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CONTENTS

EDITORIAL

Establishing An Institutional Culture and Identity of Excellence

It is always a challenge for an editor to establish a specific theme for an edition that has a limited number of papers approved by the referees. This is made more challenging when each of the seven papers of this edition deals with a different topic. One may argue that this is the nature of the beast of Institutional Research, which has moved on from merely collecting data for tertiary education institutions some forty years ago to the present involvement in analysing and creating information and knowledge that are crucial for the efficient and effective operations and sustainability of institutions. Having said that does not detract from my role of identifying a common link and theme in these seven papers.

The common thread that strings these seven papers together seems to be embedded in the message of the respective authors that education institutions have significant social roles and responsibilities in society in general, and to the stakeholders in particular. Whether the stakeholders comprise the government, staff, students or potential employers, tertiary education institutions need to create an environment where their culture and identity are favourable to the development of the following institutional characteristics:

1. Partnership in institutional excellence between the government and universities as discussed in Suthasri Wongsamarn's paper on *"The Relationship between the State and the Autonomous University in Higher Education Administration"*. This is particularly important for public universities, as much of the financing comes from the public purse string, which global trends have shown to be pulling tighter and tighter over the years round the budget waistline of universities throughout the world.
2. Institutional identity and culture for research and customer service excellence as provided by Rosmimah Modh Roslin and Rashidah Abd Rahman's paper on *"Educational Identity: A Case of Universiti Teknolgi MARA Malaysia*" and Mahadzirah Mohamad and Wan Norhayati Mohamed's paper on *"Do Satisfied Academic Staff Understand Their Students Better?"*
3. Institutional complementarity of stakeholder interests as identified in Enn Ong, Raj Sharma and Ken Heskin's article on *"Generic Skills Assessment in a Malaysian Tertiary Institution: A survey of Stakeholders' Perception*", Jidith G. Enriquez's *"A Socialisation Model for Information and Communication Technologies: Towards the Professional Development of Teachers"*, Nuttapong Lawthong's *"A Development of the Global-Mindedness Scale in Thai Socio-Cultural Context"*, and Wallapa Chantrpen's *"A Development of Activity Organizing Pattern for Developing Moral in Vocational and Industrial Education students based on Cognitive Behaviour Modification Approach*."

In summary, the authors of these articles have identified the problems, issues and challenges facing tertiary education institutions in an environment of economic, political and social change, in which institutions are asked to do more with less public financing, as well as meet the demands and interests of its diverse stakeholders. The authors have also suggested approaches and recommendations to meet these challenges in order to *establish an institutional culture and identity of excellence*, which to my mind would be the central theme of this edition.

Gan Che Ng (Editor)

The Relationship between the State and the Autonomous University in Higher Education Administration

Suthasri Wongsamarn
Office of the National Education Commission, Sukothai Road
Bangkok 10300, Thailand

Abstract

The purpose of this study was to examine the current relationship of public higher education institutions and the Ministry of University Affairs, particularly with reference to its ongoing status and problems. It also recommends an appropriate relationship between the State and future government higher education institutions under government supervision based on the provisions of the National Education Act of 1999.

It was found that it was imperative to develop and improve the relationship between the State and public higher education institutions not under the Thai civil service system (the autonomous university), both at the national level and institutional level. Areas that needed to be considered were the transformation from state control to state supervision, the methods of budget allocation as well as the support for higher education institutions to enhance its income from its operations.

The Government should improve the mechanisms relating to quality and quality assurance in higher education. It should give greater autonomy to higher education institutions to choose the system that is most appropriate for their institutional philosophies and missions, while still maintaining the power, through an independent body, to set a national standard. The Government should also evaluate all higher education institutions, both public and private, to ensure strict conformance to the required national standards, if they were to maintain the recognition and accreditation for institutional operations.

At the same time, higher education institutions should strive for excellence through good governance, appropriate devolution within the institution and more autonomy in the handling of financial, personnel and academic affairs within the boundaries of accepted philosophy, roles and functions of higher education.

