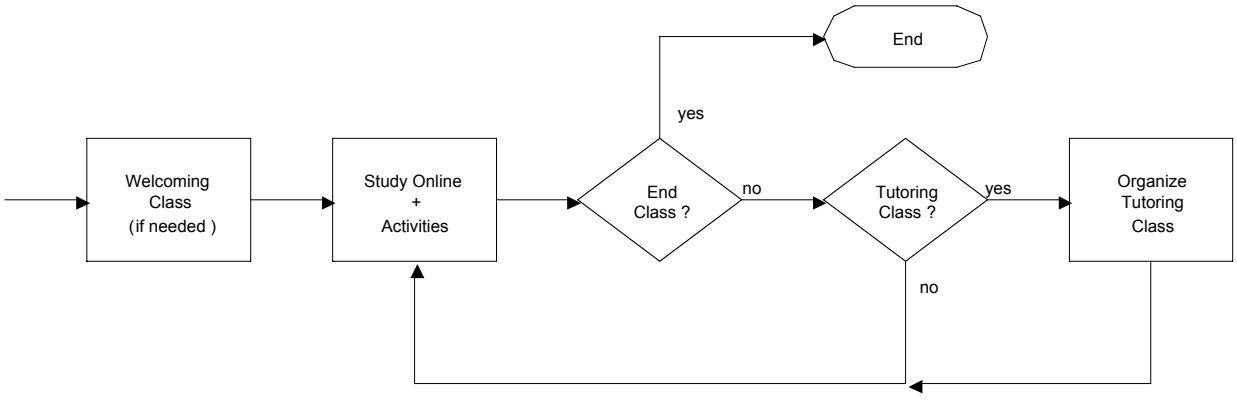


Figure 2 Performance-based Blended Learning Delivery

As illustrated in the Figure, the approach involves a continual process of monitoring, assessment, and execution (organizing the tutoring class). Because the materials are included as part of the online courseware, the face-to-face sessions are organized as tutoring classes. And, since students' performance and needs vary from course to course, the frequency and the content of tutoring material can vary based on course content, students' performance, and the instructor's experience.

Conclusion

Blended learning is one of the most promising modes of study because it can combine the right ingredients (mainly online and face-to-face) in the right amount for the given audience in the given context. In this paper, the performance-based blended learning delivery for online curriculum is demonstrated with the purpose of effectively delivering online degree programs. The discussion is given especially in the context of Thai students, who are used to the traditional learning style. The approach has been practiced by the Master's program in ICT at Assumption University. After three semesters of experiments, the preliminary results, based on a survey of 42 respondents, show that the majority of students (50%) prefer the blended mode of study for all different varieties of courses, with 33.3% and 11.9% preferring pure online and traditional face-to-face respectively. Future research will look at the learning outcomes and the proposed performance-based blended learning approach.

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Blended and E-Learning: Instructional Resources for Borderless Education

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Abstract

The trinity of teaching and learning, research, and service to society has guided the evolution of universities and their contributions to human kind. The dramatic demographic changes, globalization, and knowledge are trends that influence Higher Education Institutions to reshape the delivery of learning from traditional methods to borderless education. Instructional design and technology can assist HEIs engaged in borderless education in planning for systematic and systemwide changes.

Behaviourism, cognitive-information processing theory, constructivism, and Gagne's theory of information proposed that learners should be provided with programs authentic to the disciplines they are learning. Furthermore, the policy of "Education for All" promotes that education should be accessible and flexible to all kinds of learners.

In the next twenty years, the workforce and the world of work will be transformed. The "Generation Y" children, who are growing with cell phones and instant messaging, will be running our educational institutions and business corporations. They are comfortable and adept with technology and welcome the trends and challenges of globalization and multifarious applications of the Internet in communication, their lifestyles, and learning. They have high expectations and demands in terms of cost-effective and very efficient delivery of quality education (Bersin, 2004).

The proposed models include: *Blended Learning in ELT (English Language Teaching)*—deals with lessons in critical thinking skills in the English language that combines self-paced learning with face-to-face mode of delivery and the use of websites; *Blended Learning—Use of WebQuest in Competency-Based Learning*—an inquiry—oriented activity in which some or all information that learners interact with comes from resources in the Internet, with instructor-led teaching and optional video conferencing; *Collaborative and Blended Learning—Pragmatic--Experiential-Based Learning*—engages the learners in active learning and gives them access to shared knowledge, experiences, and insights of the other members of the learning team. This programme makes use of synchronous and asynchronous media.

Some of the Strengths and Weaknesses:

Strengths: It can be accomplished through any variety of media—mainframe-based, video-based, or web-based. In this learning, it fits technology seamlessly into a programme appropriate for the problem at hand. It can cater to any quantity and all types of learners and can be delivered using synchronous and / or asynchronous media. *Weaknesses:* Lack of learning technology infrastructure in the HEIs. There are still few Learning Portals and inadequate System of recruiting learners to enrol in and complete the network-based parts of program. There are low-grade training locations for the right plug-ins and bandwidth.

Conclusions: There is no perfect platform and no complete solution for blended learning. Blended Learning is still a relatively new field and for it to be successful, the blended learning program should be able to launch, monitor or track, and report on each element of the program.

Recommendations: The key to blended learning is collaboration that is efficient, systematic, with coordinated flow and aggressive communication, and sustainable among the top-level management, the experts of the blended programme, and the media sources. Marketing strategies should be part of the programme.

Three Major Trends Affecting Higher Education Institutions

There are three overarching trends that influence the environment within which educational systems operate:

(1) Dramatic demographic changes are under way in size, habitat, mobility, and composition of the world's population. There are also changes that alter cultural and social relations among the peoples of the world.

(2) Globalization is a transforming force wherein the world is now entering an epoch of new technological, economic, and political organizations. New technologies are changing social relations at the macro level between nations and institutions, between education and the corporate world, as well as, the micro level, that is, between individuals and groups. However, new technologies can also generate new inequalities.

(3) Knowledge is being accumulated and converted into new applications and new wealth at a faster rate than ever before (Hernes, UNESCO, 2006).

Theoretical Framework

Behaviourism, cognitive-information processing theory, constructivism, and Gagne's theory of information proposed the creation and use of complex learning environments, which should: involve learners in activities authentic to the discipline in which they are learning; provide for collaboration or group dynamics and the opportunity to engage in multiple aspects on what is being learned; support learners in setting their own goals and regulating their own learning; and motivate learners to reflect on the what and the how of their learning (Reiser and Dempsey, 2002).

Blended Learning arises from the concept that the traditional method of instruction, which we now call instructor-led training or face-to-face mode of delivery of instruction, is being supplemented and integrated with other electronic formats.

The blended learning program uses many different forms of e-learning and can be supplemented / complemented by traditional classroom instructions and other synchronous media.

The Optimum Choice and Mix of Methods is based on the ff:

1. Target audience
2. Content to be learned
3. Suitable, flexible, and accessible technologies and media

Principles Considered in the Development of a Blended Learning Program

1. Learning requires system and management.
2. Learning by doing. The learner must be active and not passive for maximum learning
3. Learners have individual differences.
4. Instructional design is vital in the teaching-learning process.

Nature and Features of Blended Learning

1. Blended learning environments mix the elements of traditional classroom-based instruction with the tools of online distance delivery.
2. It requires a learning technology infrastructure
3. It is a program that improves the programs offered by e-learning.
4. There are various media types available to students in blended learning. These are the synchronous (live formats) and asynchronous (self-study).
5. There are eight major criteria to consider when defining the blending mix: program type, cultural goals, audience, budget, resources, time, learning content, and instructional technology with its mode of delivery (Dede, et al, 2005; Gagne, et al, 2005; Bersin, 2004).

There are Several Benefits in this Set-Up (Gagne, et al, 2005)

1. Tools can be provided to organize and facilitate communication outside of scheduled class time and office hours, which improves student-student and faculty-student interaction.
2. Different learning styles and methods are allowed that suit the needs of the students.
3. Online materials are available and accessible 24 hours a day and so on, ensuring that students always have access to assignments, research projects, and other handouts.
4. Online testing can be used for students' pre tests and practices and online discussion. The students can easily identify the difficulties they encounter in studying the lessons.
5. Course management and administration of the courses are simplified with the use of online grade book and tools for e-mail management.

Proposed Models of Blended Learning

Blended Learning in ELT (English Language Teaching)
Instructor-led Program blended with self-study e-learning & group dynamics

The ELT Program has lessons on critical thinking skills in the English language and combines self-paced learning with instructor or facilitator support or in a face-to-face mode to develop specific skills.

This is a program suited to students who would like to have mastery and proficiency of the higher-order thinking skills in the English language.

Learning Objectives	Defining Feature	Instructional Strategy / Interactivity	Mode of Delivery Blended Techniques
1. Hold discussion sessions on critical thinking skills in reading, speaking, and writing.	The program is a blend of instructor-led events and self-study e-learning	Create a group-learning plan that is self-paced but follows a strict schedule. Read, listen and watch	Instructor-led class Webinar, Power Point presentation Simulations
2.Create situations for transfer of critical thinking skills in: 2.1 Reading 2.2 Speaking 2.3 Writing	Live e-learning events or Webinars form the basis of training. Self-study programs with teacher intervention Schedules are strictly observed	Read, listen, and watch. Interact, practice, ask questions, answer questions	Power-Point based courseware Live e-learning Webinar E-mail, Chat
3. Interact with and observe experts in the use of critical thinking skills in reading, speaking, and writing.	Hold sessions for interactivity, the use of interactive chats and online video Brainstorming Discussion Schedules are strictly observed	Read, listen, interact, practice, ask questions, answer questions, interact with others	Face-to-face meetings Interactive and synchronous Webinars Assign mentors E-chats, online video (check bandwidth connections)
4. Track results and completion by measuring enrolments and scores on the final assessment.	The criteria for passing the entire course. Assessment tools and criteria are set by the instructor	Take the exam, get feedback	Assessment FAQ Web-based test Print test
5. Submit certification records for all individuals who are enrolled in the program	The certification programs require completion, certain scores to be certified, and manager validation and approval	Define the criteria and gather all the information required in certifying the students	External or internal testing Tracking by LMS for completion and expiration date

Blended Learning—Use of WebQuest in Competency Based Learning
WebQuest--E-Learning with Instructor-led Events

Competency models are valued because they: (1) Provide a consistent framework for integrating the activities in the delivery of the teaching-learning process. (2) Help align actions of the learners with the skills and competencies in the approved course of study and curriculum. WebQuest is an inquiry-oriented activity in which some or all of the information that learners interact with comes from the resources on the Internet, with instructor-led teaching, and optional videoconferencing.

Many of the resources are embedded in the WebQuest document itself as anchors pointing to information on the World Wide Web and synchronous media.

Stages and Specific Objectives	Defining Feature	Instructional Strategy / Interactivity	Mode of Delivery Blended Techniques
1. Introduction Prepare and motivate the students to the activity or lesson	An overview. A short paragraph that describes the activity or lesson Questions to be answered re activity or lesson. Short term or long term WebQuest	Orientation & a short discussion of the activity or lesson Provide a list of resources available on-line and print in the content area Read, listen, & watch	Instructor-led class Power-Point presentation (Rapid e-Learning) The WebQuest Page Catalogs of Web Sites for Teachers
2. Task State the curricular units, topics and learning objectives	The learning units in the lessons /activities to be performed. The schedule	Assign topics to be discussed, presented, or analyzed. Use of common task formats Read, listen, and watch Interact, ask questions, answer questions	Instructor-led class WebQuest Page Power-Point presentation (with Rapid e-Learning) Hyper Studio Presentation Video conferencing
3.The Process and the Learning Resources Present /Describe the steps and the flow of the lesson/activity	Procedures to accomplish the task. Process matches the task description Embed the links to be applied Print and online guidelines	Information on the roles to do, groupings formed, sessions and schedule, logistics, specific resources to be read and examined Proper guidance for theory and practice	The WebQuest Page Face-to-face instruction Print & non-print materials Simulations for the roles assigned to learners Websites—Internet
4. Evaluation Evaluate the performance or accomplished work of the students	State the criteria in evaluating the performance or accomplished work of the students	Outputs of each group will be evaluated. Check the results of the activities Collective grading includes presentation, accuracy, & creativity in the roles done	Power-Point presentation Use of rubrics can be online or print FAQ
5.Conclusion Summarize the accomplished activities of the students	The outcomes of the activities or lessons learned are presented by the group	Students present the finished product before the class	Power-Point presentation Use of DVD Webinars
6.Tracking			
7. Certification			

Sample Lesson in Physics Using WebQuest (With permission and courtesy of Ms. Corazon l. Cabarloc, Teacher in High School Physics, Quirino High School, Quezon City)

Title: MOTION…"DISTANCE AND DISPLACEMENT"
Based on a template from The WebQuest Page

Stages	Content	Mode of Delivery Blended Techniques
Introduction	Motion is everywhere. The planet Earth is not the only one spinning but the entire Universe. Isn't it amazing? Have you ever imagined what the world would look like with no motion? Close your eyes for a minute and consider your favourite activity after school. You know that the activity you did had plenty of motion. Let's face it that life would be empty and pretty boring if you do not move. This WebQuest encourages you to understand the concepts of motion, distance, displacement, speed, and velocity. You and your group members will role play a given situation wherein everybody will participate actively.	*Instructor-led class *Power-Point presentation (with Rapid e-Learning) *The WebQuest Page *Catalogs of Websites for Teachers
The Task	For this task, you need to: ➢ Define motion, distance, displacement, speed, and velocity. ➢ Differentiate distance from displacement and speed from velocity. ➢ Investigate how to solve some problems on distance, displacement, speed, and velocity. ➢ **Prepare a role playing presentation to your classmates.** Each member of the group will do the following tasks: 1. Members 1 & 2—the scriptwriters. Collaborate in the organization and content of the script. 2. Member 3—the director of the role play. Coordinate with the scriptwriters and with the role players. 3. Members 4-9—the actors and actresses 4. Member 10—presenter. Present to the class the mathematical problem involving the difference between distance and displacement, speed and velocity as shown by the role players. The following are the steps to follow to complete the project: ➢ Recall some of the background information on motion before you begin your research. Brainstorm as a team on what members know that are related to their tasks. Take down notes as you gather information. ➢ After gathering information from the websites and print materials, discuss the gathered information with your members. Each member should understand and be able to explain the keywords to be used in the role playing: motion, distance, displacement, speed, and velocity and their differences. ➢ Prepare a five-minute role playing presentation before the class.	*Instructor-led class *Face-to-face instruction giving guidance and proper direction to the flow of the actual discussion. *Use of Websites *Use of print materials *Video conferencing or Power-Point presentation with Rapid e-Learning *WebQuest Page

Stages	Content	Mode of Delivery Blended Techniques
The Process and Resources	It is time to learn about motion, distance, displacement, speed, and velocity by observing them in action. You will work with your group mates to complete this project. Two class sessions will be allotted for you to work on the project. Brainstorming on the parts to be played by the participants. If you need extra time to complete the role playing presentation, your group is expected to do this during your free time or after class hours Review or examine the resources to be used: Topics on motion, point of reference, speed of an object, displacement Teacher will guide and direct the students to the resources to be used in the lesson and activity.	* Instructor-led class * The WebQuest Page * Webinars * Face-to-face interaction * For the Resources: The WebQuest Page * Print and non-print * Websites--Internet
***Evaluation**	**See Rubrics below**	* Rubrics * FAQ
Conclusion	Congratulations! You have now successfully researched, created, and presented your role playing. The role playing that you produced helped to inform other students about the concepts relating to motion, displacement, and distance. Hopefully you have been able to see how your life is affected by motion on a daily basis. Another interesting way to see motion in action is to visit an amusement park and ride a roller coaster, Listed below are two websites that allow you to experience the thrill of riding a roller coaster without having to leave the classroom. How Roller Coasters Work http://science.howstuffworks.com/roller-coaster.htm Are You Ready for a Thrill?! http://70.32/cp_website_media/ttd/cp_website_ttd_AreYouReady1_320_high_videofile.mov	* Instructor-led class * Face-to-face instruction * The WebQuest Page

Evaluation of the WebQuest Activity

Each group output will be evaluated based on the rubric below. Collective grading will include the presentation, accuracy, and creativity of the role playing.

Category	Exemplary 10	Accomplished 8-9	Developing 6-7	Beginning 0-5	Score
Content	Shows a full understanding of the topic including a simple mathematical computation	Shows a good understanding of the topic including a simple mathematical computation	Shows a good understanding of parts of the topic without simple mathematical computation	Does not seem to understand the topic very well	
Speaks clearly	Speaks clearly & distinctly all the time (100-95%) & mispronounces no words	Speaks clearly & distinctly all the time (100-95 %) but mispronounces 1 word	Speaks clearly & distinctly most of the time (94-85 %) & mispronounces more than 1 word	Often mumbles or cannot be understood & mispronounces more than 1 word	
Creativity	Presentation is original, shows creativity, hooks the audience & keeps their attention throughout	Presentation is original, shows creativity, hooks the audience	Presentation is original, shows creativity	Presentation is original & simple	
Time allotment	Finished the presentation within 5 minutes	Finished the presentation within 6-7 minutes	Finished the presentation within 8-10 minutes	Finished the presentation more than 10 minutes	

Collaborative and Blended Learning: Pragmatic-Experiential-Based Learning On-the-Job Training (OJT) Blended with Simulation and Virtual Experts

The value of integrating collaborative learning solutions within a blended learning program is now widely recognized. This kind of learning can be used when the goal is to enable participant to apply previously learned theories to the situations and content in the case, decide, identify, and analyze the real issues, make decisions, and develop a plan of action (Bersin, 2004).

1. Collaborative learning approaches engage students in active learning and give them access to shared knowledge, experiences, and insights of the other members of the learning team.
2. The value of including collaborative learning solutions within a blended learning program is now widely recognized.
3. There is a growing understanding that expertise and transfer from the classroom to the real world evolve from experience (Lave and Wenger, 1991 cited by Reiser & Dempsey, 2002).
4. Practice, exposure to real situations, and experiential learning are the vital aspects of the program.
5. Experts and virtual managers are included in the program.

		Synchronous (Live) & Asynchronous (Self-Study)	
Content Type / Learning Objectives	**Instructional Strategy**	**Technology-Based**	**Non-Technology-Based**
1. Announcement and overview of the project. Gain attention of students & inform them of the objectives and purposes of the lessons	Use of motivation Announcement Overview of the lessons Follow strict scheduling	Webinars with the use of PowerPoint presentation E-mail Video conferencing e-Learning environment Information broadcast	Instructor-led class Face-to-face meeting Printed tutorials Printed announcement
2. Presentation of the main components of the project: * Deliverables *Phases *Strategies *Budget *Quality Standards Show and present the project. Hold interactive discussion & brainstorming.	Presentation of the entire project Interactive discussion Read, listen, watch, and do critical analysis of the presentation. Take down notes Follow strict scheduling	Web-Based Application Simulation Business Simulation	Self-paced learning with facilitator Module Face-to-face meeting
3. Analysis and Query Resolution Create and hold collaborative sessions for all the queries related to the project	Interactive discussion Apply previously learned theories to the project Ask questions, Answer questions Follow a strict schedule	Webinars Web-based peer-to-peer interaction Chat Technology-enabled collaboration events	Mentors Face-to-face meeting with experts Print materials Module
4. Conduct practice sessions & get feedback Modes of analysis	Work with a virtual project team of managers Practice sessions Feedback Follow a strict schedule	Virtual project team of managers Simulations, EPSS, Web Pages, Collaboration systems Chat—laptops, messaging systems	Practice set, Simulations On-the-Job (OTJ) Exercises Study groups Collaboration systems-discussions rooms
5 .Present outcomes of the interactive collaborative sessions. Possible solutions, measures to issues, develop a plan of action. Closing session and tracking	Synthesis of the analysis made from the observed project. Desired outcomes and decisions made	Video-conferencing or Internet-based video Chat Webinars	Instructor-led class Face-to-face sessions with experts or mentors
6. Certification		Web-based test	Print test

Live Media and Self-Study Media

Live events, also called synchronous, require an instructor or mentor to be available in real time with students. Self-study events or asynchronous events do not require an instructor or a teacher.

Live (Synchronous)	Self-Study (Asynchronous)
Instructor-Led Training or Instructor-Led Class	Simulations, WebQuest
Webinars	WBT (Web-Based Training) or CD-ROM Courseware
EPSS—Electronic Performance Support Systems	Rapid e-Learning
Video Conferencing and /or Internet-based Video	Offline Video (Videotapes)
Collaboration Systems	Workbooks
Conference Calls	Job Aids
On-the-Job Exercises (OTJ)	Books
e-Modules	Modules
Live e-Learning with Chat and Video	

Strengths and Weaknesses

Strengths:

1. It can be accomplished using any variety of media—mainframe-based, video-based, or web-based.
2. It fits technology seamlessly into a programme appropriate for the problem at hand.
3. It is both an educational tool and a business tool.
4. It can cater to any quantity and all types of learners and can be delivered using synchronous and/or asynchronous media.
5. Training or learning of the students is very pragmatic and experiential.

Weaknesses:

1. Lack of learning technology infrastructure.
2. There are still few learning portals.
3. Inadequate system of recruiting learners to enrol in and complete the network-based parts of a program.
4. There are low-grade training locations for the right plug-ins and bandwidth.
5. Inability to customize the user interface to meet different learner populations.

Conclusions and Recommendations

Conclusions:

1. There is no perfect platform and no complete solution for blended learning.
2. It is still a relatively new field and for it to be successful, the program should be able to launch, monitor, or track, and report all elements of the program.
3. The learning technology infrastructure should focus on the main lesson or activity or, in terms of business focus on the kind of training that is reusable and has blending with different media.

Recommendations:

1. In the development of a blended learning program, the involved stakeholders and developers should be guided by the criteria in defining a workable, attainable and cost-effective programme.
2. Make an inventory of the available and quality resources of the school or company with training professionals.
3. There should be collaboration between the teachers and the experts in the computer technology and media centre of the school.
4. Start with a single program.
5. Set up one or more learning laboratories or e-learning rooms to make it easy for learners to attend and complete their program.
6. Assess the existing linkages and networking capabilities of the schools.
7. Marketing strategies should be part of the plan whether in school or in business.
8. Do benchmarking.