INTRODUCTION

There is indeed in the world at present a prevalence of knowledge–based societies, the knowledge and wisdom of which have been availed of as key instruments in enhancing the people's potential and capacity for national development and competition in the international arena. With such trend, many countries in all parts of the world have seriously reviewed the missions and guidelines for educational provision in their respective countries with the aim of producing and developing the necessary workforce. Such competent workforce will be capable of undertaking national economic, social, political and cultural development and able to lead the country into the new century with confidence and dignity.

Besides the changing world situation already referred to, there would be other driving forces influencing world reform of higher education. Inter alios, an increase in the number of students and the demand for furthering education at a higher level, which, on a worldwide basis, has increased more than six times in the past three decades; advancement of information technology; social expectation of higher education to serve as a key instrument for development of the potential of quality manpower; mismatching of graduate profiles and market requirement; and budgetary limitations resulting from the economic downturn.

Apart from being directly and in directly affected by the above changes, higher education in Thailand has to face with pressure from within the country as well as its own intrinsic problems. These include the quality of the educational provision, access and equity, efficiency in management and administration, The promulgation of the 1999 National Education Act is an important factor contributing to acceleration of an effective higher education reform in Thailand.

According to the act the higher education administrative system will be restructured through merging of MOE, MUA and the National Education Commission (ONEC), and creation of the Ministry of Education, Religions and Culture, changing of the public sector role in public higher education institutes from regulatory to supervisory, through incorporating public institutes, presently part of the Civil Services, into autonomous agencies or public corporations, giving the higher education institutions more autonomy by trying to encourage and facilitate government higher education institutions under the Thai civil service system to abandon the bureaucracy and become government higher institutions under government supervision with more administrative autonomy. Therefore, the relationship between the State and the Autonomous University in Higher Education Administration need to be studied.

PURPOSE OF RESEARCH

The purpose of the research was two folds, namely,

1. To study the current relationship with particular references to the ongoing status and problems of existing government higher education institutions presently already outside of the Thai civil service system but still remained under supervision by related government agency, currently the Ministry of University Affairs, and

2. To recommend an appropriate relationship between the State and the Autonomous University, bearing in mind all related provisions under the National Education Act of 1999.

RESEARCH METHODOLOGY

The research methodology was based on 3 stages: (1) review of relevant literature, both domestic and foreign (2) in-dept interview with chosen representatives from various stakeholder organizations, and (3) setting up a model and testing its operative feasibility using connoisseurship seminar with participants representing all stakeholders.

SCOPE OF RESEARCH

The research boundary is to study the relationships between the state (which means the Commission for Higher Education and other government offices) and the autonomous university under the Ministry Education, Religion, and Culture, according to the new Act (higher education institutes under other Ministries are excluded).

STATUS OF HIGHER EDUCATION IN THAILAND

The higher education system in Thailand is under responsibility of 10 ministries and 1 independent agency. Key Ministries are the Ministry of Education (MOE) and the Ministry of University Affairs (MUA). Others are Public Health, Agriculture and Cooperatives, Defence, Transport and Communications, Justice, Science, Technology and the Environment, Office of the Prime Minister and the Thai Red Cross.

In 2000 there are a total of 645 institutions, not counting the different campuses. 74 are under MUA, 489 under MOE and there are 82 specialized institutions. Two levels of tertiary education are offered,

namely, Diploma (or lower-than-degree) and Degree Levels. (See Table 1 in p.11)

Number of Higher Education Students.
In 1999, there were a total of 1,639,149 students; these students included 398,225 (24%) at lower-than-degree level and 1,240,924 (76%) at degree level. Among these students, 1,026,910 (63%) were under the jurisdiction of the MUA; 581,430 (35%) were under that of the MOE; while 30,809 (2%) were under that of other ministries (see table 2 in page 11).

THAI HIGHER EDUCATION ADMINISTRATIVE REFORM

The higher education Administrative system has suffered from an inefficient management structure. Examples of these are limited management flexibility of the Civil Services under which the public higher education system is, a brain drain of quality manpower, non-optimum resource utilizations due to uncoordinated operation and duplication of work.