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Analysis of Blended Learning Strategies for Technical Course in the Open and Distance Learning Environment

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Abstract

This paper provides an overview on the blended learning approach at Open University Malaysia (OUM) focusing on the engineering and science courses. The blended learning mode at OUM consists of three primary components: a) Self-Managed Learning; b) Face- to-Face Tutorial; and c) Collaborative Online Learning (COL). The current practice along with issues and challenges pertaining to technical courses is underlined. A pedagogical model is proposed based on the constructivism theory. Constructivism requires active involvement of the learner. Two constructivism approaches; inquiry-based learning and problem based learning are incorporated in this model. Inquiry-based learning involve development of learners with ability to recognise problems, ask questions, apply investigational procedures (could be mathematical) to provide consistent description and explanation. Functional problem-based learning requires problems with meaningful context which stimulates a learner to be actively involved. The model integrates the three primary components; the self instructional module, the face-to-face tutorial sessions and the online asynchronous forum. Technical courses require more skills than just memorizing facts. It requires learners to be able to construct knowledge, reason, solve problems and extend the knowledge to real-life applications. Efforts to incorporate continuous improvement strategies in the existing learning platforms for technical courses in response to the changing needs of a borderless world are included.

Keywords: Technical courses, blended learning, open university, pedagogy, self-managed learning, face-to-face tutorial, collaborative online learning

I. INTRODUCTION

The Open University Malaysia (OUM) uses blended pedagogical approach of learning to deliver its open and distance education programmes. This paper provides an overview on the blended learning approach at focusing on the engineering and science courses. The blended learning mode at OUM consists of three primary components:

a. Self-managed learning (SML)
b. Face-to-face tutoring (F2F Tutorial)
c. Collaborative Online Learning (COL)

Learners in OUM are guided in their SML through self-instructional modules (SIM). At OUM, one of the first courses learners must register for is the "Learning skills for Open and Distance Learners" course. Upon registration for this course, learners are provided with "The Learning Skills for Open and Distance Learners" module (OUMH1103 Module) which is the primary learning material for them to manage their learning. This course will ensure that they will be ICT savvy and learn the basic learning skills and search strategies for information retrieval.

Every module includes a course guide section which introduces learners to a recommended SML plan, course synopsis along recommended reading materials and the assessment method for the course. SML involves individual learning. Table 1 shows the breakdown of actual hours for the learning skills for open and distance learners module, a three credit hours course. It is based on the blended pedagogical approach, where 79% of a total of 120 hours is recommended for SML purpose. Learners ought to construct their knowledge using SML activities.

Table 1: Blended Learning Mode

Blended Learning Mode	**Hours**
Reading the module and completing exercises	60
Attending F2F tutorial session	10
Engage in online discussion	15
Completing (1) assignment	20
Revision	15
Total	**120**

Source: OUMH1103 module

After two weeks of self-study, a learner can attend the F2F Tutorial sessions along with other learners to discuss the course content with their tutor. It involves group learning facilitated by the tutor. This guided classroom session is an option offered to mediate the learners who are accustomed to traditional classroom interactions. The tutor would initiate discussion of concepts and conduct activities involving problem-solving. Learners work together with the learners to resolve any unclear concepts introduced in the course. Learners also engage in group activities to enhance their problem-solving skills.

Throughout the entire semester, a learner is supported by myLMS (my Learning Management System), which is OUM's internally-developed web-based e-learning platform. It supports asynchronous online forum where COL takes place facilitated by the F2F tutor. Collaboration, in simple definition, means work jointly to achieve a common goal. This session is similar to the F2F session, except it is asynchronous and is online. It can be accessed from anywhere and at anytime. Learners and facilitators contribute to the process of knowledge construction by providing ideas and opinions, sharing experiences and simultaneously engaging in deep learning activities (Kaur, K. & Zoraini, 2004). Through COL, learners can test their understanding and problem-solving skills they have acquired through discussions and solving problems in their respective groups. In distance education, discussion and sharing experience have been identified as two of the most effective means by which adults learn (Williams, B., 2004).

Technical courses are defined as courses connected with the practical use of machinery, methods, etc., in science and industry. These include science, engineering and programming courses. Considering the high percentage of hour requirement for SML, an Open and Distance Learning (ODL) learner must have a high level of self-directed learning competence in these courses.

Issues and Challenges for Technical Courses

The open and distance education experience in OUM is a success story in Malaysia. Nevertheless, it is not without of issues and challenges. Among the prevailing issues for technical course are highlighted below:

- Lack of interest and prior knowledge, especially mathematical skills required for technical course. This is a world-wide problem which has resulted in courses such as non-calculus physics.

- Module writers, despite being trained, find it hard to change their writing styles to suit ODL pedagogical approaches.

- There is also a lack of manpower (tutors) for technical courses in the rural areas.

- COL quality for technical courses does not fare as well as for non-technical courses. Most learners learn science and mathematics through rote memory. They do not participate in active learning involving discussions, presentations and free writing. A paradigm shift is needed for a change to occur.

- ODL technical programmes are often not well perceived due to the constraints in the fulfilment of laboratory work or field-work components.

II. THEORETICAL BACKGROUND

The pedagogical method practiced in OUM is a combination of behaviourism and cognitivism. SIM is written based on behaviourism pedagogy and enriched using instructional design strategies. Continues improvement of the SIM is geared in two different path; pedagogical framework and ICT driven delivery mode/approaches (Kaur, A. & Othman, W., 2006)

Learning is a process. Behaviourism approach views learning as a process to change behaviour in a desired direction. This differs from the objective of technical courses, which focuses on developing capacity and skills to learn better, i.e. cognitive ability such as information processing (Smith, 1999). As such the pedagogy model for technical courses would be best based on a cognitive orientation. Much cognitive science research has been used to support constructivist learning model (Yager, 1991).

Constructivism Theory

Constructivism requires active involvement of learners whereby they construct knowledge for themselves. Constructivism is a psychological theory involving mainly the active learners interacting with the physical and social world (Fosnot, 1996). This theory is based on two types of constructivism: cognitive constructivism and social constructivism. Cognitive constructivism theory is based on the work developed by Jean Piaget. His theory states that individual must construct their own knowledge in order to understand and build their knowledge through experience. Piaget's theory also suggests that the role of teacher/tutor in the classroom/F2F environment is important to the learning process. It emphasizes that learners should be given the opportunity to construct knowledge through their own experience. The second type of constructivism is social constructivism developed by psychologist Lev Vygotsky. In his theory, he supports the argument by Piaget but emphasizes more on the social context of learning. Like Piaget, Vygotsky also states that the teacher/tutor plays a major role to guide the learners in approaching problems and encourage the learners to work in groups to resolve issues and answer questions. Another prominent psychologist, John Dewey states that education depends on action. He adds that the actions that take place will transform, recognize and reshape the accepted meaning and values while attending to lived situations (Epstein, 2002).

Dewey's theory provides activities which engage the mind as well as hand incorporating two approaches in learning: problem-based learning and inquiry-based learning. Another approach in the constructivism theory is the discovery-based learning introduced by Jerome Bruner (Dettrick, n.d.).

Problem-Based Learning

Functional problem-based learning (PBL) requires problems with meaningful context which stimulates a learner to be actively involved. PBL refers to constructivist approach to learning (Berkel & Dolmans, 2006).

PBL was invented by McMaster University medical school 30 years ago. It is a total integration approach to the learning system where the learning process moves towards learner-centred learning to produce competent graduates. Typical essential characteristics of PBL methodology are described as follows (WS Wei, 2005):

a. Problems are designed to emulate real-world problems.
b. Problems used are complex and cover multiple objectives.
c. The problems are introduced first, before any learning occurs.
d. Student work in collaborative groups to gain multiple perspectives on possible solutions.
e. Student must have the responsibility of SML.
f. What student learned during their SML must be applied to the problem with reanalysis and resolution.
g. Analysis of what has been learned with the problem and a discussion of what concepts and principles have been learned is essential.
h. Self and peer assessment should be carried out at the completion of each problem.
i. Examinations must measure learner progress towards the goals of PBL.

The PBL characteristics are aimed at developing learner problems solving skills, self-managed skills, teamwork skills and effective communication skills during online interaction and face-to-face tutoring. The objective of incorporating PBL into the OUM learning system is to inculcate pro-active SML among the learners via myLMS platform.

Inquiry-Based Learning
The inquiry-based learning (IBL) has strong support from the constructionist psychology primarily emphasizing on hands-on and problem-centred approach. IBL involves the development of learners with the ability to recognise problems, ask questions, apply investigational procedures (could be mathematical) to provide consistent description and explanation. It requires the learners to handle situations on the above encounters and it is an open-ended and ongoing process of learning (Dettrick, n.d.).

Discovery-Based learning
Discovery-based learning (DBL) states that motivation of an individual to learn science will be increased if the individual experiences the feelings scientists acquire from 'discovering' scientific knowledge. This theory also supports that an individual would learn about the nature of science, the construction of scientific knowledge through the process of 'discovery'(Dettrick, n.d.).

Education research in science for example, focuses more on learners then teachers. The learner must be self-directed and must be actively involved in the learning process. Learning is successful if the learner achieves a full understanding of the subject matter. This cannot be achieved through rote memory. Restating a fact does not reflect understanding. Understanding of the subject matter can be gauged by the learners' ability to reconstruct, solve problems, analyze, synthesize and evaluate. Modern science does not give us truth, it offers a way for us to interpret events of nature and cope with the world (Yager, 1991).

The pedagogy of technical courses must change to suit the changing needs of the modern world. A new pedagogy model for technical courses is suggested based on the constructivism strategies in the next section.

III. PROPOSED MODEL

The new pedagogical model for technical courses is based on the constructivism theory. Three constructivism approaches; discovery-based learning, inquiry-based learning and problem-based learning are incorporated in this model. The model integrates the three primary components: the self instructional module, the face-to-face tutorial sessions and the online asynchronous forum. Technical courses require learners to be able to construct knowledge, reason, solve problems and extend the knowledge they acquire to real-life applications.

The Framework for the Proposed Model

The framework for the proposed model is built based on the SIM layout, as it is the main component of the ODL programme in OUM. The framework outlines the objectives of each section. It is structured using six of the nine Gagne Events (G.E.) (Gagne, 1985). The pedagogy model is built based on this framework.

A. Introduction

1. Develop a sense of appreciation of the subject matter among learners.
2. Gain the attention of learners (G.E. 1)

B. Learning Outcomes

Provide expected learning outcome. (G.E. 2)
Guide: Using the first three levels of Bloom taxonomy.
- *Level 1: Knowledge (Terms and definitions)*
- *Level 2: Comprehension (Knowledge models/Concepts)*
- *Level 3: Application (Problem Solving)*

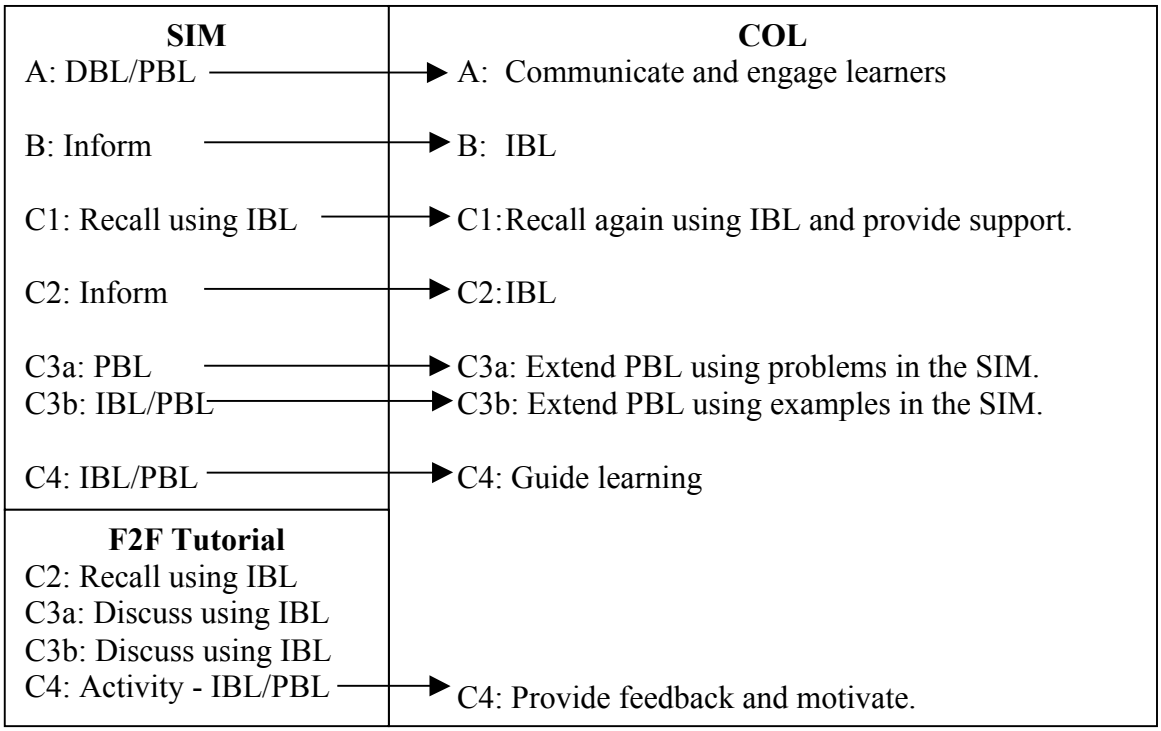
C. Content

1. Stimulate recall of prior learning. (G.E. 3)
2. Present Stimulus. (G.E. 4)
3. Guide Learning (G.E. 5)
   (a) Knowledge model
   (b) Examples

Elicit (G.E. 6) using Activities and Exercise.

The Proposed Model

The proposed pedagogical model is built using the above framework. It blends F2F tutorial and COL components to form a well-integrated model. The objectives outlined in this model are to be achieved using constructivism strategies described in section II. The choice between IBL and PBL depends on the content of the subject matter.



IV. STRENGTH AND WEAKNESS

The proposed pedagogical model is learner-centred. It offers learners to be actively involve in their learning process. The model enable learner to develop their skills in recall prior learning, fact findings, construct knowledge and solve problems by using constructivism approaches. Learners do not merely compile facts, they learn how to think and interpret events. Thus, enabling them to cope well in real-life situations and making them resourceful manpower.

One of the key weaknesses in the model is that it assumes learner to be self-directed. The assumption is not valid for all learners and at all time. In such instances, learners will not easily engage in the learning and often turn-up for F2F tutorials without any introduction to the subject matter, knowing the learning objectives, do not recall prior knowledge and do not even know the basic terms required. This requires the F2F sessions to be actively adjusted according to the different level of readiness among learners. This leaves very little time for any active learning activities to take place.

V. CONCLUSION AND RECOMMENDATION

A pedagogical model based on constructivism strategy is proposed to engage learners in their learning process. The aim is to enable effective learning and increase learners academic knowledge and performance. Constructivism learning strategies are introduced in the model which integrates the three learning components: self-managed learning; face-to-face tutoring; and collaborative online learning offered in OUM. The strategies used are DBL, IBL and PBL. In order to accommodate the different learner readiness and capabilities, the F2F and COL have to be fixed accordingly. All three approaches, DBL, IBL and PBL must be updated with the changing needs of learning in the context of the current global and borderless education. Such efforts would create a feel of being part of the borderless community among learners and this motivates and encourages learners to be actively involved in their learning.

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E-learning: Concepts and Issues for Higher Education

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Abstract

Universities around the world are reforming their pedagogical practices and embracing technology as a means of producing graduates who are well prepared to face the challenges of the modern world, developing contemporary-literate societies and advancing economies. E-learning in higher education institutions is now widely seen as an imperative strategy in these reforms. In light of these developments, there is need for clearer understanding of benefits, challenges and issues that define any strategy for e-learning implementation in higher education. Reflecting and drawing upon the author's decade of experience in application of e-learning in higher education, this paper addresses some critical issues and outlines certain recommendations that may prove useful to policy-makers and teachers. In particular, the paper outlines a number of benefits of e-learning that could be helpful in understanding reasons for technology integration and e-learning in higher education. Furthermore, the paper discusses a number of important issues and recommendations for implementation.

What is E-learning?

Advancement of computer-related technologies, and in particular of the Internet, has created opportunities as well as challenges for higher education institutions. Over the last decade the notion of e-learning has spread and become the key topic in educational reform drives. It is important for an institution that is planning an e-learning strategy to conceptualize what e-learning means to them and what problems it may have the capacity to solve. This conceptualization should take into account the perceptions of people who are affected by e-learning strategies and their implementation, and whose understanding, unless aligned, would lead to a spectrum of ongoing difficulties. An institutional mental model of e-learning should align perceptions and expectations of leadership, teachers and students, as each of these parties might have differing views of what e-learning is and how it affects and benefits them. A number of other influences also need to be considered when conceptualizing e-learning strategies. These are illustrated in Figure 1.

In a broad sense, e-learning is any form of learning that involves the use of electronic technologies such as networks, computers, handheld devices, iPods, etc. E-learning is also associated with digital content, such as courseware, learning objects, instructional video, educational web sites, and on-line quizzes. E-learning can also be understood in terms of specific processes that facilitate learning, such as on-line discussion, blogging, students designing presentations and building models, and working with information from the internet. Overall, e-learning must be understood in at least three difference contexts, each of which supports higher education in some specific way: e-learning in distance learning, e-learning as in blended learning, and e-learning as technology integration in classroom teaching and learning.

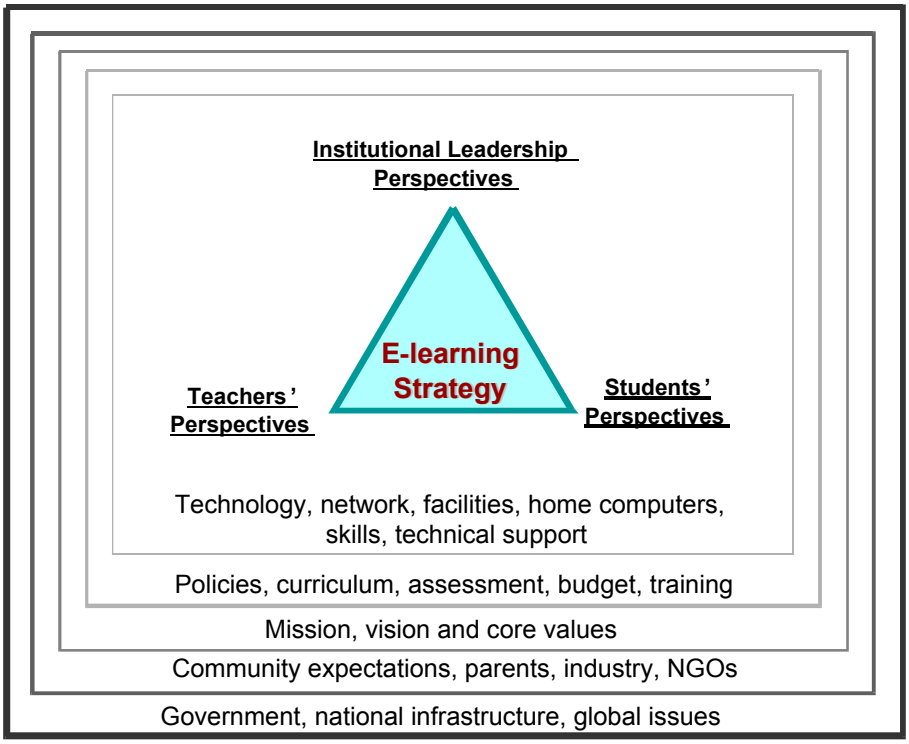

Figure 1: A set of issues for consideration in articulating an e-learning strategy

Why is Technology Important for Higher Education?

This section of the paper presents potential areas of benefit for integration of technology in teaching and learning in higher education. Empirical research from around the world is active in establishing evidence to support some of these claims. However, institutions should further explore if and how e-learning might benefit their specific contexts. The following list of benefits is useful as a guide to institutions planning e-learning and wishing to explore the specific benefits that it might be expected to bring to them.

1. Increase in teacher effectiveness -- Technology now provides important tools that facilitate teachers' day-to-day teaching preparation and delivery, including, for example, locating recourses via an electronic network, designing visual representations for class presentations, digitizing and distributing notes, maintaining course blogs, using handheld devices to share files with students via Bluetooth, and using digital cameras and other capture equipment in classroom and teaching-related contexts. The appropriate exploitation of technology can empower teachers' work and result in increased overall teaching effectiveness.

2. Improvement in learning of subject matter content -- The literature discusses possible ways in which technology can enhance learning of curriculum subject matter. (e.g. Barab, et al., 2005; Bereiter & Scardamalia, in press; Dodge, 1995; Dwyer, Ringstaff & Sandholtz, 1985-1998). This paper points readers' attention to the powerful representational capacity of contemporary digital media tools. Key concepts from various disciplines can be illustrated and represented utilizing interactive and visual material for teaching and learning. These representations - best described as *Learning Objects* (see Churchill, 2007) - can be made available for students to use any time and anywhere via a variety of devices such as computers and handhelds. Furthermore, improvements in student learning of subject matter content can be linked to learning processes that are effectively supported by technology. These include collaborative and reflective learning environments in which students socially construct knowledge. In addition, today's technology provides a variety of so-called *Cognitive Tools* or *Mind Tools* that support students' learning, reflection and construction of artifacts that demonstrate their thinking (Jonassen & Carr, 2000). In this context, technology is seen as an intellectual partner (Salomon, Perkins, & Globerson, 1991) and psychological tool (Churchill, 2005) that supports learners in "cognitive operations that they might not have been capable of otherwise" (Lim, 2006, p. 3).

3. Support for "assessment for learning" -- By using technology, students can construct a variety of artifacts that demonstrate changes in their knowledge. Examples of these are models, mind maps, presentations, photo essays (digital stories) and digital videos. Throughout a course, students can collect and display their artifacts, and provide reflections in an e-portfolio. An e-portfolio can be easily managed as a blog that can be accessed by teachers and other students and used as a basis for assessment of learning. This paper intends to promote assessment of learning as a continuous formative process that provides students with an opportunity to reflect and improve.

4. Development of "new literacies" -- Integration of technology in teaching and learning supports the development of a range of new literacies demanded by the contemporary world. These include a variety of closely connected skills such as information literacy, visual literacy, media literacy, digital fluency, lifelong learning skills and social networking and collaboration. Learning need no longer be restricted solely to the learning of curriculum subject matter; indeed, curriculums require revision to incorporate the new literacies spawned by technology. At the same time, care must be taken that new literacies do not take over subject matter and we must continue to explore ways of applying technology to enhance and expedite students' learning of subject matter. At the same time, today's students bring with them to schooling a variety of skills in using technology and if understood, these skills can be leveraged for learning in formal educational activities.

5. Making learning experiences more relevant for students -- The current generation of students in the developed world has largely grown up with many new technologies around them (e.g., computers, MP3 players, game consoles, mobile phones). Literature often uses the term *digital natives* (Prensky, 2001) to refer to today's generation of students. For Prensky (2001), contemporary schools are not designed to teach today's generation of students, while Negroponte, Resnick, and Cassell (1997) write that "throughout today's world, educational practices are woefully outdated." Often schools perceive that "the same method that worked for the teachers when they were students will work for their students now" (Prensky, 2001, p.3). There is a danger that unless educational institutions appropriately integrate technology and leverage the literacies student bring from outside to teaching and learning, they might find themselves ill prepared to meet the expectations of students. Students are likely to expect their institutions to provide them with opportunity to apply their technical literacies in their learning.

6. Empowering research students -- Technology empowers research activities in a variety of ways, such as enabling access to information from the Internet and sites such as Wikipedia, as well as journal and dissertation data-bases, and providing analytical tools and referencing systems. Research students are able to maintain their own blogs, which can be read by and commented upon by others, such as their supervisor. In addition, they might engage in social networks of students from around the world, read other research students' blogs and browse social book-marking sites on specific topics (e.g., CiteUlike).

7. Transformation of practices -- Integration of technology in teaching and learning has the potential to create an environment that fosters some important transformations in line with contemporary educational reforms from around the world. Integration of technology potentially creates *disruptive pedagogies* (see Hedberg, 2006). By planning technology integration, teachers are placed in a position to think about students' engagement, and this can be linked to transformation of pedagogical practices in a student-centered direction. This transformation can be further facilitated through emphasis on learning with technology. Transformation to student-centered practices requires technology to be placed in the hands of learners - a tool to learn *with* rather than a tool to learn *from* (Jonassen & Reeves, 1996; Hokanson & Hooper, 2000). Learning with technology positions the students to become technology users and creators, rather than merely consumers of digital content. This requires teachers consider which tools to select and provide for students to use during their learning (although students are likely to employ some tools on their own). Another important transformation that is facilitated by integration of technology in teaching and learning is that conceptualizing this integration leads to curriculum revision and re-thinking modes of learning assessment.

8. Increase of global/regional competitiveness -- The integration of technology in teaching and learning is likely to create opportunity for an institution to increase its global and regional competitiveness. Since technology integration supports important transformations and creates more relevant practices, an increase in the overall quality of operations at an institution is likely to result. Technology integration practices and resources can be packaged in powerful marketing material and disseminated via a variety of channels such as institutional web sites, blogs, Wikipedia, Youtube, etc. Furthermore, innovative practices at an institution are likely to create new opportunities for publishing. Publication of staff members' reports of institutional practices can also contribute to the promoting of the institution in significant ways. This increased competitiveness is likely to be reflected in growing interest in the institution by government, industry, potential students and those interested in working for the institution.

9. Creation of distance learning opportunities -- Integration of technology in teaching and learning is likely to create opportunities for distance learning activities. Technology integration, if appropriately managed will likely result in increase in the collection of digital material available at the institution. As this collection grows, it becomes easier to locate appropriate content to re-use in distance learning courses. At the same time, technology integration activity will prepare teachers to deliver and facilitate distance learning via an electronic network.

Some Key Issues and Recommendations for Implementation of E-learning

1. Access to the Internet -- The most critical issue for an institutional e-learning strategy is to secure broadband Internet access for teachers and students. Governments around the world must promote Internet access for all as a means of developing their society and economy. Access to the Internet alone opens numerous opportunities for e-learning. An incredible amount and wide spectrum of information, Internet-based applications such as blogs, and access to individuals and social networks from around the world are sufficient to facilitate the initiation of e-learning integration at institutions equipped with an Internet connection and computers. Ideally, Internet access on campus should be available via a wireless network. This would create the possibility for technology-supported learning to occur anywhere on campus, rather than only at designated computer labs. E-learning would be further enhanced if the Internet was available in students' homes, dormitories and other places outside of the campus. In certain countries, subscription to Internet access is costly and availability of Internet connections limited; there are still some regions in which Internet connections are non-existent. Institutions in developed worlds often provide students with dial-up accounts through which they can log into private networks and access the Internet free of charge. In Hong Kong, universities are signing agreements with major Internet providers to allow free access for teachers and students though wireless connections available at places such as major shopping centers, airports and restaurants. In addition, Internet connection is made possible through 3G mobile telephony networks and via GPRS connections for 2G phones. However, GPRS connection, in particular, is often expensive for students to use on a frequent basis.

2. Access to computers and other technologies -- In addition to Internet availability, access to computers is a concern for developing countries. In the developed world, institutions are well equipped with computers. Government assistance, self-funded programs, donors, initiatives by NGOs, partnerships with industry and research grants all facilitate acquisition of new computers and replacement of outdated ones. Universities often make special arrangements with major companies such as Acer, Apple Macintosh or Fujitsu to supply laptops to students at subsidized prices. Partnership with industry is an important component of overall e-learning strategy for institutions. Encouraging for developing countries are reducing prices of computers as well as initiatives such as One-laptop-per-child (OLPC). OLPC is a project with a mission to develop and distribute inexpensive laptop computers to children in the developing world. The OLPC project's aim is to develop a laptop that will cost only USD$100, although this cost target has not yet been achieved. Other organizations are also attempting to develop inexpensive computers (e.g., Intel Classmate PC or Asus Eee PC). The Indian Government and private sector are working to develop a computer that will cost only US$10, and claim that they have so far managed to produce a prototype that costs US$47 (*Times of India*, 2007). Asiatotal, a company based in Hong Kong, hopes to develop a business model that will allow distribution of inexpensive computers for free to developing countries. Although some or all of these initiatives might never be achieved, these are good indicators that efforts are being made around the world to make computers less costly and more accessible for people across the world.

At the same time, costs of other technologies such as MP3 players, portable digital assistants, mobile phones and digital cameras are also decreasing, making these items more affordable. The roles of these other technologies should also be considered when conceptualizing and implementing e-learning. Many students today have their own mobile phones. In developed countries, nearly 100% of students own mobile phones, while many others also have other kinds of handheld devices and MP3 players. In developing countries, also, mobile phones

appear to be widespread. For example, Indonesia is believed to have 80 million mobile phone subscribers (*Jakarta Post*, 2006). An average mobile phone today is equipped with capabilities to display multimedia, play MP3 files and capture digital photographs, audio-recordings and videos. These affordances can all be educationally useful when appropriately applied in e-learning. The cost of mobile phones is likely to decrease significantly in the future while processing power, available software tools and digital content for handheld devices will likely continue to escalate. It is speculated that the average mobile phone by 2011 will cost around US$20 (see Mc21st, 2007). Subscription costs will also likely reduce, which is significant in relation to the cost of accessing the Internet via mobile phones. Already, handheld devices are becoming digital life for many individuals around the world and this is likely to be an increasing trend.

3. Pedagogical design -- Availability of computers, other technologies and access to the Internet are not, in themselves, sufficient for effective e-learning to occur in a formal educational setting. Institutions and teachers must have an understanding of suitable pedagogical designs that leverage technology resulting in effective learning experiences. Recently there has been increased effort in schools, universities and other educational institutions to transform pedagogical practices in a student-centered direction. In general, calls have been made for pedagogical designs that promote more thinking, inquiry, collaboration, problem-solving and learning to learn, and integrate technology as a means of facilitating these types of student-centered engagements. E-learning design and implementation should also follow these pedagogical approaches. In student-centered practice, students learn with, rather than from, technology. One possible strategy in conceptualizing a student-centered pedagogical design is to consider its components. For Churchill (2006), four key components of a pedagogical design need to be planned by a teacher when designing a student-centered learning experience. These should include:

(i) Resources (tools, informational resources and material that students deploy when working on a task);
(ii) Provision of a task prompting students to engage in the learning process (e.g. a problem to be solved);
(iii) A strategy to facilitate the learning process; and
(iv) A plan for evaluating students' learning.

When planning learning experiences, teachers need to consider each of these components and integrate them in a complete plan of action. In technology integration in the classroom, any of these elements can make use of technology. However, when planning distance e-learning and on-line lessons for blended learning, all of these elements need to be technology-based.

4. Learning management system -- Institutions often implement learning management systems (LMS) to support e-leaning. LMSs are mostly designed to support creation and management of course spaces, administration of students, distribution of content and tracking of usage, creation of on-line quizzes, asynchronous and synchronous discussion, and submission of assignments. LMSs often contain components that allow tracking of resource usage and administration of quizzes in a way that is compatible with certain standards such as SCORM (although there is little evidence that such a facility offers any pedagogical advantage). Although LMS were not developed to support any particular pedagogy, they often appear to be encouraging more traditional approaches. Thus, any implementation of LMSs in an institution should be accompanied by a strategy that can support teachers to use the system in a pedagogically effective way. Until recently, institutions had little choice other than to use inflexible and expensive LMSs. Until recently, such systems were beyond the budgets of

many institutions from the developing world. However, today there is a choice of at least two powerful open-source LMS systems - Moodle and Sakai (see Sakai Project) - that can be downloaded from the Internet, installed and used by any institution for free. Being open-source means that these systems can be enhanced and modified to better serve the needs of a particular institution. In addition, open-source systems have their own community of enthusiasts and developers that continuously releases various components that can be used to extend existing functionalities. Such flexibility is critical today, as we are facing an influx of new and powerful ideas under the umbrella term *Web 2.0*, which creates a spectrum of further possibilities for e-learning, including blogs, wikis, podcasting and social networking. There are now many free Web 2.0 systems (e.g., Drupal, Multi-user WordPress or ELGG) that can be downloaded and integrated with a LMS or used alone to support e-learning processes.

5. Students-as-users of software tools -- As noted earlier, e-learning can engage students in the use of various software tools to design representations and create products such as digital stories, videos, presentations and web pages. Encouragingly for developing countries that previously struggled to afford expensive commercial software, there are now many free software tools. Examples are Free Serif Software graphics design suite for image manipulation, Audacity's audio editing tool for creating podcast materials, Microsoft's Photostory for digital story creation, Microsoft Windows Movie Maker or Apple's iMovie for digital video editing, and NVU for web page authoring. Royalty free graphics sites such as those provided on Microsoft Office Online and the widespread presence of camera-enabled mobile phones can further fuel students' creative expression. An interesting and potentially important development for e-learning is the Web 2.0 "web-as-a-platform" Idea, which envisages that in the future computers will not host any software tools, operating systems or hard discs. Currently there are already some powerful tools on the Internet, such as Zoho's and Google's word processing and spreadsheet programs that run in the web browser and do not require any local installation. Files are saved on-line and their creators can decide how to share them with others. Groups can be easily set up to collaboratively develop a document, which can then be shared with others as a read-only file or a web page.

6. Content for e-learning -- This paper suggests that students should be engaged in the use of software tools; however, content also remains a critical component of e-learning. There is a vast amount of information available from the Internet that can be utilized for learning purposes. Wikipedia has grown to contain more than five million articles in over 100 languages; teachers are able to locate videos useful for teaching from repositories such as Youtube; journal articles, conference papers, and even many books (see Google Books) are now accessible via the Internet. Clearly, these fruits of new technology are of great benefit in an education context, but they also bring challenges such as selecting appropriate content, determining whether information and sources are reliable and trustworthy, and of appropriate quality of presentation for learning. Teachers and students need to be equipped (through training or some other means) with literacies – particularly information and media literacy - to effectively work with information from the Internet. At the same time, an institution is empowered by technology to do more to synthesize the collective effort of its members in relation to sharing and recommending resources from the Internet, such that a subset of Internet resources meaningful to members of the institution can be articulated. A useful Web 2.0 idea for immediate application is "social book-marking" utilizing services such as seen at CiteUlike and Del.icio.us. Such systems typically allow users to book-mark their favorite resources from the Internet. When book-marking a resource, a user can add a set of keywords that describe the resource as perceived by him or her. This process is called *tagging*, while the entire practice of cataloguing and searching for resources within such a system is called

folksonomy. The system might also allow users to comment on a resource (e.g., to describe its pedagogical use, and provide some recommendation or note on its content) and to assign a one to five star rating indicating its quality from a personal point of view. As more individuals across the institution engage in this practice, more resources will be added to this institutionally meaningful subset of Internet resources. Teachers would be able to *dig* though this subset for useful resources when, for example, working on the preparation of an e-learning lesson. They are able to filter resources using specific tags, focus only on those that are marked with five stars or explore only those provided by a particular person. The subset can also be made available to students to use when working on assignments and pursuing independent study. This system can serve not only as a mean of locating useful resources, but also as a platform for sharing of pedagogical recommendations for their reuse. At the same time, this channel can serve as a social networking environment, helping isolated members of the institution to connect and make new alliances based on common interests.

The system can be effectively enhanced to include a digital repository of content that is produced at the institution or otherwise acquired. Currently, most of the content produced in an institution is rarely further developed, shared and reused. Often, content is kept by individual creators or "buried" in course spaces in the LMS. A lot of overlapping of development occurs, members of the institution often spending time developing material that already exists. Resources that can be reused are not just content resources, but can include presentation templates, lesson plans, course outlines, assignments, quiz question templates, and digital assets such as images. Placing the resources in an institutional repository and cataloging them within a social book-marking system would create many opportunities for advancement of e-learning practices.

Intuitions that aim to engage in the digital publishing, outsourcing work to industry, and even facilitate and promote their own staff developing content for e-learning might find it useful to consider the idea of learning objects. A lot of Internet material was not developed specifically for educational purposes and continues to use text and linear presentation as the predominant mode for communicating knowledge and ideas. Current digital technologies allow knowledge to be represented and information to be structure using interactive and visual learning objects that are powerful for learning. Learning objects are best described as representations designed to afford uses in different educational contexts (Churchill, 2007).

7. Transformation management -- Finally, it must be noted that e-learning strategies require certain transformations in perception, knowledge and skills of teachers, institutional leaders and even students. Managing such transformations is challenging for many institutions, whether in the developed or developing world. Teachers, in particular, need not only to learn how to use technology and facilitate e-learning, but also to understand pedagogical design, whether for classroom integration of technology or for distance and blended e-learning. They also need to acquire a set of new literacies in order to work effectively with information and media, and to effectively transform information and knowledge into e-learning material. Suitable intervention tools and strategies should be in place to facilitate this transformation. Such interventions must be conceptualized beyond formal training sessions. Some possibilities for consideration might include: seminars and conferences, on-demand e-learning, education technology champions programs, social networking, reports on best practices, incentives, laptops, annual budget for purchase of software and books, research and development and teaching development grants, communication letters, news feeds and podcasts, blogs and wikis, pedagogical model and design templates and tools, and social book-marking and repositories. Intervention strategies should be expanded to involve students, who also need to develop new literacies and engage in other literacies (which they bring in from outside the school) if they are to optimize the learning benefits of today's exciting and transformational technological advances.

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Knowledge Acquisition of Thai Metal Forming Die Designer Leader

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Abstract

In this research, the proposed approach requests the necessary step to get knowledge of die design experts. We aim to show that a knowledge acquisition of Thai metal forming die designer. We choose two main criteria are sources and method for studies. The experts for participant was selected form two network. First, from advisor or academics of Thai Tool and Die Industry Association(TDIA) who had more Experience. Second, selected by die factory's owner or die design leader in die industry network. In this paper, we us semi-structured feedback interview are modeling for capturing buy study the way or histories of experts. We found the best source are Foreigners/Owner's Technology and the best knowledge transfer method are onsite practice and problems solving. The best process to get knowledge of design knowledge(H. Kawakami) for the structure and function level is leaning process, for the physical- law revel is training process, for the planning level are training and working process, and for the goal level is working process. the importance of basic knowledge and Basic skill, we found the best basic knowledge is mechanical drawing subject and the best basic skill is observant and attentive. In this research, we interested in only processing to get knowledge of experts. But in fact, the one(s) who can get expert they haven't only good source and knowledge transfer method. They should have idea (creative) and persevering for take them up.

Keywords: Explicit knowledge; Knowledge Acquisition; Semi-structured feedback interview; Tacit knowledge;

1. Introduction

Die design knowledge are importance to develop die industries and another metal forming industries. Thailand has too many metal forming industries by used the parts form die technology. That we need to developed and build up the die designer for support them. All most of die knowledge are in the die design expert. That is the reason to finding the way to capture and acquiring knowledge form expert. Knowledge acquisition (KA) is one of the critical bottlenecks in developing a KBS for obtaining the knowledge of special domain from domain experts (Nick Milton 2003). We have to searching the way to get knowledge by

any way. The differing types of knowledge possessed by experts and expert systems areas concerned with knowledge acquisition are: Knowledge engineering and Machine learning(J. Boose & B. Gaines 1990). In this paper, we study a different way of Thai metal forming die design experts as same as Knowledge engineering. This includes the knowledge individuals have of their life history, their studied, their trained, their worked, their researched, and their opinions. In these, we aim to define knowledge acquisition process more than knowledge elicitation or theory of die design concept.

1.1. Research assumptions.

We aim to show in this paper that a knowledge acquisition of Thai metal forming die designer leader can provide methods knowledge for take them to professionals. We believe that these methods can help in the development of new die design studies theories and be of benefit to ordinary people who interested by increasing their self-understanding. This follows a studies in knowledge acquisition theories, and the design sciences, to widen the use of qualitative techniques. In exploring these issues, we follow a transfer interaction and informal aspects of the knowledge transfers process and complicate the levels of design knowledge (H. Kawakami et al.1995) and source(data, information) (B.J. Hicks et al.2002) interchange. Our subject assume expertise found the best way and many idea to get knowledge. We can studies history and systemize for make model to studies die design easer and more efficiency. The studies step, we choose two main criteria for compared and analysis. First are source such as a data, information system, and method are the step or process to get knowledge of expert. In these we interested in only processing to get knowledge of experts.

1.2. Research questions

We identify the questions form assumption for surveyed and discussion with Thai die design expert for solving problems follow these.

(i) How did expert acquired die design knowledge and there's histories?
(ii) What's best source (data, information) for acquiring knowledge?
(iii) What is the best of die design knowledge transfer methodologies?
(vi) How can we define step to studied die design knowledge easer?

2. Knowledge acquisition theories and technique analysis.

2.1. Knowledge transfer

The sum of what is known: a body of truths, principles, and information that, in a business context, guide operation. Knowledge is of two kinds. We know subject ourselves, or we know where we can find information on it. Knowledge classification are Material, Skills, Rule, Experience and Talent(Samuel Johnson,1997). Most knowledge is in the heads of experts. Experts have vast amounts of knowledge. Nick Milton (2003) gives a brief introduction to the types of techniques used for acquiring, analyzing and modeling knowledge: The most important part of knowledge acquisition is knowledge elicitation - obtaining knowledge from a human expert for use in an expert system. H. Kawakami et al.(1995) Design multilayered structure of design knowledge and domain theory of the proposed EBL system (Explanation Based Learning) have 5 level show in fig 1.

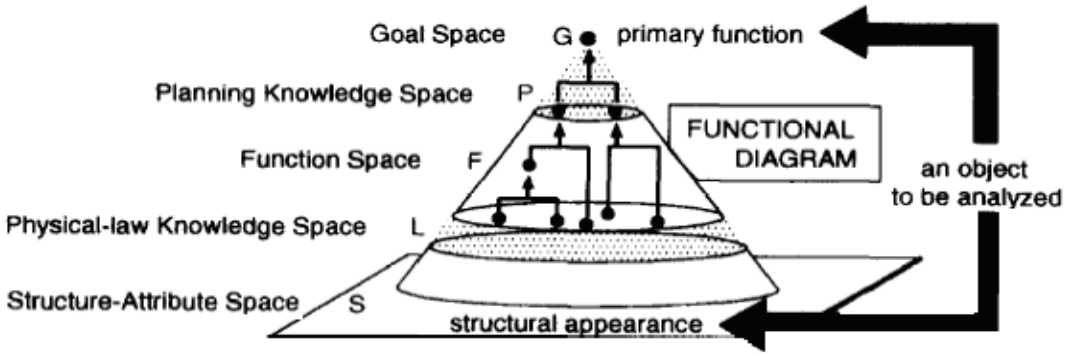


Fig 1. Multilayered structure of design knowledge and theory of the proposed EBL system

B.J. Hicks, S.J. Culley, R.D. Allen, G. Mullineux ,(1998). Presented the development of better mechanisms and procedures for the capture and reuse of information and knowledge in engineering design. They classify source in design knowledge are two levels. First are source for conceptual design and detail design. In particular, the approach of this work is to consider the intended reuse and level of application for knowledge in order to determine the requirements for its acquisition and process. They design complex interaction and informal aspects of the process magnify and complicate the levels of knowledge and information interchange. They design model of process diagram illustrated in show in fig. 2.