According to the 1999 National Education Act, the Thai higher education administrative system will be restructured. MOE, MUA and the Office of the National Education Commission (ONEC) will be merged. The public sector role in state higher education institutes will be changed from regulating to supervisory, through incorporating public institutes, presently part of the Civil Services, into autonomous agencies or public corporations. Other roles include the creation of a national education quality assurance body, systematic implementation of QA and educational standards, and extensive resources mobilization and investment in education.

The restructured higher education system will have as its basic and important tenet a unifying policy formulation, and an equally crucial attribute of diversity of practices and implementations. Salient features are: (1) Division of the higher education system into two levels, sub-degree and degree levels; and (2) National bodies to coordinate policy formulation, planning, education standards, resources mobilization, monitoring and evaluation.

Issues that are addressed under the new higher education administration structure are:

1. Maintaining of unified policy formulation and standards, while delegating authority and administrative and management responsibilities to educational service areas.
2. Administration and management of the education system are divided into 3 levels, namely, national educational service areas, and individual institution levels.

The National Level: The Ministry of Education is mandated to supervise education at every level, under which 2 national bodies will manage higher education, namely, the National Council for Education, Religions and Culture, and the National Commission for Higher Education.
The Educational Service Areas Level: The Educational Service Area Committees and the National Council for Education, Religion and Culture are mandated to supervise sub-degree level institutions.
Individual Institutions Level: Degree level institutions are autonomous in management of their academic, financial and personnel affairs under supervision of their respective institution councils or governing boards.

THE CONCEPTUAL FRAMEWORK OF RELATIONSHIP

Meaning of Autonomy
According to the Encyclopaedia of Higher Education, institutional autonomy refers to the belief that institutions of higher education should be left alone to determine their own goals and priorities, and to put this into practice, if they were to best serve society as a whole. Similarly, one of the largest international higher education associations, the International Association of Universities (IAU), states that:

> *The principle of institutional autonomy can be defined as the necessary degree of independence from external interference that the Universities require of its internal organization and governance, the internal distribution of financial resources and the generation of income from non public sources, the recruitment of its staff, the setting of the conditions of study and finally, the freedom to conduct teaching and research*

These definitions imply that autonomy refers to an institution's independence and freedom to determine its goals and means. Autonomy is clearly relative to the general, national, and local context. No institution is fully autonomous, because all Universities will be subject to some government regulations.

International Concept of Relationship between the State and the Autonomous Universities

In the western industrialized nations, there seems to be a consensus that a significant amount of autonomy is needed for a University to function effectively, and in general governments are trying to maintain or increase the autonomy enjoyed by higher education institutions. The government, as a major fund provider, and others demand that higher education institutions demonstrate quality performance and achievement of goals with maximum efficiency and effectiveness.

The Encyclopaedia of higher education states:
Autonomy is closely associated with accountability, both to the state and to the public at large. It is the state, rather than academe, which in practice defines the nature and limits of institutional autonomy.

Guy Neave and Frans Van Vught (1994) identified two basics models of government regulations in higher education systems in the world:
(1) State Control Model or the continental model
This model, traditionally found in the higher education systems of the Europe, is a combination of the authority of state bureaucracy and faculty guides. The result of the combination of authority of state bureaucracy and faculty guides is a power structure, which expresses the interests of two groups: state officials and senior professors.
(2) State supervising model or America and British model
This model has its root both in the U.S. higher education system and in the traditional British higher education systems. The model shows far less government influence on higher education than the continental model. In this model the influence exercised by the state is weak. The state sees it only as its tasks to supervise the higher education system, in term of assuring academic quality and maintaining a certain level of accountability.

Peter Scott (1995) identified and discussed the five models of university–state relations. They are:
(1) Universities as state institution. This category includes all higher education institutions in continental Europe, many state universities and colleges in the United States. Typically university and college staff is state employees and their buildings are state property. Rectors are elected from among the professors. Most academic appointments are made from the institutional themselves. States universities have been given greater control over their budgets and buildings.
(2) Chartered and constitutional universities. In this category universities have either been chartered by the state or are protected by constitutional safeguards. As a result, they are distanced from the regular state bureaucracy. Because their regulation is a legal or constitutional, rather than simply administrative, matter, their autonomy is notionally enhanced.
(3) Arm's-length universities. In this category universities are public, rather than state institution. As well as being, in most cases, chartered institutions or independent corporations, they receive their funds not directly from the state, but indirectly through an intermediary body. That body, rather than a government department may be responsible for the detailed planning of the higher education system within board political guidelines. The structure is similar to the UGC in Britain.
(4) Universities in the "internal market". In this fourth category, the relationship between universities and the state becomes looser still. Governments, directly or through agencies, establish *"internal market"* designed to encourage universities to be more efficient and responsive. Funding systems are

used to generate competition rather than produced planned outcome. Market-like mechanisms have been introduced into many of these systems to manage marginal increases and decreases in funding.
(5) Private Universities. The state has no direct financial stake in this last category of universities. However, it may have a residual role, such as granting charters or authorizing the awards of degrees, and it may also have an indirect financial stake for example, granting tax-exempt or tax-favourable status, or making students eligible for public support.

Richard J. Novak (1996) discussed that relationship between higher education and state government will continue to evolve in uncertain and unpredictable ways. The immediate future seems to offer opposite and contradictory trends, including movement towards decentralizing established governance structures and movement towards centralization . Overlaying both of these trends will be confusing messages on the relationship of governance to accountability.

Ashby and Anderson (1966), as cited in The Brooker Group (1999), had identified six indicators to ascertain the extent of an institutional autonomy, namely,
(1) Institutional governing: Freedom from non-academic interference in the governing of the institution.
(2) Financial control: Freedom to allocate funds as the institution sees fit.
(3) Staffing: Freedom over the recruitment of staff, and in determining their conditions of work.
(4) Student recruitment: Freedom over the selection of students.
(5) Curriculum: Freedom to design and deliver the curriculum.
(6) Assessment: Freedom to set standards and determine methods of assessment.

RELATIONSHIP BETWEEN STATE AND AUTONOMOUS UNIVERSITY

Historical background and the Thai Model

The concept of autonomy first surfaced in Thai higher education over thirty years ago. The first wave of autonomy came in 1965, when a consortium of academics submitted a report on how to make state universities autonomous to the National Education Commission (NEC). The NEC submitted it to the cabinet. After consultation with university staff, they came to the conclusion that Thailand's universities were not ready for autonomy at that time. The cabinet opposed the idea and the movement did not proceed.

Suranaree University of Technology, established in 1990, was the first autonomous university. In 1992 Walailak University became the second autonomous university to be established. At present, there are 6 autonomous universities, 2 under MOE and 4 under MUA. There are different approaches being taken in the movement toward realizing autonomous universities in Thailand. Currently, the following four models are evident (The Brooker Group, 1999):
(1) Establishing a new university
The first model represents the creation of an entirely new university that is set up from the beginning as an autonomous institution. Suranaree University of Technology and Walailak University are in this category. They receive block grants from the government, but the universities have to generate additional funds. Administration and management are left to their own responsibilities.
(2) Establishing a new unit under an existing university
In existing universities, autonomy has been exercised by establishing new units. Rather than a comprehensive and simultaneous transformation of the entire university to autonomy status, selected units are gradually granted autonomy or new autonomous units are established. The Petroleum and Petrochemical College and Sasin Graduate School under Chulalongkorn University, Sirindhorn International Institute of Technology (SIIT) under Thannasat University, and the International College at Mahidol University are examples. SIIT employs faculty on a contract-basis. They provide higher salaries and expect quality lecturing, research, and publications from the faculty.
(3). Transforming an entire existing small university
A model of transformation involves taking an existing university and making the whole thing autonomous. The change to autonomy is comprehensive, and all units are transformed simultaneously. The first institution to apply this model was King Mongkut's University of Technology – Thonburi

(KMUTT), which established its autonomous status in March 1998. This model may not be plausible for the large comprehensive universities, but still there are lessons to be learned form KMUTT's experience such as having strong leadership, smaller unit size, and intensive consensus building.

(4) The Chulalongkorn model.

Transforming a large, comprehensive university such as Chulalongkorn University (CU) into an autonomous one is an arduous process. In CU's case, the size of the faculty and staff alone present numerous problems in terms of consensus building, contract options, and salary structures.