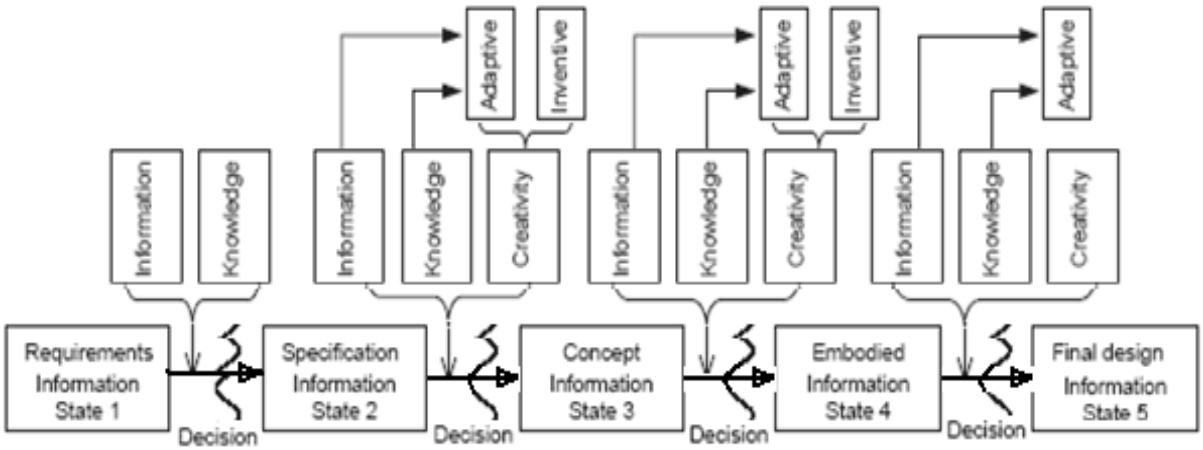


Fig. 2 Show information and knowledge transformation for designed.

Demonstrates that both information and knowledge contribute significantly to the transformation and creation of the designed art effect, for all aspects but the inventive element of the creativity phases. Therefore, knowledge and information provide for the basis of all possible decisions, and decision processes.

2.2. Analyze and Comparison of KA Techniques

Many techniques have been developed to help elicit knowledge from an expert (Nick Milton, 2003). These are referred to as knowledge elicitation or knowledge acquisition (KA) techniques. The term "KA techniques" is commonly used. The following list gives a brief introduction to the types of techniques used for acquiring, analyzing and modeling knowledge: (i) Protocol-generation techniques include various types of interviews (unstructured, semi-structured and structured), reporting techniques and observational techniques. (ii) Protocol analysis techniques are used with transcripts of interviews or other text-based information to identify various types of knowledge, such as goals, decisions,

relationships and attributes. (iii) Hierarchy-generation techniques, such as laddering, are used to build taxonomies or other hierarchical structures such as goal trees and decision networks.(iv) Matrix-based techniques involve the construction of grids indicating such things as problems encountered against possible solutions. Important types include the use of frames for representing the properties of concepts. (vi) Repertory grid technique used to elicit, rate, analyze and categories the properties of concepts.(v) Sorting techniques are used for capturing the way people compare and order concepts, and can lead to the revelation of knowledge about classes, properties and priorities.(vii) Limited-information and constrained-processing tasks are techniques that either limit the time and/or information available to the expert when performing tasks. For instance, the twenty-questions technique provides an efficient way of accessing the key information in a domain in a prioritized order. (viii) Diagram-based techniques include the generation and use of concept maps, state transition networks, event diagrams and process maps. The use of these is particularly important in capturing the "what, how, when, who and why" of tasks and events.

2.3. Selection and Typical Use of KA Techniques

A variety of techniques have been developed for eliciting, mapping and validating knowledge from subject matter experts. A number of authors have provided reviews and comparisons (Hoffman et al., 1995; Shadbolt and Burton, 1995). For example, provide a taxonomy of techniques with two high-level classes: non-contrived (aka natural) techniques and contrived techniques. Non-contrived techniques include interviews and protocol analysis techniques (Belkin et al., 1987). Contrived techniques include mapping techniques, such as concept mapping (Zaff et al.,1993) and repertory grid (Gaines and Shaw, 1993), and goal decomposition techniques, such as laddering (Corbridge et al., 1994) and limited information tasks (Grover,1983). For the current study, the decision of which acquiring techniques to select was based on follow. First, each technique should be capable of acquiring knowledge, preferably structured knowledge. Second, each technique should be able to be implemented with a participant in a session lasting approximately 1 hour. Third, there should be at least one technique that can show the different step to get knowledge of expert, e.g. knowledge resource, acquiring and method. Fourth, each technique should have performed well during the pilot study. A semi-structured interview technique is a standard technique used in many knowledge engineering projects. It makes use of a redesigned set of questions but allows unplanned supplementary questions to be asked during the session(De Waele and Harr?, 1979). Thus, the semi-structured interview technique was selected and applied to used because it is representative of a questioning technique.

3. Research methodologies

3.1. Design considerations

Form literature review, we design meta model to solving problems by mapping concept following: Simultaneously with the design knowledge process, a knowledge adaptive process takes place. The KA uses the data, information and methodologies transform from the knowledge acquisition sessions to build a good model to solve problems show in fig. 3.

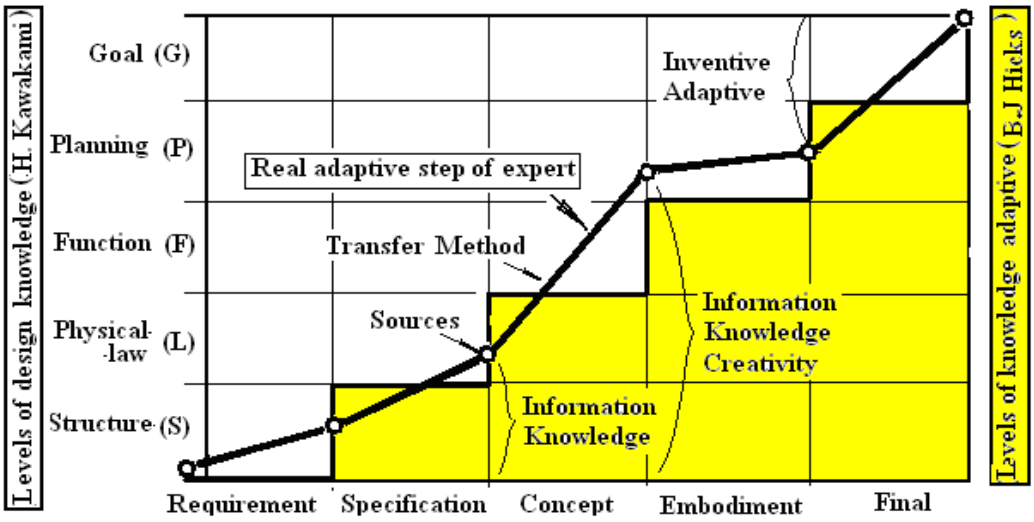


Fig. 3 The meta-model concept mapping of relationships between design knowledge of H. Kawakami and knowledge transformation for designed process of B.J Hicks

The model mapping applied to ask and discussion during session for finding sources of knowledge (Human experts and Documentations): textbooks, journal articles, technical reports, records containing, etc(John plats,2004). The table following show that related of sources used for the design process to knowledge transfer method. We design these during pilot study and discuss with expert participate for developed following.

Knowledge Sources (KS)					**Knowledge Transfers Method (KT)**					
	Code	KS applied form B.J Hicks	EK	TK	Code	KT mapping of Nonaka & Takeuchi	**I**	**S**	K.'s Type	
Document	S1	Magazine / Journal Website/ Network	*		M1	Publication/Internet Network Searching	*		Data	Rule / System
	S2	Catalogue/ Brochure CD Demo/Drawing	*		M2	Seminar/Conference Exhibition/Site visited	*			
	S3	Manual/Text book Handbook/Literature	*		M3	Textbook/Handbook Literature Searching	*			
	S4	Study books / Sheet Report/Thai textbook	*		M4	Reading study books/ Sheets /Thai textbook	*			
Human	S5	Teachers/Instructor Lab. Technician		*	M5	Learning/ Workshop practices/ Experiment		*	Practice	
	S6	Engineer/ Foreman Senior /Technician		*	M6	Onsite/ Shop training (Include Studying)		*		Skill
	S7	Thai Expert (Professional)		*	M7	In bound/ Institute specific trainings		*	Experience	
	S8	Foreigners/Owner's Technology		*	M8	Owner/Out bound specific trainings		*		
	S9	Customer/ Supplier/ Auditor/ Member		*	M9	Tech sale/ Know-how Knowledge Sharing		*		
Oth	S10	Machine /Equipment Law Mat. /Model	*		M10	Onsite practice/ Problems solving	*			Tale nt

Proce
Searching
Learnin
Training
Working

Table 1. show that the sources used for design related to knowledge transfer method.

3.2. Participants

The experts for participant was selected form two network. First, from advisor or academics of Thai Tool and Die Industry Association (TDIA) who had more Experience. Second, selected by die factory's owner or die design leader in die industry network. The number of participants to involve having enough for sample size and ensure a good spread of demographics. On this basis, we select 18 persons pilot interview and cut off eight that they out of scope such as expert in process planning, managing or Mold design.

3.3. Assessment and Method

There are many problems when evaluating knowledge elicitation techniques (Shadbolt et al., 1999). There is the difficulty of involving a large enough sample of experts to give statistical significance (Belkin et al., 1987). There is the difficulty of assessing and validating the knowledge acquired given the lack of 'gold standards' to compare against. There is the need to discover the range of tasks and domains for which the techniques are useful. There is also the difficulty of isolating what added value a technique gives when each technique may need to work alongside other techniques (B.J.Hicks et all.,1998). Hence, questions and feedback interviews were used. They are different methods overlap in what opinions they capture, hence provide a way to assess the reliability and validity of the measures. All ten participants in the main study we surveyed period about 3 months. We found that and separate knowledge acquisition method on sessions took place. Each session we interview and discussion about 1 hour by using question guideline, Four measures were designed:

(i) A questionnaire containing expert general profile show in table 2.

Exp. N0.	Expert Profile				
	Graduate	Position	Age	Experience	
				Job	(Year)
1	Diploma	Design Manager	38	Progressive	17
2	Under-Dip	Managing Director	56	Stamping	35
3.	Diploma	Section Manager	38	Press Die	15
4.	Diploma	Design Manager	36	Press Die	15
5.	Bachelor	Design Manager	42	Press Die	20
6.	Under-Dip	Managing Director	58	Stamping	32
7.	Master	Managing Director	51	Press Die	18
8.	Bachelor	Section Manager	35	Stamping	10
9.	Bachelor	Head Division	43	Press Die	17
10.	Bachelor	Section Manager	35	Stamping	10

Table 2. show the participant expert list and profile

(ii) A semi-structured feedback interview questions applied to containing rating scale items and a ranking technique(% ranking weigh).

1. We studied Source and Method to get knowledge of expert by ask and discussion step by step follow the design question in table 1. All the sessions were tape-recorded and used a semi-structured interview format. A ranking weigh techniques using a quantitative (statistical) methods (% to get knowledge) used for basic analyses measures of each KA model separate. The rankings weight made on the questions and feedback during session. The KA model were design show in fig. 4

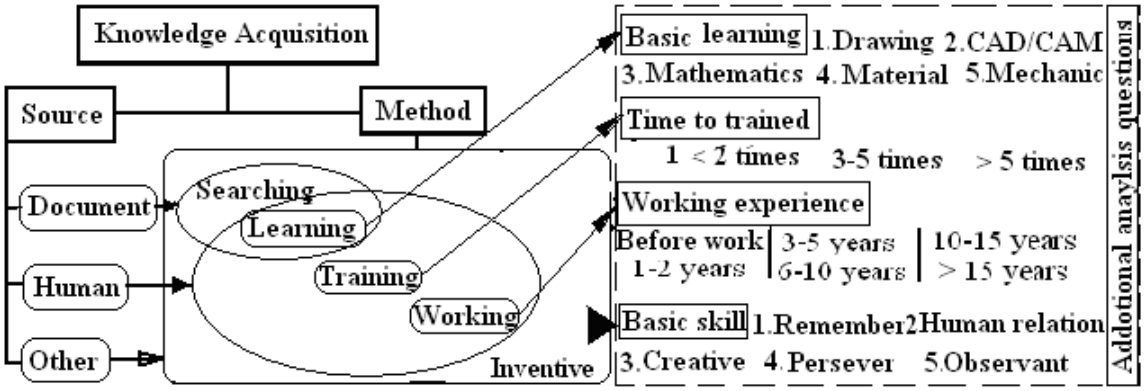


Fig. 4 The structure of KA model study for data analyze separated.

The structure of KA model study show that using question for participant rating or weighting in percentage and then we transform to scales 0-9 (0= Worse - 9 = Best) followed questions: How much are ranging weight of any source and method ?

2.The questions compared and related the participant's opinions of the step to get knowledge and design knowledge(H. Kawakami) rating scales. We ask them for analyses the content of the knowledge captured, the responses to the open-ended question and the responses made at the feedback session. The model design show in fig. 5

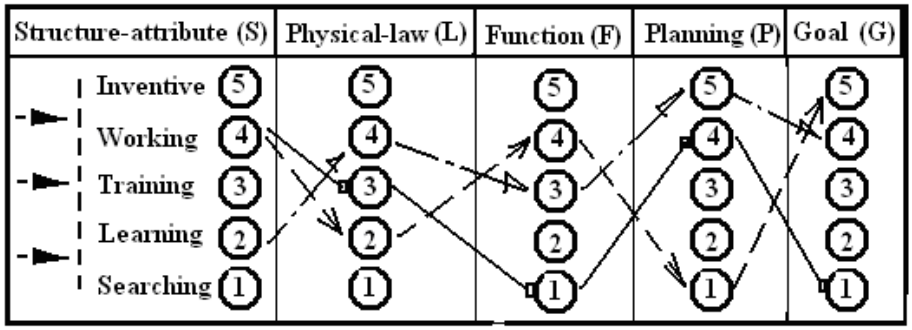


Fig. 5 The summarize model of Design knowledge and Process study comparing.

We interview and shared for weighting followed questions; How much are ranging weight of any method for structure, physical-law , function, planning and goal level?

3. The addition questions for captured the participant's opinions about the importance of basic knowledge (1. Mechanical Drawing 2. CAD/CAM software 3. Mathematics/Calculus 4.Material / Chemical 5. Machine Tools) and Basic skill (1.Remembering 2. Human relation 3. Creative and Enterprising 4. Persevering and assiduous 5. Observant and attentive) rating scales. We discuss by followed questions; How much are ranging weight of any basic learning, time to trained and work's experience?

4. Results and Discussions

4.1 Results

The main results of the research. A description of the results can show follow.

(1). Knowledge acquisitions source (S) and method (M) analysis.

A. Source analysis.

Expert Number	Knowledge source									
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Total	2.81	6.67	9.12	5.96	8.07	16.49	9.47	16.84	11.58	12.98

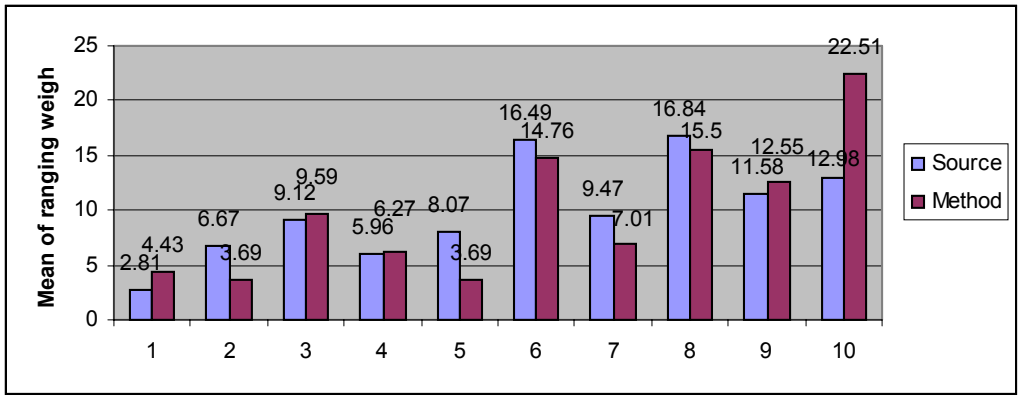
Table 3. Knowledge acquisitions source analysis.

B. Method analysis.

Expert Number	Knowledge acquisitions method for die design.									
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
Total	4.43	3.69	9.59	6.27	3.69	14.76	7.01	15.5	12.55	22.51

Table 4. Knowledge acquisitions method analysis.

The summarized off source and method ranging weigh comparison.



Graph 1. Knowledge transfers (source and method) analysis.

From graph 1. we can see source and method have a nearly significance but for the best source are S8 (Foreigners/Owner's Technology) and method are M10 (Onsite practice/ Problems solving) there are difference. That mean, the best technique are practice and problems solving.

(2). Process to get knowledge relate to design knowledge(H. Kawakami) rating scales.

	Relation weight																								
	Structure					Law					Function					Planning					Goal				
	S	L	T	W	I	S	L	T	W	I	S	L	T	W	I	S	L	T	W	I	S	L	T	W	I
%	2.0	5.5	4.4	5.1	1.7	1.6	4.1	5.8	2.4	2.0	1.6	5.1	4.1	4.1	2.6	3.1	5.6	6.0	6.0	5.1	1.6	2.4	6.0	6.4	6.0

Table 5. Weighting of step to get an expert in die design knowledge.

C. The best process for structure level in design knowledge is learning process(L).
D. The best process for law level in design knowledge is training process(T).
E. The best process for function level in design knowledge is learning process(L).
F. The best process for planning level is training(T) and working (W) process.
G. The best process for goal level in design knowledge is working process(W).

4.2 Discussions

The last of session we discussion about participant's opinions about the importance of basic knowledge and basic skill rating scales. For addition questions we asked for compared the importance of basic knowledge and Basic skill, we found the best basic knowledge is mechanical drawing subject and the best basic skill is observant and attentive. For training and working experience, the best experience are owner/out bound specific trainings more than 5 times and working experience should be more than 15 years.

5. Conclusion

In this paper we have analyzed the knowledge involved and conclusion follow;
We can study histories of die design expert for acquired knowledge. Result of research we found the best source are foreigners/owner's technology (S8) and transfer method are onsite practice/ problems solving (M10)**.** The best process to get knowledge relate to design knowledge are working process, and all step show follow.

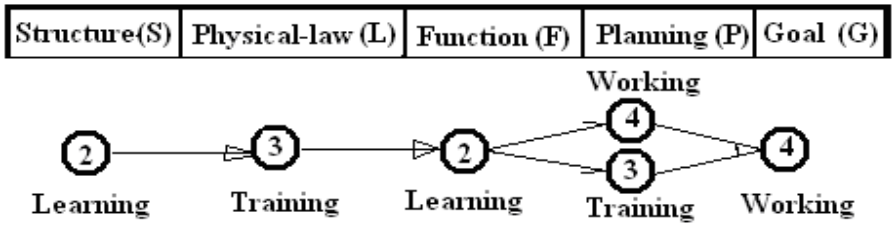


Fig. 6 The conclusion of process to get knowledge relate to design knowledge

Acknowledgements

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Tutorial via the Internet on the Dietetics Course*

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Abstract

The main objective of the Dietetics Course is to enable students to apply knowledge for family members especially those who are ill with chronic diseases. In the past, the results of the final examination for each semester showed that on the average 75.71 percent of the students could not pass the Course. In the 2007 academic year, the Course was among the 10 courses included in the Tutorial via the Internet Pilot Project which was a research project with financial supports from STOU.

The research objectives were to develop instructional media via the internet for the Dietetics Course, to evaluate the students' achievement, and to evaluate the students' satisfaction with the e-Tutorial Pilot Project in the Dietetics Course.

The operational method included joint-planning involving staff members of the Office of Educational Services, Institute for Research and Development, and School of Human Ecology in order to determine the schedule and sites of the tutorial for students to attend the tutorial sessions on their own choice. As for academic matters, the School of Human Ecology assigned the Course Administration Committee to be responsible for instructional design and free determination of instructional media. The tutorial sessions for the Dietetics Course was set to take place on October13 –14, 2007 between 9.00am and 3.00 pm each day. The instructional media were in the form of PDF file and power point based on the tutorial contents. Students were allowed to download the instructional media via the website of the university one month in advance of the tutorial schedule. Before the tutorial, students were able to take the self-evaluation pre-test and send questions to the e-mail address of the course chairperson and via the web board. During the tutorial sessions, resource persons for the course jointly presented live lectures; while students could learn the course at home or at the regional distance education centers of the university and could raise their questions to the instructors during the tutorial sessions.

Results of the pilot project showed that the number of students joining the tutorial session and providing feedback information was 55 or about 15 percent. As for the 26 students who joined the project in the real time, 20 or 76.9 percent passed the Course at the satisfactory (S) grade level; while 6 or 23.1 percent failed the Course or receiving the unsatisfactory (U) grade level. Data on students' satisfaction seemed to indicate that the

course contents were effective but should be improved in some aspects, especially the media design and appropriate time. This project should be implemented on a wider scope as an instructional innovation for enhancing student's learning achievement and increasing the efficiency of the distance education system.

1. Introduction

The Dietetics Course is a course in the Community Nutrition Major of the Bachelor of Home Economics Program of the School of Human Ecology, Sukhothai Thammathirat Open University (STOU). Its main objective is to enable students to apply knowledge on food and nutrition in preparation of food for family members who get ill with sudden or chronic diseases and need treatment with food together with medical therapy. This course, therefore, helps equip people with knowledge and understanding on how to take care of patients, enables them to assist the doctor in taking care of patients, and helps them to save considerable expenses in taking care of patients, especially in taking care of family members who are ill with chronic diseases. However, even though students could see the course benefits and apply the obtained knowledge in taking care of their family, the results of the final examination in the past 3 years showed that only the average of 75.71 percent of students could pass the course. In the 2007 academic year, this course was redesigned as a course in the e-Tutorial Pilot Project which could be an alternative media for the students in distance learning education system.

2. Research Objectives

2.1 To develop instructional media via the internet on the Dietetics Course.
2.2 To evaluate the students' achievement.
2.3 To evaluate the students' satisfaction with the e-Tutorial Pilot Project in Dietetics Course.

3. Methodology

This tutorial via the internet was started in the first semester of the 2007 academic year. The project was undertaken as a research project with financial support from the university. The operational method included joint-planning involving the Office of Educational Services, the Office of Educational Technology, Institute for Research and Development, and School of Human Ecology in order to determine the schedule and sites of the tutorial for students who volunteered to attend the tutorial sessions on their own choice.