The four models for achieving autonomous universities in Thailand should not be seen as competing or mutually exclusive approaches. Thailand has a variety of higher education institutions. Thus, one model is unlikely to be appropriate for all institutions due to varied financing schemes, specialized curricula, overall educational goals, and objectives.

The Autonomy White Paper and University Autonomy Plans

As a direct result of the policy conditionality of the ADB which stated; the whole public universities must be autonomous by the year 2002, the Ministry of University Affairs produced a White Paper on University Autonomy, as well as policy matrix outlining the program to take the university system to autonomy. The White Paper's key points are summarized as follows:

- An autonomous university means that university is still a government unit but will have its own administration and management. The goal for being autonomous is for the university to be more efficient, independent, flexible, and fast in order to respond to academic changes.
- The government will only oversee autonomous universities on issues related to policy, budget allocations, and quality, but it will emphasize monitoring and evaluation so that universities' operations are transparent.
- Most university administration and management decision will be finalized at the university level.
- A budget for expenses related to education will be allocated to universities on a cost per head basis, and will ensure that minimal standards are achieved.
- The university shall regulate and manage its own accounting, financial, and asset management. However, the Office of the Auditor General will do the auditing. The University Council of each university will be responsible to the government for the university's performance.

The Cabinet have approved the new schedule for the remaining universities to achieve autonomy. There will be four phases or batches of new universities becoming autonomous between the end of 1999 and the end of 2002.

● **By end of 1999 (2)**	● **By end of 2001 (7)**
Naresuan University	Ubon Ratchathani University
Chulalongkorn University	Khon Kaen University
● **By end of 2000 (8)**	Silpakorn University
Chiang Mai University	Prince of Songkla University
Ramkamhaeng University	Sukhothai Thammathirat Open University
Maejo University	Burapha University
Mahasarakam University	Kasetsart University
Srinakarinwirot University	● **By end of 2002 (2)**
Mahidol University	Thammasat University
Taksin University King Mongkut's North Bangkok	King Mongkut's Institute of Technology Lard Krabang

The Brooker Group's research on **University Autonomy in Thailand** concluded that:

(1) There is a considerable misunderstanding of autonomy (especially in terms of equating it with privatization), and a lack of certainty about what autonomy will involve. These two factors in

particular lead to opposition to autonomy and call for strong efforts to clarify the meaning of the definitions and concepts and to enhance public awareness of the concepts and implications.
(2) Existing institutional structures, in both universities and government, are inadequate to support moves to autonomy. New institutional frameworks are required to support the ambitious objectives of higher education reform.
(3) Inadequate and misdirected research support from government hinders moves to autonomy
(4) All stakeholders must be involved in the process of higher education reform. While top-level commitment and leadership is required, broad-based "ownership" is a necessary condition.
(5) The "process" of moving towards autonomy is critical. Defining the university's distinctive charter and community outreach strategy is not a simple blueprint that can be imposed from outside.
(6) One cannot downplay the over-riding importance of "attitude change" in the higher education sector at large, as well as the critical need to improve management practices and recruit professional university administrators.
(7) University-industry linkages and university outreach strategies must be integral parts of moves to autonomy.
(8) Autonomy, responsibility, accountability, and academic freedom are all key elements of higher education reform, and must be explicitly incorporated into reform efforts.

The Thailand Research Fund-backed study of Prof. Dr. Utumporn and her team, entitled *"The Preparation of Public Universities for Autonomy"*, recommends that universities should have a clear mission, a research or a teaching university or some combination of the two. The research suggests eight main recommendations for change, namely,
(1) University councils must be restructured, by hiring prominent persons from the field of higher education to replace present members, whose qualifications are sometimes suspect.
(2) University rectors and faculty deans must change their role from director to manager. The research also recommends that these positions have tenures of four to five years.
(3) All university lecturers should have clear job descriptions and be evaluated every year according to their particular career paths and salary scales.
(4) The number of university support staff should be reduced as much as possible. Instead of hiring employees such as drivers, messengers, guards and cleaning staff directly, the university should sub-contract the work out to private companies.
(5) A block-grant system should be introduced, in which the government gives the university a lump sum of money with few restrictions on how it may be spent. The university would decide how best to spend that money according to its mission. Market forces should determine tuition fees.
(6) All laws and regulations. Dealing with universities should be amended in accordance with a policy of autonomy by the relevant state agencies at one time.
(7) Transparent avenues of communication must be established to promote mutual understanding among university members.
(8) The research team found that to make the transition to autonomy effectively, each university must adjust its values and norms to reflect a culture of autonomy.