The Office of Educational Service's function was to disseminate the e-tutorial information to the students who registered in the course by promoting the alternative channels which enabled them to link with the internet system such as at home, Office of Regional Distance Education Center, Office of Provincial Education Center, etc.

As for academic matters, the Course Administration Committee which collaborated with staff members of the Office of Educational Technology was responsible for instructional design and free determination of media, and provision of tutoring via the e-tutorial network according to course schedule. The e-tutoring was broadcasted from the EBPC Center to educational service centers and regional distance education centers of the university.

Institute for Research and Development's function was to evaluate the effects of the tutorial via the Internet of the Dietetics Course on students who participated in the Project. A questionnaire was posted on the web site in order to evaluate the students' satisfaction, the students' achievement in the Course as well as to obtain information on the problems and obstructions for participating in this Project.

The data were collected from students who volunteered to participate in the Project via different channels. As for data analysis, the results of the final examination for the first semester of the 2007 academic year were compared with those of the group that participated in the e-Tutorial Pilot Project. The students' satisfaction with the e-Tutorial Pilot Project in Dietetics Course as well as the problems and obstructions for participating in this Project were also analyzed.

The student's satisfaction data were collected in the form of 5-level Likert scale as follows: 5 = most satisfied, 4 = satisfied, 3 = moderately satisfied, 2 = less satisfied, and 1 = least satisfied. The obtained data were analyzed for the mean and standard deviation.

4. Main Findings/Results

4.1 The development of instructional media via the internet on the Dietetics Course

The instructional media was jointly planned and developed by three content members of the course team who shared responsibility and taught for 5 units each. The tutorial took place on two days. The first day covered the contents of the first seven units; the second day, those of the last eight units. The tutor of each unit tried to present only main points and cover the unit within 30 minutes. In addition, they cooperated to develop content conclusions and pre-test and post-test questions in advance.

The instructional media were in the form of PDF files and slides (power point) according to the tutorial contents. Students were allowed to download the instructional media via the website of the university one month in advance of the tutorial schedule. Before the tutorial, students were able to take the self-evaluation pre-test and send questions to the e-mail address of the course chairperson and via the web board.

Staff members of the Office of Educational Technology helped the content members of the course team in designing the instructional media and producing the clip video for use in the tutorial. The produced instructional media were especially needed in the Dietetics Course to help clarifying difficult contents that required explanations from medical doctors or experts and included organizing such activities as preparation of food for patients with special diseases and exercise activities in main hospitals that would make it easier for students to understand the contents.

The tutorial sessions for the Dietetics Course were scheduled to take place on October13 – 14, 2007 between 9.00 am and 3.00 pm each day by web casting. During the tutorial sessions, resource persons for the course jointly presented live lectures; while students could attend the course at home or at the regional distance education centers of the university and could raise their questions to the instructors during the tutorial sessions via either fax or e-mail provided. In the final session for each day, a 30-minute period was provided for students to undertake the post-test, and for the instructors to conclude main points of the course covered in that day and to answer any questions concerning the course. One week after the tutorial, answer keys for the pre-test and post-test were shown on the university website. The statistics on student's access to the e-tutorial was shown in Table 1 below:

Table 1: The statistics on student's access to the e-tutorial for the Dietetics Course

Students	Number	%
1. Students registered for the Dietetic Course [5]	366	100
2. Students who completed the pre-learning evaluation	40	11

form [6]		
3. Students who completed the questionnaire[7]	55	15
4. Students who attended the tutorial sessions on real time schedule[7]	26	7
4.1 Those who attended both sessions[7]	18	5
4.2 Those who attended only one session[7]	8	2

[5] data from the Office of Registration and Evaluation
[6] data from the Dietetics Course Administration Committee
[7] data from the Institute for Research and Development

Table 1 shows that out the total number of 366 students who registered for the Course, 40 or about 11 percent completed the pre-learning evaluation form, 55 or about 15 percent completed the questionnaire. As for those who attended the tutorial sessions the number of students joining the tutorial sessions was 26 or about 7 percent, consisting of 18 or about 5 percent who attended both sessions (two days) and 8 or about 2 percent who attended only one session (one day).

4.2 The evaluation of the student's achievement

Results of the evaluation of student's achievement are shown in Table 2 below:

Table 2 The evaluation of the student's achievement

Type of students	Total	Satisfied	unsatisfied
1. Students who registered for the Dietetics Course [5]	100% (N=366)	63.03% (N=208)	36.97% (N=122)
2.Students who attended the e-tutorial sessions [7]	100% (N=26)	76.9% (N=20)	23.1% (N=6)

[5] data from the Office of Registration and Evaluation
[7] data from the Institute for Research and Development

Regarding student's achievement in the course as shown in Table 2, out of the total number of 366 students registered for the course, 208 or 63.03 % passed the course at the satisfactory (S) grade level; while 115 or 32 percent failed the course or receiving the unsatisfactory (U) grade level, and 122 or 36.97 percent received the incomplete (I) grade level or unaccounted for. As for the 26 students who joined the project via attending the e-tutoring sessions, 20 or 76.9 percent received the satisfactory (S) grade level; while 6 or 23.1 percent received the unsatisfactory (U) grade level.

4.3 The evaluation of the student's satisfaction

Evaluation results of student's satisfaction with the Course are shown in Table 3 below:

Table 3: The evaluation of the student's satisfaction [7]

The student's satisfaction	Mean ± SD
1. Satisfaction with the course contents	

1.1 The e-tutorial program facilitates understanding of the course contents.	4.16 ± 0.47
1.2 The course contents are suitable for e-tutorial.	4.04 ± 0.61
2. Satisfaction with tutorial design and media	
2.1 The presentation method is appropriate for the contents.	4.00 ± 0.76
2.2 The presentation method is interesting.	4.00 ± 0.82
2.3 The presentation method induces students to follow.	3.96 ± 0.84
2.4 Instructional media (pictures, words, and sounds) are appropriate.	3.56 ± 1.00
2.5 Instructional media facilitate content understanding.	3.84 ± 0.69
3. Satisfaction with interaction	
3.1 Interaction opportunity between students and the instructor.	3.32 ± 0.89
3.2 Instructor's clarity in answering questions.	3.39 ± 0.77
4. Satisfaction with convenience for learning	
4.1 The e-tutorial is convenient for students.	4.40 ± 0.71
4.2 It is easy to attend the e-tutorial.	4.16 ± 0.85
4.3 The speed of access to the e-tutorial.	4.04 ± 0.79
4.4 Convenient for downloading the tutorial documents in advance.	4.12 ± 0.83
4.4 Convenience for asking questions.	3.41 ± 1.05
5. Satisfaction with tutorial duration	
5.1 The e-tutorial date and time are appropriate.	4.00 ± 0.72
5.2 The 5-hour duration per day of e-tutorial is appropriate.	3.88 ± 0.73
5.3 The provision of two consecutive tutorial days is appropriate.	3.80 ± 0.58
6. Overall satisfaction of the students with e-tutorial	4.32 ± 0.69

[7] data from the Institute for Research and Development

Table 3 shows that the students' overall satisfaction with the e-tutorial program was at the high level (mean = 4.32). When satisfaction with each aspect of the program was considered, it was found that the rating means of only three items, namely, Item 3.1 (mean = 3.32), Item 3.2 (mean = 3.39), and Item 4.4 (mean = 3.41) were at the moderate level; while those of all other items were at the high level.

5. Discussion

1. Eventhough this project was only a pilot project, the research results seemed to indicate that a number of students showed their interest in the project by attending the tutorial sessions as judged by the data on submission of pre-learning evaluation forms to the course team, the completion and return of the questionnaires, and the number of students attending the scheduled e-tutorial sessions.

2. As for the achievement of the e-tutorial program, it could be concluded that the program helped students to gain understanding of the course contents as shown by the number of students who attended the e-tutorial sessions receiving the passing grade in higher percentage than that of those who did not attend the sessions. Thus, it could be concluded that this e-tutorial program enabled students who joined it to pass the course in higher percentage than that of those who did not do so. If the program could be implemented in wider scope, it would facilitate student's learning to a much greater extent.

3. The data obtained from the questionnaire administered by the Institute for Research and Development indicated that the guidelines for improvement the efficiency of the e-tutorial program were the following: On the course contents, more important course contents should be included, and communications should be undertaken with the uses of simple language. On tutorial design and instructional media, the presentation should be improved to be more interesting, and more variety of instructional media should be included. On problems encountered by students, it was found that students had problems with the lost of some audio and visual signals resulting in disruption of the viewing which could cause the student's satisfaction with the instruction media being at only the moderate to high level. On student-instructor interaction, there were problems on time limitation, together with a lot of contents to cover resulting in the opportunity for student-instructor interaction being less than that planned for. On learning convenience, research findings indicated that students who could gain access to the program received learning convenience because they could learn while staying at home without having to travel to the provincial educational service center. However, there were almost 90 percent of students who lacked computer facilities, computer usage skills, or the Internet facilities and had to pay fees for using this system. On tutorial duration, the e-tutorial duration might be too long; and the tutorial schedule was too near the final examination time causing the students to have less time for reviewing their lessons and preparing for the final examination. Therefore, improvement could be made by rescheduling the e-tutorial sessions in several intervals, and offering only the one-day tutorial session.

6. Conclusion and Recommendation

These results seemed to indicate that the Tutorial via the Internet Pilot Project for applied science courses such as the Dietetics Course which had contents difficult to understand was effective and should be implemented on a wider scope as an instructional innovation for enhancing student's learning achievement and increasing the efficiency of the distance education system.

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Industry-Based Technologies as Blended Learning Resources: An Application of Competency-based Programs Leading to International Certification Geared Towards An Integrative, Outcome-driven Curricula in Business and Information Technology (IT) Education of La Consolacion College Manila

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Abstract

Business and IT education requires an integrative approach, wherein the functional areas of business, taken as core-professional courses such as marketing, operations, finance and accounting, human resources and information technology can be viewed from a "central management" perspective. This paradigm follows the urgent need of business and industry to have a "top management view in formulating, implementing and evaluating cross-functional decisions that enable organizations to achieve its strategic objectives, in the light of the dynamics of its environment.

The organization of the 21st century is no longer defined as what is within the bounds of its offices and factories. An organization is now defined by the breadth and depth of its relationships- a network that can go deep into customer, vendor and partner supply chains. The changing dynamics of the future is the transition to a new organizational relationship-the "relational enterprise".

However, the current state of business and IT education, both in curriculum design and teaching pedagogy, does not match this need. Professional-core courses are still conducted as separate and independent subjects, including the supposed "integrating" course in Business Policy and Strategic Management. Notwithstanding the use of "integrating" cases, the problem still remains that these cases do not have the complete quantitative and qualitative information that allows an objective, logical and systematic approach leading to an effective decision to be made under conditions of uncertainty. Moreover, the current pedagogy does not integrate the pillars of organizations: structure, process, systems and leadership.

This paper seeks to determine the applicability of industry-based technologies, such as Enterprise Resources Planning (ERP) software as a "blended learning resource" in business and IT education. This technology will equip the students with an understanding of the entire business cycle and how information technology helps in business. ERP is such a strategic tool, which equips the enterprise with the necessary capabilities to integrate and synchronize the isolated functions into streamlined business processes in order to gain a competitive edge in the turbulent business environment.

This paper will also address on the integration of ERP in a "blended teaching-learning" system. This new learning paradigm integrates Business + IT , using real business-industry applications, thus, reinventing both business and IT education. If ERP is a business' fantasy, then business and IT education must adopt its integrative enterprise-wide paradigm and pedagogy. It will also propose a strategy on how this technology can be adopted in identifying the specific skill-competencies per curriculum year level of BSBA, BSA and BSCS/IT Curricula,, that can lead to certifications of students according to international standards.

Finally, this paper will attempt to design an outcome-driven curriculum for Business and IT Education using this Blending Learning Resource.

I. Introduction

a) Trends in Education: Increasing the "Cope-ability" and Adaptation to Continual Change

"In the technological systems of tomorrow---fast, fluid and self-regulating, the most valued attributes of the industrial era become handicaps. In such a world, we need men who can make critical judgments, who can weave their way through novel environments, who are quick to spot new relationships in the rapidly changing reality. The prime objective of education of the future is to increase the individual's "cope-ability"---the speed and economy with which he can adapt to continual change."(Toffler,1990).

This futuristic vision of Alvin Toffler, is indeed happening now, and HEI's and Governments, particularly in Southeast Asia, must be able to "cope-up" with the dynamics of a global-cyberspace environment. HEI's all over the world are in a continual quest for a pedagogy that would match the demands and complexities of the school of the 21st Century.

b) The Medium-Term Development Plan for Higher Education in the Philippines (MTDPHE): Responding to the Challenges of a Dynamic Environment

Vision-Mission of HEI's in the Philippines

With the increasing prominence and utilization of knowledge in the economy, higher education in the Philippines is envisioned to be the channel for life-long learning that provides the Filipino youth with greater opportunities for economic and social advancement within and outside the country.

The vision for higher education institutions (HEI's) in the Philippines is " to become key players in advancing new knowledge for the improvement of academic instruction, productivity enhancement and job creation, and in addressing the key issues confronting Philippine society" (MTDPHE,2007).

It is the mission of the higher education system in the Philippines to provide higher education institutions that are innovative, responsive, accessible, and effective towards the social transformation of the country.

"The Commission on Higher Education (CHED) is thus envisioned to be the lead catalyst in transforming the country as the prime knowledge center in Southeast Asia by revitalizing HEIs and ensuring that their renewed roles in a dynamic environment are fulfilled." (MTDPHE, 2007).

c. The Role of ICT in the Medium –Term Development Plan

The MTDPHE supports the National Science and Technology Plan 2002-2020 in "recognizing the crucial role of science and technology in enhancing productivity, increasing economic growth and expanding employment. There is a need to develop new knowledge and bring the products of new knowledge to the market. Higher education can contribute immensely in this aspect. The MTDPHE recognizes the reinforcing linkages between academic activities and the development of science and technology." (MTDPHE, 2007)

d. The Role of the Business and IT Education Sector

The MTDPHE also underscores the "crucial mix played by the government and the private sectors in the development of human resources of the country. In coordination with business and civil society, it vigorously works toward the design, development and delivery of practical and appropriate education and training for current and future managers , entrepreneurs , and workers in both public and private sectors who will contribute to economic growth and social development with the end in view of enhancing the quality of life and well-being of Filipinos" (UHRDFP,2007).

e. The Current State of Business and IT Education in the Philippines: Curricular Design and Pedagogy

E-Learning and Blending Learning as alternative modes of teaching-learning delivery have been introduced in the Philippine educational system in the 80's-90's. HEIs-both government/state owned and private institutions have adopted this teaching mode, but to a limited extent. The UP-Open University, a state-run university has rolled on limited undergraduate and graduate programs.

Regional agencies such as SEAMEO INNOTECH have focused programs for this purpose. It is principally dedicated to "identifying common and unique education problems and needs of Southeast Asian countries and developing innovative and technology-based solutions to address these problems. The Center aids in educational development within and outside the region through training and human resource development, research and evaluation, information and communications technology and other special programs addressing specific areas of concern in the Southeast Asian educational scenario." (Alejo, 2007).

In his study Alejo, cited that "with the emergence of cutting-edge choices in ubiquitous e-learning particularly in information and communications technology (ICT) for educational leadership, blended flexible learning is now prominent as a viable option to educational training delivery. Marked for its ease, scalability, and efficiency, organizations are exploring the blended learning approaches in coming up with the most applicable mix of non-traditional and traditional modalities to effectively promote learning.

A key aspect of successful models in blended learning therefore is the selection of the most appropriate combination of platforms and resources. Criteria for selecting the right mix of applications are suggested in this paper such as but not limited to the application of flexible learning principles, competency-based curriculum guide and assessment, optimal utilization of CMCs or Computer Mediated Conferencing or Communication, and, quality assurance in content and instructional design of self-learn materials. (Alejo, 2007).

Specifically for Business and IT education, ICT application is still not widely used. Two major factors include a) the absence of a full Policy Standards on On-line Programs from the Commission on Higher Education; while the existing one prescribes various restrictions (accreditation, deregulation status, etc.) on schools ; and b) the limited support from Government and industry given to HEIs, particularly on ICT investment to support instruction, given the huge amount of ICT infrastructure-hardware and software. The best effort most HEI's adopt in business and IT education is an ICT-driven curriculum. This is in the form of computer simulations, computer-aided instruction and free educational software that book publishers usually provide freely to instructors.

This educational practice lags behind the leading HEI's in the region. In Singapore, (SMU,2007) Business +IT are already integrated in its programs, with such unique features and best practices as:

i) flexibility of being both a business and IT expert (Business IT reinvented)
ii) Collaboration with industry to restructure a breakthrough learning process based on how IT is applied in real business settings
iii) Objective-driven, focused on project management, critical analysis and creative problem solving
iv) Pragmatic learning paradigm
v) broad-based, interactive pedagogy which develops critical and analytical thinking, communications and presentation skills
vi) Sharpening leadership and team-building potentials
vii) Instilling a sense of social and ethical responsibility

f) The Future Pedagogy in Business and IT education: The Relational Enterprise Model

Business and IT education requires an integrative approach, wherein the functional areas of business, taken as core-professional courses such as marketing, operations, finance and accounting, human resources and information technology can be viewed from a "central management" perspective. This paradigm follows the urgent need of business and industry to have a "top management view in formulating, implementing and evaluating cross-functional decisions that enable organizations to achieve its strategic objectives, in the light of the dynamics of its environment.

The organization of the 21st century is no longer defined as what is within the bounds of its offices and factories. An organization is now defined by the breadth and depth of its relationships- a network that can go deep into customer, vendor and partner supply chains. The changing dynamics of the future is the transition to a new organizational relationship-the "relational enterprise".(Cooper,2002)

However, the current state of business and IT education, both in curriculum design and teaching pedagogy, does not match this need. Professional-core courses are still conducted as separate and independent subjects, including the supposed "integrating" course in Business Policy and Strategic Management.

Notwithstanding the use of "integrating" cases, the problem still remains that these cases do not have the complete quantitative and qualitative information that allows an objective, logical and systematic approach leading to an effective decision to be made under conditions of uncertainty. Moreover, the current pedagogy does not integrate the pillars of organizations: structure, process, systems and leadership.

II. Blended Learning Pedagogy in Business and IT Education Using Industry-Based Technologies

a) Enterprise Resource Planning (ERP)

Enterprise Resource Planning (ERP) from a business management standpoint is an industry term for the broad net of activities supported by multi-module application software that helps a manufacturer or other business manage the important parts of its business, including product planning, parts purchasing, maintaining inventories, interacting with suppliers, providing customer service, and tracking orders. ERP can also include application modules for the finance and human for the finance and human resources aspects of a business. Typically, an ERP system uses or is integrated with a relational database system. The deployment of an ERP system can involve considerable business process analysis, employee retraining, and new work procedures.

From a technical standpoint, ERP is an information system for identifying and planning the enterprise-wide resources needed to take, make, ship, and account for customer orders . It is a software that allows companies to (1) automate and integrate many of their business processes, (2) share a common database and best practices throughout the enterprise, and (3) produce information in real time.

The objective of an ERP system is to coordinate s firm's whole business, from supplier evaluation to customer invoicing. It evolves as an umbrella system that ties together a variety of specialized systems. This is accomplished by using a centralized database to assist the flow of information among business functions. In addition to the traditional components of Materials Requirement Planning (MRP), ERP systems usually provide financial /AM (FAM) and human resource (HR) management information. ERP systems also include:

- *Supply-Chain Management (SCM)* software to support sophisticated vendor communication, e-commerce, and those activities necessary for efficient warehousing and logistics. The idea is to tie up operations (MRP) to procurement, to materials management, and to suppliers, providing the tools necessary for evaluation of all four.
- *Customer Relationship Management (CRM)* software for the incoming side of the business. CRM is designed to aid analysis of sales, target the most profitable customers, and manage the sales force.

Besides these five modules (MRP, finance/accounting, HR, SCM and CRM), many other options are usually available from vendors of ERP software. These vendors have built modules to provide a variety of "solution" packages that are mixed and matched to individual company needs. The key to these large database and integrated ERP systems is to develop interfaces that allow file access to the databases. (Heizer,2006).

Thus, ERP, when translated into a formula has the following equation:

ERP = MRP + FAM + SCM + CRM

where: ERP is Enterprise Resource Planning
MRP is Materials Requirement Planning
FAM (Financial and Accounting Management)
SCM (Supply-Chain Management)
CRM (Customer Relationship Management)

SAP, a large ERP vendor, has developed about a thousand business application-programming interfaces (BAPI's) to access its database. Similarly, other ERP vendors have designed the systems to facilitate integration with third-party software. The demand for interfaces to ERP systems is so large that a new software industry has developed to write the interfaces. This new category of programs is sometimes called middleware or enterprise application integration (EAI) software.

In addition to data integration, ERP software promises reduced transaction costs and speed and accuracy of information. A strategic emphasis on just-in-time systems and tying suppliers and distributors more closely to the firm drives the desire for enterprise –wide integration.

b) Industry-based technologies: SAP ERP Systems

SAP was founded in 1972 as Systemanalyse *und Programmentwicklung* by five former IBM engineers in Mannheim, Baden-Wurttemberg, Germany. The acronym was later changed to stand for Systeme, Anwendungen und Produkte in der Datenverarbeitung (System, Applications and Products in Data Processing).

SAP is the world's largest business software company and the third-largest independent software provider in terms of revenues. SAP's products focus on Enterprise Resource Planning ERP), which it helped to pioneer. The company's main product is SAP ERP. The name of its predecessor SAP R/3 hints at its functionality: the "R" stands for realtime, the number 3 relates to a 3-tier architecture: database, application server and client.