RECOMMENDATIONS

Policy and planning

It was found that it was imperative to develop and improve the relationship between the State and government higher education institutions not under the Thai civil service system (the autonomous university) both at the national level and institutional level. A systematic transition of public higher education institutions from being a part of the Civil Services to autonomous institutions will happen. Indicators on preparedness for the transformation will be developed. Capacity for autonomous management will be strengthened. Areas that needed to be considered were the transformation from state control to state supervision, the methods of budget allocation as well as the support for higher education institutions to enhance its income from its operations.

The Ministry of Education, Religions and Culture will be responsible for unity and coherence in education policy formulation and planning. Policy formulation and the jurisdiction boundary of related government agencies over higher education should be clear and in agreement with other related bodies and policies. The supervision of relevant government agency or agencies over higher education institutions should be revamped, curtailing its previous controlling power and focusing more on policy and standard, and forging continued development and support to further improve standard and equity in higher education. Related government agencies and higher education institutions should collectively work out the most appropriate mechanism for supervision to ensure achievement toward the national policy.

Standard and Quality Assessment

The Government should improve the mechanisms relating to quality and quality assurance in higher education giving more autonomy to higher education institutions to choose the system most appropriate for their institutional philosophies and missions while the State still maintaining the power, through an independent body, to set a national standard and to evaluate all higher education institutions, both public and private, to ensure strict conformance to the required national standards if they were to maintain the necessary recognition and accreditation for institutional operations.

Internal quality assurance mechanism will be set up within each institution. Capability of higher education institutions to carry internal assessment and evaluation of academic and management performance will be strengthened. This will lead to improvement of education quality. Moreover, it reflects accountability of the higher education system to the public support.

A national body mandated to undertake external quality assurance, as stipulated by the 1999 National Education Act, will be established. This agency will be in charge of external evaluation of all educational institutes, from primary to tertiary levels.

The Ministry of Education, Religion and Culture, through the National Commission for Higher Education will set up common standards for higher education institutions while procedures for accreditation will be developed by the national body on standards and education evaluation. Professional organizations will be called upon to take active roles in higher education standards setting and quality assurance.

Administration and Governance

Related government agencies should also improve its operation rendering more support and encouragement to higher education institutions to achieve maximum efficiency and effectiveness. At the same time, the higher education institutions should strive themselves for excellence through good governance, appropriate devolution within the institution and more autonomy in the handling of financial, personnel and academic affairs within the boundaries of accepted philosophy, roles and functions of higher education.

Good governance will be an important issue in management of autonomous universities, especially the public institutions. The institution boards or university councils need to be strengthened as they represent the government (MUA or MOE) and the public interest in overall internal management of a university, once a public university is incorporated. Most current university councils carry pro-forma duty. A university council, in a new management context, is supreme in setting the vision and direction of a university, formulating policy on education and research, overseeing the personnel system, budget and finance. Performance evaluation of faculties, functional units, as well as senior administrators are to be carried out by a university council. An internal audit unit needs to be similarly strengthened to do internal auditing and performance evaluation, in addition to simply auditing of accounts normally carried out by public agencies. Reporting, auditing and assessment will become regular features and are a manifestation of transparency and accountability dimensions of good governance.

Resources mobilization

Autonomous or incorporated higher education institutions will be accorded block grants budget. Unit cost of providing higher education in various disciplines and degree levels are to be formulated. Extensive resources mobilization is necessary, if the higher education reform were to bear fruits. Cultivation of the new stakeholders for higher education is to be made through better public understanding and appreciation of the national benefits resulting from high quality education. Public and private commitments to higher education may need both simultaneous promotion of public spirit and tax incentives.