SAP ERP is one of five major enterprise applications in SAP's Business Suite. There are four other applications, two of which are:

- Customer relationship management (CRM)-helps companies acquire and retain customers, gain deep marketing and customer insight, and align organization on customer-focused strategies
- Supply-chain management (SCM)-helps companies enhance operational flexibility across global enterprises and provide real-time visibility for customers and suppliers (www.mysap.com)

c) Partnership with industry and educational institutions

Partnerships are core to SAP's strategy and in its 35 years of history, the network of software solution providers, value-added resellers, distributors, technology and services partners has developed into a broad ecosystem that is among the industry's largest.

Notwithstanding the tremendous benefits, the huge investment required to acquire and implement SAP for small-medium enterprises (SME) is the main deterrent why many companies, much more schools to adopt SAP Systems.

FastTrackSolutions, Inc. prides itself as the only SAP Philippines Partner which is 100% dedicated to SAP products and technologies. The company provides implementation and consulting services to the Philippine and international market-sharing best practices and improving businesses worldwide. Its designed partnership with educational institutions paved the way for this world-class technology to be utilized and adopted as a both as a technology too and teaching pedagogy.

In March3, 2008, the company signed a memorandum of agreement (MOA) with La Consolacion College Manila (LCCM), an ASAIHL –member HEI to support its Business and IT Programs through its SAP B1 Academy—a business unit for Education and Academy. The operation-joint program aims to educate and train professionals on SAP technologies. The partnership seeks to prepare undergraduate students with knowledge and skills on automated ERP systems.

III. The Proposed Integration of ERP as an Industry-Based Technology and Blended Learning Pedagogy in the Business and IT Programs of LCCM

a) Curriculum Design of LCCM's Business and IT Programs.

LCCM's Academic Curricular Programs have been designed in a ladderized structure over a period of four years.

- Level I:Foundation – contains the general education component (GEC) mainly on liberal arts and sciences, which includes Introduction to Information Technology
- Level II: Business/IT Preparation- basic business principles on accounting, finance, computer applications and programming, quantitative techniques,statistics and research, among others
- Level III: Business /IT Core and Functions - clustered according to the core functional areas of business and management- management, human resource , marketing management, financial management, operations management , MIS.
- Level IV: Integrating Courses and Professional Electives/Specialization- consists of integrating-central management courses: Business Policy and Strategic Management, Business Plans and specialized courses on business/IT functional areas and decision-making.

b) Interface of SAP modules with LCCM's Academic Programs

Level	Curriculum Courses	ERP Interface/Applications	SAP Module/s (Products/Applications)
I-Foundation	• Introduction to IT	• Basic ERP: Database Management	
II- Business /IT Preparation	• Business and Management • Computer Applications • Accounting Principles • Basic finance • Statistics • Quantitative tech.	• ERP Basic-Accounting Process	• Finance
Level	**Curriculum Courses**	**ERP Interface/Applications**	**SAP Module/s (Products/Applications)**
III- Business/IT Core/Functions	• Human resource • Marketing management • Operations management • Financial management	• HR • Customer Relations Management (CRM) • Supply-chain management ISCM) • Financial Management (FM)	• HR • Sales • Purchasing • Inventory • Production
IV- Integrating and Specialization Courses	• Business Policy and Strategic Management • Business Plan • Logistics Management • E-commerce	• Forecasting • E-commerce • Logistics • Marketing intelligence • Integration via internet	• Add-on Products

IV. SAP Competencies and Certification Process

a) Outcome and industry-based curriculum

LCCM's curricular program design is to have an outcome and industry-based competencies. The integration of ERP using SAP technologies in various levels/courses would be an effective means to achieve this objective.

SAP certification may be opted by the student during their course of study and/or after graduation when they opt for a career in IT practice and management consulting. Following is a schematic diagram and description of the certification process.

b) SAP certifications

This certification is designed for ERP professionals who work with SAP. Certification is available in one of the following areas: Customer Solution Strategy, Accelerated SAP Implementation, and Continuous Business Improvement.

ERP Certifications

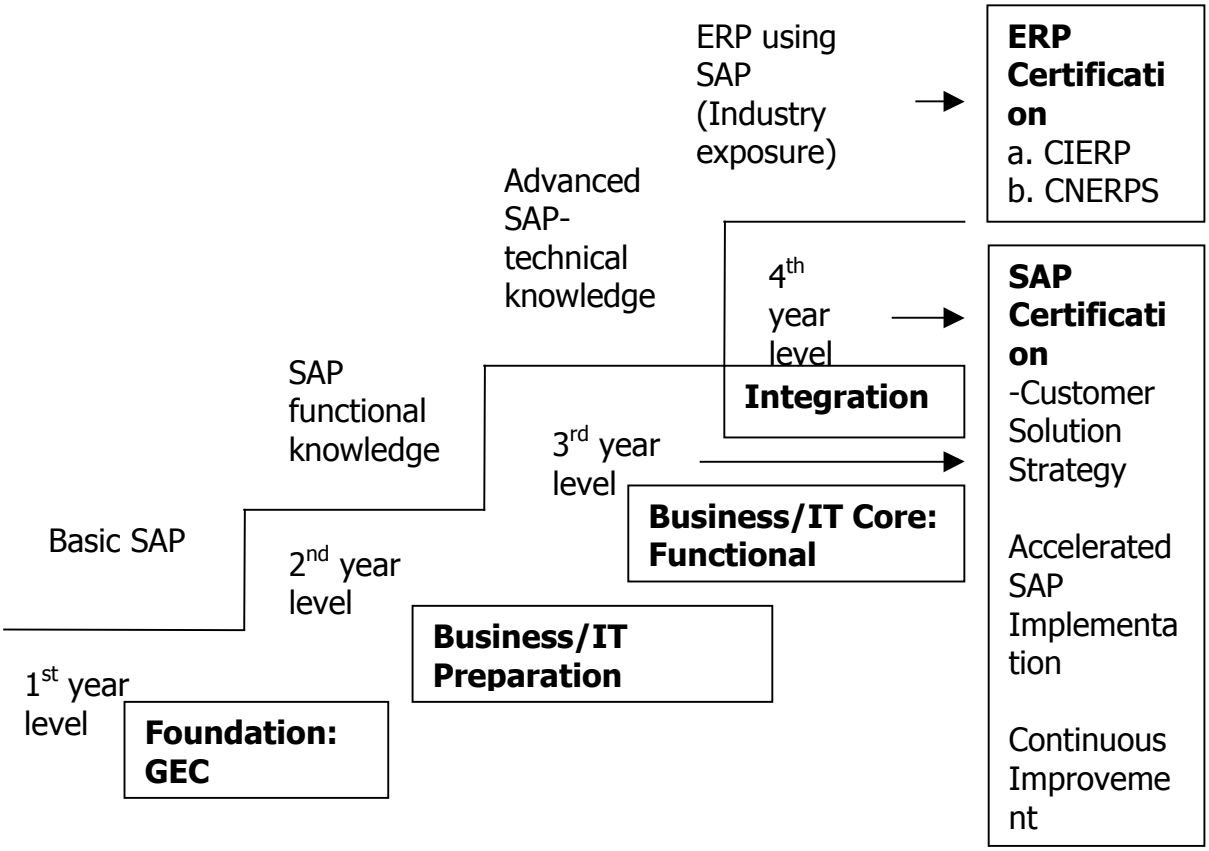
CIERP - Certified Implementer of Enterprise Resource Planning

The CIERP certification is designed for those who need to display knowledge of ERP processes and technology. The CIERP is appropriate for all positions within an ERP project, including users, managers, implementers & help desk support.

CNERPS - Certified Novice of Enterprise Resource Planning Systems

This is an entry-level ERP certification that requires only one exam which can be taken online. It is ideal for candidates looking for a jumping point into ERP or working towards completion of the CIERP certification.

Figure 1: Schematic Diagram of ERP Using SAP systems technology integration and Competency requirement in the Business and IT Programs of LCCM



V. Conclusions

1. The organization of the 21st century is no longer defined as what is within the bounds of its offices and factories. An organization is now defined by the breadth and depth of its relationships- a network that can go deep into customer, vendor and partner supply chains. The changing dynamics of the future is the transition to a new organizational relationship-the "relational enterprise".

2. Thus, the concept that "the workplace of today requires its workers to use contemporary information technologies, understand how they interface with other technologies , think critically, identify and solve problems, communicate effectively, apply technology to task and work in teams" (ICEBE,2007) is a valid proposition that has now gained prominent attention from a wide spectrum of business and industry.

3. Thus, contemporary management tools such strategic plans, TQM, Six Sigma, business process re-engineering (BPR), MIS ,ERP, project management, etc.,as innovations in business and IT education must be technology-driven in order to cope up with the dynamics of this 21st Century.

4. It is also a truism that " in our knowledge society, the driving force of all science, technology and business development is education" (ICEBE, 2007). This belief by the international academic community and industry is shared in the Philippines with "…the Commission on Higher Education (CHED) envisioned to be the lead catalyst in transforming the country as the prime knowledge center in Southeast Asia by revitalizing HEIs and ensuring that their renewed roles in a dynamic environment are fulfilled." (MTDPHE, 2007).

5. The innovations proposed in this paper will be a pioneering idea that offers a new perspective on a "blended learning approach" in business and IT education in the Philippines and is applicable worldwide. This approach is a combination of curriculum design and pedagogy, through the use of industry-based technologies and competencies.

6. This industry-academe partnership is a pioneering project that would eventually provide solutions to the so-called "academe-industry" gap. An output-based curriculum based on industry-benchmarked competencies and using a "blended learning" pedagogy" which is technology-driven shall bring a" radical" change and paradigm shift on how business and IT education and its platform of delivery shall be made in the 21st Century schools.

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Exploring the Use of a Constructivist E-learning System in a Blended Learning Environment

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Abstract

Recent years have seen increasing studies in the integration of constructivist learning theory and e-learning to improve student learning outcomes. The constructivist e-learning system (CES) is one of the research results. This study demonstrates how the constructivist e-learning system (CES) has been applied to a blended learning environment. The experimental research was conducted in a traditional face-to-face classroom environment. The results show that most students were satisfied with the proposed blended learning environment and believed that this environment could improve their knowledge and learning outcomes.

Introduction

The use of information and communication technology (ICT) in traditional education to improve student learning effectiveness is a new challenge. As the world becomes more technologically complex, students need to be taught differently (Kurubacak, 2007). The capabilities of ICT to distribute, share, and retrieve information along with the communication help instructional designers blend a broader range of pedagogy into course design and delivery (Balram and Dragicevic, 2008). With the use of ICT, teachers confront new instructional strategies of teaching and learning in order to meet the growing expectations and demands for higher quality learning experiences and outcomes (Garrison and Konuka, 2004).

The use of e-learning, as a consequence of applying ICT in education, has increased during the past few years. Attempts to integrate e-learning in the traditional face-to-face learning environment as blended learning to discover the best solution have been the focus of recent research (Bliuc, et al., 2007; Garrison and Kanuka, 2004; Olapiriyakul and Scher, 2006; Stacey and Gerbic, 2006). In addition, e-learning is also expected to make an impact on education and to improve student learning outcomes. Integrating learning theory into e-learning is one of the approaches. In addition, the integration of constructivist learning pedagogy and e-learning appears likely as they share many similar features (Bellefeuille, et al., 2005; Chou and Tsai; 2002; Tsai, 2001) and can be facilitated by e-learning tools (Nichols, 2003).

The main purpose of this study is to explore the results of using a constructivist learning approach in a blended learning environment. In this study, a blended learning concept, constructivist learning theory and a constructivist e-learning environment are reviewed. By using the Constructivist E-learning System (CES) developed by Wangpipatwong and Papasratorn (2007), this study demonstrates how to apply constructivist learning concepts in a blended learning environment. The results of the study are, afterwards, evaluated both qualitatively and quantitatively.

Review of Literature

Blended Learning

The term blended learning emerged from the attempts to integrate technologically-mediated learning to traditional face-to-face learning (Bliuc, et al., 2007) with the expectation that it will improve teaching and learning effectiveness. Blended learning can be considered as simple as the integration of online learning and face-to-face classroom learning (Garrison and Kanuka, 2004; Stacey and Gerbic, 2006) or it can be used to describe an approach to design a course that reduces traditional class learning with online learning (Vaughan and Garrison, 2005). However, this study defines blended learning as a combination of instruction which integrates face-to-face learning with e-learning to facilitate the learning process (Olapiriyakul and Scher, 2006) and the attempt to improve learning outcomes.

Currently, the use of e-learning to support course activities in traditional face-to-face learning is increasing (Olapiriyakul and Scher, 2006). Since the quality of learning is highly expected, and both e-learning and face-to-face learning have an advantage in supporting each other, the concept of blended learning is attracting considerable attention from researchers as a means to facilitate meaningful learning (Vaughan and Garrison, 2005). Besides, with the emergence of new advanced technologies, blended learning seems to be a reality whereby traditional face-to-face learning can be integrated with e-learning (Nel and Wilkinson, 2006).

Blended learning strategies can help students improve their critical thinking skills. With blended learning, students generally gain better learning outcomes than students who study in a traditional setting (Heilesen and Josephsen, 2007). The structure of a blended learning course usually depends on the instructional design of the course and the applicability of the course (Olapiriyakul and Scher, 2006).

Constructivist Learning Theory

Recently, constructivist learning theory has become a prominent approach to teaching and learning strategy (Neo, 2005). Constructivist learning theory represents a paradigm shift from instructional design based on behaviorist learning theory to instructional design based on cognitive learning theory. It is found that students learning in a constructivist learning environment have better learning outcomes than students learning in a traditional learning environment (Moreno, et al., 2006; Parker and Becker, 2003; Zhang, et al., 2004; Zhang, et al., 2005).

Constructivist learning theory is not a unified theory, but rather a combination of many ideas (Tynjala, 1999). Wangpipatwong (2007) summarized five basic principles of constructivist learning theory as follows:

1. Constructivist learning places less emphasis on the sequence of instruction and more emphasis on the design of the learning environment. The learning environment should promote student learning and knowledge development.
2. Students have an active role in constructing their own knowledge. It means that students are the center of learning and the teacher's role changes from instructing to facilitating students' development of new knowledge.
3. It is important that students interact and collaborate with others in the learning process. Constructivist learning works best in social settings as students have the opportunity to compare and share their ideas with others.
4. Learning activities lead students to discover new knowledge and develop new skills. With learning activities, concepts become meaningful and students can transform theory into practice.
5. New learning builds on prior knowledge. During the process of knowledge development, students compare new information with their existing knowledge and beliefs then question, challenge, investigate, accept or discard the information in order to progress.

Constructivist E-learning

It is believed that constructivist learning and e-learning can be easily integrated because they have many similar features (Bellefeuille, et al., 2005; Chou and Tsai; 2002; Nichols, 2003; Tsai, 2001). Wangpipatwong and Papasratorn (2007) proposed the Constructivist E-learning Environment (CEE) model which consists of the three following components:

- Collaboration (Basak and Cakir, 2005; Moreno, 2006; Pan and Hawryszkiewycz, 2004; Zhang, et al., 2005; Zualkernan, 2006).
- Exploration (Katila, 2002; Liaw, 2005; Stager, 2001; Zhao and Deek, 2006).
- Construction (George, 2001; Jonassen, 2007; Puntambekar, 2006; Saito and Miwa, 2007).

Based on the concept of the CEE model, Wangpipatwong and Papasratorn (2007) developed the Constructivist E-learning System (CES) which they believe can generate a constructivist e-learning environment. The CES was studied in the actual classroom environment and students' learning outcomes were compared to student learning outcomes in a traditional learning environment. The results revealed that students who studied in a constructivist e-learning environment gained better learning development than students who studied in a traditional learning environment.

However, the study of Wangpipatwong and Papasratorn (2007) was conducted in a computer laboratory where students had fulltime access to the computer and the internet during class hours. Students in a blended learning environment, where they are in a traditional face-to-face classroom environment, have not yet been tested. As a result, this research further investigates the use of CES in a traditional face-to-face learning environment based on the concept of blended learning.

Constructivist E-learning System (CES)

Based on the CEE model, the CES was developed and implemented using e-learning tools. The first component, Collaboration, was implemented by using an instant messaging (IM) tool and a web board. With IM and a web board, CES provides students with the ability to communicate both synchronously and asynchronously.

The second component, Exploration, was implemented using an Internet search engine. As the Internet is the largest information source in the world, students can find real-life information to solve problems and challenges.

To implement the Construction component, CES uses a tool called an online notebook in which students can record new information and understanding into the system.

The CES interface used in this study is slightly modified from that of Wangpipatwong and Papasratorn (2007) shown in Figure 1.

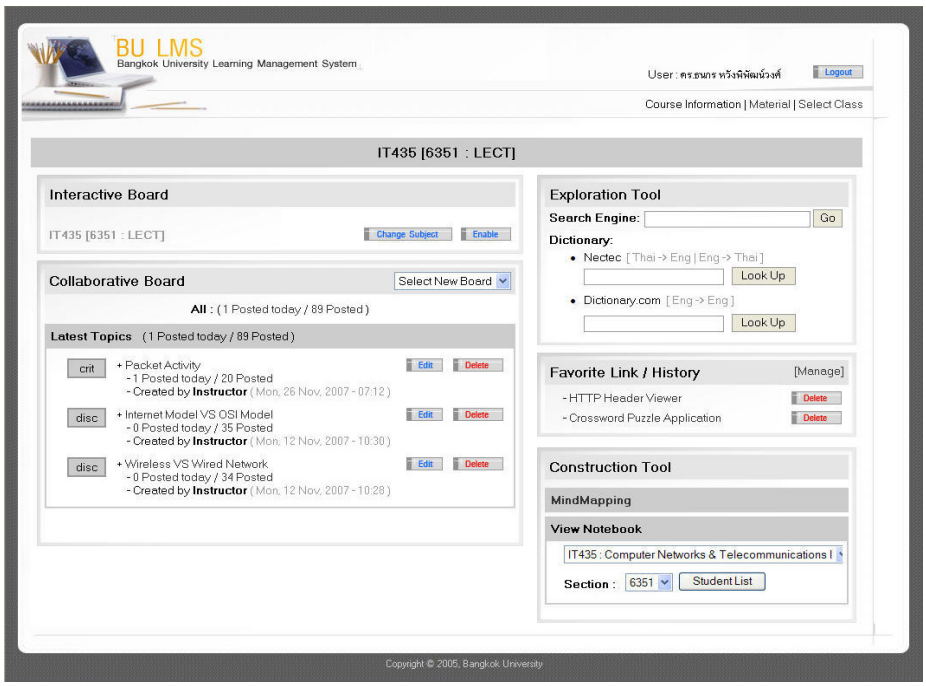


Figure 1. Constructivist E-learning System

Research Questions

There are three research questions in this study.

1. How can the CES be integrated with the traditional face-to-face learning environment in order to form a blended learning environment?
2. Are there any effects on students when they learn in the proposed blended learning environment?
3. What is the students' perception toward learning outcomes in the proposed blended learning environment?

Methodology

This study created a blended learning environment by using CES as an e-learning tool to support the traditional face-to-face learning environment. With CES, teachers could provide students with administrative and general information (syllabus, lecture notes, slides, etc), online learning activities, online assignments, and other learning resources (such as links to useful web pages). As an exploratory study of the use of the CES in a blended learning environment, this study focused on using constructivist learning strategies for both face-to-face and e-learning.

Participants were students of a "Computer Network and Telecommunication I" course at Bangkok University. There were 39 students enrolled in the course. The students attended regular face-to-face classes and used the CES as a supportive learning tool. The class was conducted once a week and the class time lasted two and a half hours. The length of the study was 6 weeks.

Since constructivist learning theory emphasizes educational activities, this study was designed to use educational activities as a teaching and learning tool. Within the frame of blended learning, these activities were used both inside and outside the classroom. Activities outside the classroom were assigned by using the CES. Students worked on those activities before and/or after the regular class meetings. In regular class sessions, the teacher gave students in-class learning activities, discussed real-world problems and solutions, and taught students based on the philosophical approach of the course in order to achieve the course objectives and goals. During class hours, students, however, were encouraged to speak freely about the learning activities, to work on the learning activities in the CES, and to solve the assigned problems. Work on these activities was counted toward student course grades.

Evaluation in this experimental study was based on the observations within class sessions, the observation of the CES activities, questionnaires, and conversational and written evaluations at the end of the study.

Teaching Procedure

At the beginning of the first class, a teacher made a brief review of the learning strategies that would be used in the class. Later, the teacher gave students a review of how to use the CES. At the end of the first class, the teacher assigned online learning activities for students to work on in the CES.

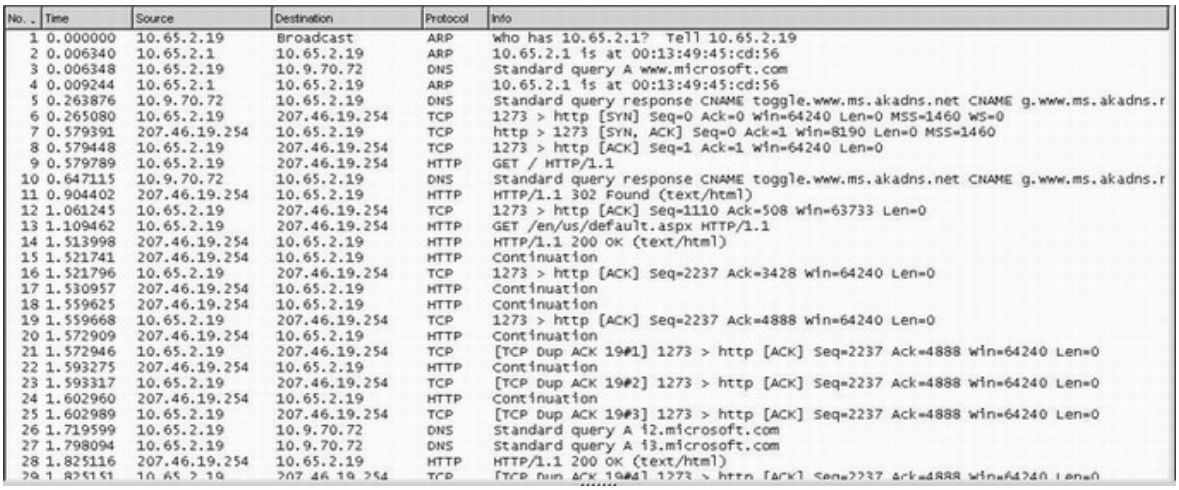
Every week, a 10-minute test was given to students at the beginning of the class. The test was about the online activities that were assigned the week before. Then, there was a discussion of the online activity. Afterwards, the teacher taught students as normal and finally gave students an online activity at the end of the class.

Selective Examples of Learning Activities

The first learning activity introduced in the course was an online debate. Online debate gives students an opportunity to exchange ideas and learn course concepts. By giving students some controversial topics that were relevant to the course objectives, students needed to divide into two groups and debate each other. With this activity, students had to use the Exploration tool to search and find out information that could overcome the opposite side. Students also had to write the information into the Collaborative board during the debate time. Finally, students could record what they had learned in the online notebook.

Another learning activity was writing explanations to a real-world task. This activity provides students with the opportunity to finding multiple solutions to problems. In this case, students were given a packet activity log that recorded what was happening during computer transmission in the network. Students had to find out the explanation for what happened in the log. The requirement that was used to encourage students was that students could not explain the same thing that the others had already done. Therefore, the sooner the students worked on the activity, the easier it would be for them to explain. Figure 3 illustrates the packet activity that was given to students.

The last example that was used in the experiment was the use of crossword puzzles. By using software called EclipseCrossword, the teacher can generate online crossword puzzles. As specified by the teacher, students were required to solve an online crossword puzzle in the CES.



No.	Time	Source	Destination	Protocol	Info
1	0.000000	10.65.2.19	Broadcast	ARP	Who has 10.65.2.1? Tell 10.65.2.19
2	0.006340	10.65.2.1	10.65.2.19	ARP	10.65.2.1 is at 00:13:49:45:cd:56
3	0.006348	10.65.2.19	10.9.70.72	DNS	Standard query A www.microsoft.com
4	0.009244	10.65.2.1	10.65.2.19	ARP	10.65.2.1 is at 00:13:49:45:cd:56
5	0.263876	10.9.70.72	10.65.2.19	DNS	Standard query response CNAME toggle.www.ms.akadns.net CNAME g.www.ms.akadns.r
6	0.265080	10.65.2.19	207.46.19.254	TCP	1273 > http [SYN] Seq=0 Ack=0 Win=64240 Len=0 MSS=1460 WS=0
7	0.579391	207.46.19.254	10.65.2.19	TCP	http > 1273 [SYN, ACK] Seq=0 Ack=1 Win=8190 Len=0 MSS=1460
8	0.579448	10.65.2.19	207.46.19.254	TCP	1273 > http [ACK] Seq=1 Ack=1 Win=64240 Len=0
9	0.579789	10.65.2.19	207.46.19.254	HTTP	GET / HTTP/1.1
10	0.647115	10.9.70.72	10.65.2.19	DNS	Standard query response CNAME toggle.www.ms.akadns.net CNAME g.www.ms.akadns.r
11	0.904402	207.46.19.254	10.65.2.19	HTTP	HTTP/1.1 302 Found (text/html)
12	1.061245	10.65.2.19	207.46.19.254	TCP	1273 > http [ACK] Seq=1110 Ack=508 Win=63733 Len=0
13	1.109462	10.65.2.19	207.46.19.254	HTTP	GET /en/us/default.aspx HTTP/1.1
14	1.513998	207.46.19.254	10.65.2.19	HTTP	HTTP/1.1 200 OK (text/html)
15	1.521741	207.46.19.254	10.65.2.19	HTTP	Continuation
16	1.521796	10.65.2.19	207.46.19.254	TCP	1273 > http [ACK] Seq=2237 Ack=3428 Win=64240 Len=0
17	1.530957	207.46.19.254	10.65.2.19	HTTP	Continuation
18	1.559625	207.46.19.254	10.65.2.19	HTTP	Continuation
19	1.559668	10.65.2.19	207.46.19.254	TCP	1273 > http [ACK] Seq=2237 Ack=4888 Win=64240 Len=0
20	1.572909	207.46.19.254	10.65.2.19	HTTP	Continuation
21	1.572946	10.65.2.19	207.46.19.254	TCP	[TCP Dup ACK 19#1] 1273 > http [ACK] Seq=2237 Ack=4888 Win=64240 Len=0
22	1.593275	207.46.19.254	10.65.2.19	HTTP	Continuation
23	1.593317	10.65.2.19	207.46.19.254	TCP	[TCP Dup ACK 19#2] 1273 > http [ACK] Seq=2237 Ack=4888 Win=64240 Len=0
24	1.602960	207.46.19.254	10.65.2.19	HTTP	Continuation
25	1.602989	10.65.2.19	207.46.19.254	TCP	[TCP Dup ACK 19#3] 1273 > http [ACK] Seq=2237 Ack=4888 Win=64240 Len=0
26	1.719599	10.65.2.19	10.9.70.72	DNS	Standard query A i2.microsoft.com
27	1.798094	10.65.2.19	10.9.70.72	DNS	Standard query A i3.microsoft.com
28	1.825116	207.46.19.254	10.65.2.19	HTTP	HTTP/1.1 200 OK (text/html)
29	1.825151	10.65.2.19	207.46.19.254	TCP	[TCP Dup ACK 19#4] 1273 > http [ACK] Seq=2237 Ack=4888 Win=64240 Len=0

Figure 2. An Example of Learning Activity: Packet Activity

Results

The blended learning environment in this study is designed to use the CES to support traditional face-to-face learning. The effect on students of using CES was displayed in three different phases – during the first two weeks, after two weeks, and after six weeks.

In the first two weeks, the experiment showed that students were not surprised to work on learning activities in the CES outside class sessions. The reason for this could be that when the teacher assigned learning activities to students, they treated the activities as homework assignments. Instead of working on the homework, students worked on the online learning activities in the CES. However, when working on learning activities in class, students seemed to be unfamiliar with the method. Most students expected the teacher to take the lead in all discussions of learning activities. Besides, the experiment showed a low participation rate in both CES and in-class activities. A few students voluntarily responded to the questions. When they were assigned a discussion topic, some students were uncomfortable to dispute with others. Moreover, many students did not argue even though they disagreed with some opinions.

After two weeks, by getting inspiration and encouragement from the teacher, students seemed to be more familiar with the learning method. More importantly, students seemed to be comfortable and had more interaction in the learning activities. In CES, when a teacher was involved in the online learning activity and encouraged students to interact and collaborate, students reacted well.

In conversations with students at the end of the study, most students believed that working on learning activities made them more active. However, some students thought they had to work harder than when learning by using the traditional method. Nevertheless, students liked the learning activities because they thought such activities gave them real-world experience and were more fun.

In contrast, there were some students who did not accept the new learning method and reacted by neither participating nor working with others. They did not want to search for any new information or to work on the learning activities. These students were unhappy and expected the teacher to teach them. In addition, some students concentrated on their grades rather than knowledge. They did not participate in any learning activities that had no scores. They usually asked how many points they would gain before working on learning activities and did only the minimum in order to get the points.

The experimental research reveals that there are some advantages of using online learning activities in CES that are worth emphasizing. First, with the Collaboration tool, students have more time to solve problems than when using learning activities in the face-to-face learning environment. Second, by using the Exploration tool, the information that students provided in the online learning activities was more accurate and complete than the information given in class because they could explore information from the Internet. Third, the nature of the web board in the Collaboration tool gave students more time to read, think and express their ideas. Therefore, based on the online debate activity, students showed more understanding when they read; both questions and responses when they interacted and collaborated with others. Fourth, the Collaboration tool made students more comfortable to discuss, to argue, and to express their opinions. Finally, these discussions and opinions seemed to be expressed with more frankness and honesty.

The CES also assisted teachers in processing and analyzing student responses in each activity. Since the CES kept track and recorded all responses from the students, the teacher could use this information to analyze students' understanding and knowledge and to improve teaching effectiveness.

To evaluate the students' perception of the blended learning environment, a questionnaire was used. The questionnaire consisted of 15 items divided into 5 major scales: (a) Collaboration, (b) Exploration, (c) Construction, (d) Learning Activity and (e) Blended Learning. The questionnaire used a 5-point Likert scale ranging from 1 as Strongly Disagree, 2 as Disagree, 3 as Neutral, 4 as Agree, and 5 as Strongly Agree. The items used in this questionnaire were modified from that used by Wangpipatwong and Papasratorn (2007).

The questionnaires were distributed to students at the end of week 6. There were 35 student respondents. The students were asked to determine the perception of the CES, learning activities, and blended learning toward the improvement of student learning outcomes. The results from the questionnaire are shown in Table 1.

Table 1. Mean of the Student Perception of the CES, Learning Activities, and Blended Learning

	N	Mean	SD
Collaboration	35	3.68	0.73
Exploration	35	4.07	0.59
Construction	35	3.67	0.74
Learning Activity	35	3.66	0.76
Blended Learning	35	3.94	1.03

To interpret the results of the students' perception, descriptive statistics, the mean for central tendency analysis and the standard deviation for dispersion analysis were used. The range of student scores was interpreted as follows:

- 4.21–5.00 as very high perception,
- 3.41–4.20 as high perception,
- 2.61–3.40 as moderate perception,
- 1.81–2.60 as low perception, and
- 1.00–1.80 as very low perception.

As a result, the student perception of the CES to improve learning outcomes was interpreted as high. Considering each component of the CES, the results show that the students' perception of the Exploration tool had the highest score at 4.07. The Collaboration tool and Construction tool have very close mean scores of 3.68 and 3.67, respectively.

It is interesting to see that the Exploration tool has the highest mean score. It suggests that students believe Exploration is the most useful tool for improving their knowledge and learning outcomes, while Collaboration and Construction have lower mean scores. The explanation may be that students thought, for the learning activity, they usually received information they needed while they may not receive it when they collaborated with other students.

Student perception of learning activities and blended learning was also interpreted as high. Learning activities had a score of 3.66 and blended learning of 3.94.

It should be noted that the Exploration tool has the lowest standard deviation, which means most students agree that the Exploration tool can improve their learning outcomes. However, blended learning has the highest standard deviation, which means that there may be some students who do not think blended learning can improve their learning outcomes. This result corresponds to the observation in class that there were students that did not accept the new learning method.

Discussion and Conclusion

This study proposed an alternative teaching and learning strategy which uses the Constructivist E-learning System (CES) to support traditional face-to-face learning in order to form a blended learning environment.

The blended learning environment provides many benefits to teachers and students because it combines the strong points of both face-to-face learning and online learning. For example, it is easier to talk to students in a face-to-face environment and to understand the background and thoughts of students in order to assign appropriate learning activities. In addition, some concepts are easier to be explained face-to-face. In this case, it is easier for a teacher to explain in the classroom how a computer transmits packets to another computer. However, by using online tools, students can understand more deeply when they see the real action of computer transmission. Besides, it is easier for students to solve a complex problem in an online learning environment using asynchronous communication. The reason is that complex problems require brainstorming and other students' reflections to overcome challenges. Another advantage of online learning activities is to the use of a simulator. Since a simulator can display a process that is difficult to display in a book or a whiteboard, it provides students with more authentic learning experiences. Moreover, the online tools allow students to practice skills taught in class and to gain real-world experiences.

To use a constructivist learning approach in a blended learning environment effectively, first, a teacher has to understand the concepts behind the constructivist learning theory. Secondly, learning activities should be carefully designed in order to meet the course objectives. Lastly, students need time to adapt to the new learning method. Therefore, teachers should explain to students the learning strategy and encourage them to work on learning activities.

Although some students rejected the change in teaching and learning strategies, most students believed the blended learning helped them improve their knowledge and learning outcomes. Most importantly, students seemed to be active and have more fun to learning.

Admittedly, this study does have some limitations. First, this study was conducted among a small group of participants because it was designed as an exploratory study. Therefore, further study on a larger scale may be needed. Second, the evaluation method should be further researched in order to confirm the research results. For example, test scores may be used to evaluate the students' learning outcomes. In addition, the record of student behavior during the use of the CES to complete the learning activities may also be used to analyze the results.

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Ethical Considerations of Online News

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Abstract

Nobody can argue that Internet has played an essential role in human life since the beginning of the twenty first century. A kind of information that has been considered to be increasingly essential with the digital surrounding is news.

News, especially the online ones, are being reported every second due to the important and interesting events that happen all over the world. Almost all news organizations' Websites compete to be the first to report the happening events. Meanwhile they have to immediately report news that are accurate and precise according to their professional codes of ethics. This predicament increases the opportunity of violating the ethical issues within the higher advance of the technology.

No matter how hectic they are, online journalists who work for their professional organizations still have to perform their duty according to the codes of ethics like what they have been doing since then. Professional journalists that aim for integrity still have to be responsible for their objectivity. The objectives of accuracy, precision, balance, fairness, impartial, and empathy. Truth still is the ultimate goal for the sake of society's order, unity, and happiness.

However, within cyber ambience, the Internet has fulled the concern with what is authentic and what is not and has made it simpler to indulge in ever more sophisticated fakery. Digital technology has made it easier to manipulate text and image with more artifice. Can we still trust such content for telling us the truth? Where do the limits of fakery lie? Seeing is not believing anymore.

One vital suggestion is that professional news organization should be alert of such situation. They should be self control by practicing their duty with ethical concerns. They have to monitor and be responsible for the improper contents especially the ones that are unethical and inauthentic. Meanwhile, the online audience have to be informed, educated, taught, and advised to be media literate. Readers must be the ones who can analyze, consider, and judge what they are reading. Media literacy should be taught and advised in school class and through informal and non-formal education outside formal school class room surroundings.

Keywords: ethics, online news, online readers, media literacy, education

Introduction

Nowadays Internet plays a significant role in human's everyday life. According to the technology of the World Wide Web, information around the world is spreading continually every second. A kind of information that has been essential for human since the arise of media is news.

News, especially the online ones, are being reported every second due to the important and interesting events that happen all over the world. Most news organizations compete to be the first to report news to their audience. They have to confront with pressure both inside and outside organization. The rush and the time limit lead to the lack of monitoring and reporting false news which violates journalists' basic principles of practice. Sometimes they report just rumors, news from unreliable sources that bring about mistakes and impacts broadly.

When push comes as it often does in journalism, where is the balance between the need to make a profit and the responsibility of the organization to the public? How far do they take the principle of ethical reasoning when weighing the ends versus the means?

In cyber sphere, computer assisted reporting requires journalists to pay more attention than ever how they seek and report truth and how they treat news sources and readers because Internet make so much information which is easy to retrieve. With electronic reporting, the ethical questions come to us quickly and more subtly. (Miller, Lisa C. 1998: 228)

At the other end, online audience can get into online news. Everybody can be a reporter and a reader at the same time. So how can the ethical consideration of online news reporting can be in effect? Not everybody knows the codes of news ethics like those in the professional do. Do the reporter-like readers know and concern of the impact of their information distribution? (Ibid)

Does the changing communication environment and the development of the Internet and other digitally-based technology provide radically new ethical challenges for journalists? The answer is ambivalent. New technology generates new complexity but it is hard to see that the ethical questions posed are qualitatively different from those already faced by journalists. (Sanders, Karen 2003:163)

This article proposes some suggestions for the ethical predicament. It goes from the online situation, follows by professional duty and responsibility for online journalists, ethical dilemmas of online news, and some possible solutions.

Online situation

The advent of the Internet and other online services are the recognition that computer can help journalists to tell stories they couldn't tell otherwise. (Miller, Lisa C. 1998: 235)

Like all new technology, digital knowledge makes life both easier and more complicated for the reporter. Internet use has become part of the fabric and core of what journalism and communications are all about. Journalists use the Internet for everything from story ideas and opinions to article research and reference needs. (Sanders, Karen 2003:164)

Internet is not an information source in itself, it is a conduit to get to various sources of information. It does not matter whether the information was obtained via the Internet. What matters is the original source where that information came from. (Callahan, Christopher 1999: 17)

Due to the distinguished characteristics of online media, ethical considerations even play more important roles on news reporting. News organization can upload their content as immediately as they can, especially in the form of breaking news. So the chance of presenting inaccurate contents increases. Rapid reporting and unprecised content go hand in hand.

The Internet has fulled the concern with what is authentic and inauthentic, makes us believe that what we see is true. The truth of an event cannot be denied if we have seen it with our own eyes. Pictures presented in news, current affairs or documentary context have traditionally had this special kind of authority. We believe what we see to be true. Digital technology has made it even easier to manipulate text and image. The grammar of pictures and other contents are distorted with artifice. The Internet has made it simpler to indulge in ever more sophisticated fakery. Can we still trust pictures for telling us the truth and where do the limits of fakery lie? Misuse of the technology poses a serious threat to photojournalism's credibility. (Sanders, Karen 2003: 54, 164)

All pictures are interpretations of reality. Digital technology now makes picture manipulation easier and more difficult to detect than ever. Technicians can resurrect the dead and have them turned about with the living. This technology could very well undermine the traditional authority of images, if electronic manipulation of pictures becomes widely practiced.

The worst professional offence a journalist can commit is knowingly and deliberately publishing fiction as fact. (The Guardian cited in Sanders, Karen 2003: 58)

The line of news reporting indicates that news is produced within an organization, and reporters must produce material which "sells" to an audience and, in addition, "sells" to the editor. Reporters compete for space and pleasing an editor by supplying the editor with stories that he or she is likely to regard with favor. Therefore, the relationship of news to reality is skewed by the reporter's natural desire to please a boss. (Hausman, Carl 1992: 120)

It is a rating combat which is undermining journalistic integrity. Inexperienced staff are used and projects are oversold to commissioning editors. The pressure to deliver becomes intense. (Sanders, Karen 2003: 60)

Journalism should be a process of searching the truth. Once that process is poisoned, the bond of trust between content providers and viewers is broken. (The Guardian cited in Sanders, Karen 2003: 58)

In addition, many websites lack credibility, publish Internet rumors, often with little or no substantiation, and to use sources whose credibility has not been adequately established. Journalists were reluctant to give credit to other publications' work when using their material from the Net. (Sanders, Karen 2003:164)

Another increased ethical complexity is that of freedom and the kind of content to be found on the Internet.

The establishment of the Internet Watch Foundation in 1996 by Internet Service Providers (ISPs) was in direct response to the growth of child pornography available online. The foundation introduced a hotline allowing it to alert ISPs and national and international police authorities to the presence of possibly illegal material on their servers. The convicts of global terrorism and crime can use the Net to move money around, exchange information and plan operations. (Sanders, Karen 2003:164)

The business of news is so overwhelmed by market competition that most constraint has gone by the board. News is mixed with comment. Campaigning distorts coverage. Anonymous (that is, made-up) discreditable quotes are everywhere. (Sanders, Karen 2003: 8)

Professional duty and responsibility of online journalists

News profession is freedom oriented. Journalists begin their work by asking questions and chasing after the answers. No matter how fast the new technology has been rising, the principles of news gathering and reporting are still the same as the former journalists had followed (Miller, Lisa C. 1998: 231). No matter what kind of media the journalists are reporting through, traditional or online, the above considerations still must be in their mind while practicing their profession.

A profession adheres to codes of practice, rules of fairness and confidentiality. In sociological terms, professions are thought to have four characteristics (Donsbach 1997 cited in Sanders, Karen 2003: 8)

1. primary orientation to the community rather than to self-interest
2. a high degree of generalized and systematic knowledge
3. a high degree of self-regulation through codes of standards absorbed through work socialization and associations operated by the professionals themselves
4. a system of rewards which are symbols of work achievement so that professionals usually have a high degree of freedom and high income levels

In a strict sense, 'profession' refers to a certain small class of occupations with special characteristics that set them apart from mere trades or business. Those professional occupations are afforded special privileges and status. (Miller, Lisa C. 1998: 228)

Professions are self-regulating occupational groups. They establish their own standards of ethics, of right and wrong, and find ways of enforcing on their own members all those proper standards. (Hodges, Louis 1986 cited in Hausman, Carl 1992: 68)

Most news business is private own and has to work for public at the same time. As a public institution, it must conform to ethics and being responsible for the contents they report to their audience. News institutions can bring prosperity or disaster to society due to the concern or the careless of their duty. (Miller, Lisa C. 1998: 231)

Good news media aim for searching, finding truth and promote readers' understanding. Therefore, impartiality is essential for event/ situation evaluation and brings to truth finding, which is the target of news professional.

Journalists sketch in the contours of our moral landscape. They contribute to the business of telling us who we are, interpreting the world for us and making it intelligible. (Sanders, Karen 2003: 9)

Works that journalists should do are to seek the truth, to write stories that are accurate and complete as possible, to always strive to be fair in their reporting and writing, to minimize harm to others.

The essential rules for journalists still are being objective and impartial. The news they report must be balance, complete, precise, accurate, concise, and timely. The ideal of "objectivity" would imply that gathering enough viewpoints would allow the journalist to sort out the "truth." (Hausman, Carl 1992: 63)

The essence of the professional ethics of the journalists are accuracy, sincerity, impartiality, justice, good taste, and etiquettes. There should not be separate new rules of attribution for information found on the Internet.

The accuracy and objectivity heading stresses the journalist's responsibility to tell the truth, obtaining information from reliable sources, and ensuring that "news headlines should be fully warranted by the content of the articles they accompany, not highlight an incident out of context." (The Codes of Ethics of the Society of Professional Journalists (SPJ) 1987 cited in Hausman, Carl 1992: 127)

Accuracy and fairness have to do with attribution. Tell readers who and where information comes from, so they have some framework in which to evaluate the information themselves. (Miller, Lisa C. 1998: 231)

Journalists must be fair play which means they will at all times show respect for the dignity, privacy, rights, and well-being of people encountered in the course of gathering the news. Newspeople should not communicate unofficial charges affecting reputation or moral character without giving the accused a chance to reply. Perhaps fairness could better be defined as presenting the most accurate possible portrayal of events within their proper context. (Hausman, Carl 1992: 58)

Professional organization should perform their duty by monitoring their Web content almost all day. They can screen contents or opinions that are impolite, indecent, inappropriate, obscene, and other rude-like matters. (Miller, Lisa C. 1998: 228)

Ethical dilemmas of online news

Ethics are morals that ones should conform to and are goodness that they should practice. Codes of ethics are the written forms of ethics that practitioners should ideally perform. They are different according to each profession. Journalists should focus on public service rather than aiming for profit making only.

Ethics arises from journalists' practice that aims for the sake of society's order, unity, and happiness. Professional ethics are the core of journalists' consideration that should cover every part of the news organization that leads to news ideology. News media ethics are bond to social and business conditions.

Ethics has to do with how journalists go about doing their jobs. The ethics of the journalists rooted from the concepts of the religion but may be different when applied to newspaper business. It is different from society to society.

Ethics can be divided into 3 categories: deontological ethics (deontologism, deontology) where the emphasis is placed on the notion of duty; consequentialist ethics (consequentialism or utilitarianism) where the consequence of action is underlined; and virtue ethics where good character is emphasized, that accounts of right and wrong action, be good human beings and carry out good human actions. The three overlap (Sanders, Karen 2003: 15, 33).

Reporters and journalists are faced with multivarious moral dilemmas (Sanders, Karen 2003: 29) including:

- Conflicts of interest-- what is called 'freebies'-gifts, free meals and drinks, promotions, free trips-can be a source of gentle corruption or an acceptable way to obtain information.

- Treatment of sources-- is the use of unattributable material legitimate? Is it fair to disseminate a story about someone who has been unable to comment? How to treat bereaved relatives?

- Methods-- when are deception, fakery, lying, ambush interviews acceptable?

- Level of publicity-- do the gruesome details of a suicide need to be spelt out? Should readers be told about the sexual lives of politicians? Musicians? School teachers? Where are the limits?

Most news organizations have guidelines to help journalists decide what is ethical. Online practice, like their print counterpart, provide guidance on what is appropriate in matters of taste and decency. The boundary is violating the intimacy of human beings in ways which undermine human wholeness and integrity.

Ethical concern also relates to privacy violation, copyright and the related issue of plagiarism, sources and the problem of credibility. (Sanders, Karen 2003:164)

Privacy is probably the greyest moral area for journalists and unwanted publicity perhaps one of the greatest causes of suffering to ordinary people. Public reaction to invasions of privacy reveals us at our most hypocritical, we condemn the messengers while devouring the message. (Sanders, Karen 2003: 77)

What is the most conflict? Where do we draw the line between the individual's right to privacy and the public's right to know? The privacy includes physical privacy, mental or communicational privacy, and informational privacy.

Private correspondence is justified when that is the only way to prove wide-spread government corruption, the provision of information, the scrutiny of the powerful, providing a voice for all sectors of society, and the revelation of injustice, but not publishing names and addresses or details which permit the jigsaw identification of child victims of sexual crimes.

Bad journalism is practiced by those who rush faster to judgment than they do to find out, indulge themselves rather than the reader, write between the lines rather than on them, write in the dead terms of the formula, stereotype and cliché, regard accuracy as a bonus and exaggeration as a tool and prefer vagueness to precision, comment to information and cynicism to ideals. (Randall, the former assistant editor of the Observer cited in Sanders, Karen 2003: 165)

Good journalism is intelligent, entertaining, reliably informative, properly set in context, honest in intent and effect, expressed in fresh language and serves no cause but the discernible truth.

However, ethical values do change over time. Change is often the result of individuals saying, "This is wrong." What may have been accepted good practice at one time is not necessarily acceptable as standards evolve. (Hausman, Carl 1992: 53)

Solution: Self control

Social responsibility as it is applied to journalism implies not only sort of commitment but a control as well. Controls can be internal (codes of ethics, management dicta, good conscience) and external (government sanctions, libel laws, consumer pressure, press councils, and so forth). (Hausman, Carl 1992: 46)

Journalists, both traditional and online, are more than representatives of the media and more than representatives of specific news organizations. They are each autonomous moral agents, and be responsible for their own actions. Illustrations abound to show that a person can not hide from personal responsibility by attributing his or her action to a supervisor's directive. (Elliott, Deni cited in Hausman, Carl 1992: 52)

One consideration is that professionals should be aware that self control or self-censure has largely been a failure because journalists are uncomfortable with calling attention to the sins of fellow professionals (Bukro 1985-1986 cited in Hausman, Carl 1992: 146). While journalists are quick to hold others to ethical standards, they are afraid of having ethical enforcement principles imposed on them.

Hausman's pilot survey found that news directors feel that the news media could and should be tougher on themselves, and most feel that self-censure – giving coverage to unethical practices among journalists—would be an effective deterrent to journalistic malpractice. (Hausman, Carl 1992: 151)

Individual autonomy is necessary for the moral health of any profession or group. If all members of a professional group shared exactly the same values, there would be no hope for improvement or growth, no questioning of normative attitudes or actions. (Elliott, Deni cited in Hausman, Carl 1992: 53)

Online journalists should practice good journalism. They should evaluate the reliability of Internet-gathered information, and determine the source credibility. The form of the information received does not matter, what matters is the news value of the information and the legitimacy (Callahan, Christopher 1999: 18, 25). They should be intelligent, reliably informative, properly set in context, honest in intent and effect, expressed in polite language and serves no cause but the discernible truth.

Self control of online news operations can also be the intention of deleting the improper content and languages that readers post on the Internet. The owner and the Webmaster are responsible for the posted content and do the monitoring most of the time. They should always practice professional codes of ethics. However, if the self control does not work out, governmental and legal control have to be imposed. Another consideration that I would recommend as an external control is audience' media literacy.

Solution: Readers' media literacy

On the Internet, information has fewer anchors. Information has been pulled from its roots and thrown into cyberspace. (Miller, Lisa C. 1998: 234)

Since there is no perfect way of conveying reality, audience rely on media. But with the mechanics and requirements, the tools distort messages. And that distorted messages in turn become reality as are perceived by the audience. I would strongly suggested that readers be able to analyze and separate truth from falsehood.

Audience should be able to understand the limitations of the visual vocabulary of digital technology and the extent to which artifice is used in content provision. In this sense a dose of healthy audience skepticism may be good deal (Sanders, Karen 2003: 61).

Readers should evaluate information on the credibility of the source which brings about the information. They should be able to judge the content from clear sources. Online journalists should make readers feel sure the information they pull off an online site is reliable to let readers know where it came from.

Individuals and audiences do have power. They can affect what they read, see, and hear. Each has a responsibility to let his or her feelings be known and a concomitant responsibility to shape those feelings into informed opinions. (Hausman, Carl 1992: 52)

If people do not like the ethics of news reporting, they should complain; but they should also have some basic grasp of the news process in order to make a more valid complaint and a complaint more likely to be acted upon constructively. (Hausman, Carl 1992: 51)

Ethical problems increasingly arise because there is far too little training in news disseminating and there are a lot of illiterate news readers who have come in and really don't discern the authenticity they are perceiving.

Online audience have to be informed, educated, taught, and advised to be media literate, especially that of the online. Readers must be the ones who can analyze, consider, and judge what they are reading. Online and other media literacy should be taught and advised in school classes. Furthermore, it should also be guided through informal and non-formal education outside formal school surroundings.

The best solution should be a mutual responsibility: The public is responsible to learn and the media are responsible for allowing accesss and explaining the way news is gathered and presented. In its ideal state, the audience-based social responsibility theory could induce the media to act responsibly without imposition of the controls. The marketplace is still the best regulator the news professionals can have.

Conclusions

Journalists have to work for their organizations that are mainly business oriented and aiming for profits; meanwhile, they have to inform and educate their readers, and to give their opinions to public accordingly. At the same time they have to compete with their professional fellows. They have to report news that are fresh, new, timely, together with the principles of objective, accurate, complete, balance, and impartial. They have to care for and respect their readers, and the ones who are in the news. They cannot defame the image of the ones in the news or violate their private life although other readers are eager to find out what has happened. They have to hold their morals and codes of ethics in their mind.

Journalists need to know their duty, have freedom, responsibility, independence, sincerity, justice and fairness. They have to investigate the events or the situation extensively, maintain accuracy, present facts, uncover news source, and do not perform as though they were judges. They should be optimistic, and willing to accept different ideas.

The essence of the codes of ethics are just framework or methods that the practitioners should perform, not law or rule that is forced to conform to. The codes will be effective or not depends on the sense of responsibility, conducts, morals and ethics, and also their private conscience. Anybody can control himself / herself if he/she holds the ethics.

In an entry on fair play, journalists should be accountable to the public and the public should be encouraged to voice grievances against the media (The Codes of Ethics of the Society of Professional Journalists (SPJ) 1987 cited in Hausman p.127).

Ethical dilemma points out the facts that all of the relevant parts-- reporters, professors, philosophers, lawyers, consumer of news who are media literate-- have to start putting the pieces together to solve the problems.

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Perspectives on Blended Learning in Malaysia Higher Learning Institutions: Needs, Readiness and Future Challenges

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Abstract

Online learning has become one of the important components in higher learning institutions in Malaysia. Some of the higher learning institutions had began to use online learning to complement the face-to-face learning where others use it as added learning to enhance teaching and learning. This paper explores the needs, readiness and future challenges of blended learning in Malaysia higher learning institutions from the perspectives of expertise and lecturers. The study employed a qualitative study. The semi-structured questionnaire was used in the study. The qualitative data were collected through in-depth interview and were coded using NVIVO 7 software. Respondents indicated that the needs for blended learning are to overcome increasing number of students intake, cater for different learning style, flexibility in terms of time and place, complement for traditional face-to-face learning, reduce cost and save time, convenient, stiff competition within industry and immediate feedback. From the interview data, Malaysia higher institutions are ready to offer blended learning courses in term of infrastructure, support from stake holders and government policy. The future challenges for offering courses in blended learning mode consist of infrastructure maintenance, up-to-date hardware and software, optimizing the usage of all available tools in the blended learning system, overcome the resistance to organizational change, continuing

commitment of the management, aligning standard of blended learning courses offered among universities and convert online learning materials to be accessible by other technologies such as mobile phone and pocket personal computer. Results of the study show that there is a need for Malaysia higher learning institutions to offer blended learning courses to complement the shortcoming in the traditional face-to-face learning and e-learning. Malaysia higher learning institutions are ready to offer blended learning courses and the future challenges identified in the study can be used as a guideline in planning future blended learning courses.

Keywords: Blended learning, online learning, traditional face-to-face learning

Introduction

The main teaching and learning process in Malaysia is still remains as the proven traditional face-to-face method. With the advancement in technology, educators are enhancing technology in the teaching and learning process. According to William (2003), the idea of incorporate different learning experiences was exist since human started thinking about teaching.

The advancement of technology especially the world wide web (WWW) had forever changed the new millennium teaching and learning process (Black, 2002). The infusion using WWW in teaching and learning had become limelight in the new millennium (Clark, 2003). With this advancement, educators are facing new challenges of enhance the WWW in teaching and learning process. Some higher institutions had taken the initiative to develop and offered courses through Web based (McCormick, 2000). Many higher institutions in Malaysia had also started to enhance WWW in teaching and learning such as Universiti Kebangsaan Malaysia, Universiti Sains Malaysia, and Universiti Malaysia. Some higher institutions had incorporate online learning and traditional face-to-face learning in the course offered such as Universiti Teknologi MARA Malaysia, Tun Abdul Razak University, Multimedia University Malaysia and Open University Malaysia which known as blended learning course. Blended learning course had been widely offered in the new millennium in higher education institution (Motera-Gutierrez, 2006) where it maximizes the benefits of both online learning and traditional face-to-face learning (Osguthorpe & Graham, 2003).

Purpose of the Study

The first wave of e-learning had found that e-learning along is not enough in the process of teaching and learning (Ron, 2001). The second wave of e-learning had suggested to use blended learning to complement the weakness identify in e-learning and traditional face-to-face learning (Zenger and Uehlein, 2001) by combining the best from both online learning and traditional face-to-face (Black, 0002; Granham & Kaleta, 2002). Thus, the purpose of the current study is to explore the needs of Malaysia higher institutions to offer blended learning course, to explore the readiness in Malaysia higher institution to offer blended learning course and to explore the future challenges of offering blended learning course in Malaysia higher institutions.

Methodology

To explore the needs, readiness and future challenges of offering blended learning courses in Malaysia higher learning institutions, in-depth interview was used to gather the expertise and lecturers perspective on these issues. Semi-structured questionnaire were designed to collect the qualitative data. Researchers used semi-structured questionnaire so that the same sequence and style of questions are used during the interview and at the same time, it open for interviewer to change the questions according to the situation.

The study used cluster sampling. Higher learning institutions which offered blended learning courses are cluster and respondents from each cluster are chosen randomly. The number of respondent chosen for the study will depend to the data collected. The interview will stop once the data collected did not produce any additional new data (Glesne & Peshkin, 1992). The data in the study was collected from 4 expertise and 6 lecturers who are directly involve in the blended learning course. The interview data were coded using NVIVO 7 right after each interview. The combined lists of the coded data are then converted into a common form based on the three sub-heading: need, readiness and future challenges.

Results and Discussion

Expertise and lecturers who involved directly in design and conduct blended learning courses in Malaysia higher institution had possessed their perspective. This section outlines the needs, readiness and future challenges of blended learning in Malaysia.

a) Needs Perspective

Is it a need for Malaysia to offer blended learning course? From the interview data, all interviewees agreed that there is a need for Malaysia higher institutions to offer blended learning course. The needs suggested are:

- Overcome increasing number of students' intake,
- Cater for different learning style
- Flexibility in terms of time and Place
- Complement for face-to-face learning.
- Reduce cost and save time
- Convenient
- Stiff competition within industry and
- Immediate feedback

Most of the universities in Malaysia are expanding. Some universities are facing drastic increasing number of students' intake (Ling, Elinda, Lee & Kelvin, 2007). The fastest way to accommodate this problem is by offering blended learning course where the sit times are reduced. According to Bersin (2004), two of the biggest challenges with traditional face-to-face classrooms are lack of scale and long deployment time. Therefore, by offering blended learning courses, it can immediately reduce the pressure of shortage in subject expertise and lecture rooms by reducing the 'seat time' (Garrison, Kanuka & Hawes, 2002).

Different students have their own preferred learning styles. The traditional way of teaching can only accommodate certain learning styles. Respondents indicated that blended learning mode can accommodate different learning style. This finding is consistent with Young (2002). According to Young (2002), the best model for teaching and learning is to offer a buffet style as in blended learning to accommodate different individual's learning style.

Respondents revealed that in traditional lectures, students and lecturers only can meet each others during the face-to-face sessions. In the blended learning course, students and lecturer are connected all the time in online learning. Students can discuss, help each others and motivate each others to study. Beside this, students can share their experience and learn from each other through constructivist way. Students also have chance to communicate with their lecturer after the face-to-face sessions for further discussion (Zenger et al., 2001; Black, 2002). Faculties and branches of university are also connected at all time.

With the advancement in technology especially in WWW, many educators had enhanced technology in teaching and learning (Black, 2002). Respondents revealed that for concepts which are difficult to explain, online learning can be used to complement the face-to-face learning. As suggested by Daniel (1997) and Johnstone (1992), the use of information and communication technologies (ICT) in teaching and learning will provide at least part of the solution to many of these issues. Students' are able to extent their learning hours after their face-to-face session through the variety of learning resources in blended learning. Students also can prepare themselves before the face-to-face session through the aid of online learning. By doing this, we create the culture of using technology to enhance teaching and learning.

University students are from all over Malaysia. The study groups, discussion, project may require students to group together. According to respondents, with blended learning mode, all the above activities can be done online. With that, students can save their traveling time and reduce their study cost (Osguthorpe et al., 2003; Zenger et al., 2001). For part-time students, most of them are working adults and reduce traveling time might reduce some of their problems which occurs from traveling such as leaving family, save traveling expenses and time away from job (Zenger et al., 2001).

Blended learning is a flexible mode (Garnham et al., 2002) and is convenient for students and lecturers. Respondents pointed out that in the blended learning mode, lecturers can make announcement, upload content at anytime when needed, and make use of useful teaching and learning website as the resources. Students can ask question and share the learning materials at anytime and anywhere (Driscol, 2002).

Universities are facing stiff competition among industry in students' intake. The primary goal of learning is to deliver educational content. To achieve the enduring goals, respondents suggested to create a learning environment in which students feel comfortable and intellectually challenge, up-to-date professional manner subject content and setting of high standard (Black, 2002). Each university is trying to offer and give their students the best education. Those universities which offer flexible mode may attract more students. Therefore, university may need to follow the current trend and blended learning is proven to be the solution for typical traditional face-to-face learning and fully learning mode.

Readiness Perspective

All respondents consensus agreed that the Malaysia Universities are ready to offer blended learning courses. They indicated that Malaysian is ready in term of infrastructure, support from stake holders and government policy. Some of the universities in Malaysia already offered blended learning course such as Tun Abdul Razak University (www.**unitar**.edu.my/), Open University Malaysia (www.**oum**.edu.my/) and Multimedia University (www.**mmu**.edu.my/) where some others university use the online learning as the added learning tool. From the interview data, respondents said that Malaysia has a good internet facilities and the access are available to most of the areas. Malaysia also has enough expertise to design, implement and maintain the blended learning system. These are proven by some of the universities which had already offered the blended learning mode.

In term of support from stake holders, the academicians are enthusiasm to create the interactive contents. For parents, they are concern about their children computer skills by sending their children to the computer basic courses and let their children access the Internet. People in Malaysia are slowly creating the culture of buying laptops or computer and access to Internet. This can be seen in the world Internet ssage and population statistics (http://www.internetworldstats.com/stats.htm) where the Internet users growth increase 302.8% from year 2000 to year 2007 (Table 1).

Table 1: Malaysia Internet Usage and Population Statistics

Country	Population (2007)	Internet Users (Year 2000)	Internet Users Latest Data	Penetration (% Population)	Use Growth (2000-2007)
Malaysia	24,821,286	3,700,000	14,904,000	60.0 %	302 .8 %

Respondents also revealed that Malaysia government policy is working towards teaching and learning through technology. Inline with the Government policy, Ministry of Education are created policies to enhance information, communication technologies in teaching and learning. Three policies from the foundation of the Ministry of Education's plan for Information and Communications Technology (ICT) in education are stated below (http://www.comminit.com/en/node/148397/36):

- ICT will be used to reduce the digital divide between the country's schools, enabling ICT access for all students;
- ICT will be used as teaching and learning tools in education, taught as an independent subject and integrated into others; and
- ICT will be used to enhance efficiency, effectiveness and productivity of management in education, through the automation and mechanization of work processes.

Respondents pointed out that smart school are the initial step for preparing students to the blended learning mode. The smart school project intended to fulfill national development goals and aspirations, and also to address various educational needs. Three of the education needs which are related to the technology and education are: to prepare school leavers for the information age, to re-emphasize science and technology education with a focus on creativity and innovation and to equip students with information technology competence. Schools today are accomplishing with computer laps for teaching and learning (http://www.ppk.kpm.my/smartschool/concept.html). Schools also collaborate with outside agencies to offer very affordable fees for students to attend basic computer courses.

Future Challengers Perspective

The key of future challenges on the perspective of blended learning in Malaysia are identified as up-to-date hardware and software, infrastructure maintenance, optimizing the usage of all available tools in the blended learning system, overcome the resistances of human factor, continuing commitments of the management, aligning standard of blended learning courses offered among universities and convert online learning materials to be accessible by other technologies such as mobile phone and pocket personal computer.

Respondents revealed that technologies changing too fast and is difficult to keep track. Today they are training lecturers for this field and tomorrow the world technology might improve to another advance step. With that, the hardware and software are difficult to keep up-to-date. The infrastructures need to support the drastic increase of users also. The accessibility of all components needs to be available at anytime and anywhere. System itself needs to be upgraded frequently so that more functions are available and more users friendly. The implementation and development of resources also need to be in place. The content needs to be quality in order to attract students and make the interactive learning online. All these technologies challenges take time and difficult to keep up-to-date. Respondents indicated that although technology is difficult to keep up-to-date, they will make sure the system is enough to support their blended learning courses.

Respondents encourage users to make use of all available tools in the blended learning system to enhance the teaching and learning. They pointed out that users only use few tools such as forum, content, resources, online discussion, online tutorial, and communication tools. Others available tools should be fully used to support the teaching and learning process.

Resistance to organizational change is a common challenge and is a well documented phenomenon (Twigg, 1999; Barone, 2001). Respondents revealed that the resistances of implementing the new things are there because human are not willing to be out from their comfort zoon. Respondents pointed out few challenges involving the resistance to organization change such as: Are the management willing to accept the current proven mode of study? Are those computer illiterates willing to catch up with the usage of technologies in teaching and learning? Are those with the negative attitude towards blended learning willing to change? Some respondents indicated that attitude in human factors is the most challenging factor.

Respondents revealed that to put any system establish, it need a lot of commitment from the higher management. The commitment from the higher management should be serious and continuous. Management needs to take it seriously and give fully support in terms of allocation, policies and the implementation.

Standardize the blended learning courses among universities is another future challenges (Twigg, 2003). How to standardize the content and the assessment methods? In future, a committee needs to set up to look into this challenge.

Another future challenge indicated by the respondents is to convert the online learning materials to be accessible by other technologies such as mobile phone and pocket personal computer. One of the respondent said, "Now blended is expending at university level. I believe in 10 years time as Internet become more accessible and computer is easily available, blended learning will expend to primary and secondary level. To what extend it will expend depend on the information technology infrastructure provided by the government especially in rural areas and how available computer is to students. I believe one day, having a computer is just like student having a calculator today. It is a need and not a luxury. By then Blended will be truly 'blended' into the education system". Today, mobile phone already can access Internet. Are the interface, contents and all tools available online are suitable to be used in mobile phone or personal digital assistant (PDA)? In future, the blended learning course planner may need to consider this challenge.

Conclusion

There is a need for Malaysia higher learning institution to offer blended learning course to overcome some of the existed problems. All the higher learning institutions are ready in term of facilities, support from stake holders and government policy. To plan for long term implementation of blended learning mode, higher learning institution in Malaysia may need to look into the future challenges suggested in this paper in their future planning.

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