New public (and private) financing mechanisms for higher education are to be developed. The traditional one has always been direct funding to institutions (for public institutions). Fund for student loans, introduced during the 8th Plan (1997-2001), need to be increased to accommodate large increase in projected numbers of higher education students. Funding could be shifted overtime from supply-side financing (direct to institutions) to demand-side financing (student loans). Loans are available for students of public (and private) institutions. Loans conditions, based on family earning, and loans payment need to be revised. There have been calls to make loans payment income-contingent and, possibly, as graduate taxes.

Other financing mechanisms to be considered may be specific funds targeting specific issues of higher education institutions. The government can consider establish funds for university staff development, research, innovations and entrepreneurship, effective management and good governance development. These are issues that required quantum amount of funding over sustained periods, not in the traditional domain of an annual budget process, to yield outputs and have reasonable impacts. They need goals and strategies at national and individual institution levels. Financing these can come from the annual government budget, education tax, taxes on cigarettes and alcoholic drinks, government bonds and overseas loans.

Table 1: Number of Higher Education Institutions in 2000

Unit: Institution

Ministries	Total	Public	Private
Total	**645**	**370**	**275**
MUA	74	24	50
MOE	489	264	225
Other Ministries	82	82	-

Source: Office of the National Education Commission, 2000.

Table 2 : **Number of Higher Education Students in 1999.**

Unit : Students

Education level	Total	MUA	MOE	Other Ministries
	1,639,149	1,026,910	581,430	30,809
1. Lower- than-degree level	398,225	2,238	388,380	7,607
2. Degree level	1,240,924	1,024,672	193,050	23,202

Source: Office of the National Education Commission, 1999.

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Educational Identity: A Case of Universiti Teknologi MARA Malaysia

Rosmimah Mohd Roslin and Rashidah Abd. Rahman
Universiti Teknology MARA, Malaysia

Abstract

The focus towards R&D in Malaysia is reflected in the efforts of both the private and public sectors. Institutes of Higher Learning (IHL) are also encouraged to participate and be more aggressive in their R&D efforts. The Malaysian government realizes that R&D activities are needed to boost the nation's competitiveness in the global arena and as such is investing a substantial sum in R&D. Yet, for some IHL such as Universiti Teknologi MARA (UiTM), the effort towards enhancing research activities among the academics has been a slow but steady process. The infrastructure required for effective research needs to be established firmly first and while this is still in progress, the issue of educational identity may have to be addressed effectively to allow more positive steps in changing present mindset of academics towards R&D. This is what this study seeks to clarify.

INTRODUCTION

In the last two decades, research in Institutes of Higher Learning (IHL) in Malaysia has indeed expanded in line with the government's intention of enhancing support for R&D. With grants from the government, the IHL spent a total of RM 133.6 million in 1998 for R&D (MASTIC, 1999). Yet, despite the strong support from the government, there is still a nagging question among academics whether quality research has been successfully achieved. There are still doubts on the extent of acceptance of research as a culture agreed by academics at all educational levels.

Universiti Teknologi MARA (UiTM) is a 'new' university when it changed status in August 1999. Originally known as Institut Teknologi MARA (ITM), the proclamation as a university was announced by the Prime Minister on August 20 1999, much to the surprise of everyone, academics and non-academics alike. Although new as a university, UiTM has been around since 1956 when it was known as Dewan Latihan RIDA, which later evolved to become Maktab MARA in 1965. In 1967, this became Institut Teknologi MARA and finally Universiti Teknologi MARA in 1999. The changed in status brings with it new issues and perspectives on how academics at UiTM perceive themselves in comparison to colleagues in other IHL especially in areas pertaining to research. In the past, academics at UiTM have always viewed research as secondary to teaching. The emphasis has always been on teaching, not research. The management of the university now sees the need to change this paradigm but the task appears to be a difficult one.

PURPOSE OF STUDY

The question of educational identity is relevant when relating efforts towards changing the paradigm of academics at UiTM. To put it very simply, educational identity refers to the positioning of the educational institution as reflected by the image it portrays through educational efforts. UiTM in its efforts to be at par or even better than other established IHL in the region, is working hard to change the existing mindset of its academics towards research. Research is now

viewed as a prerequisite for educational enhancement. Thus, the management now looks at research as a means of establishing an educational identity by which the measurement of quality can be established. The study therefore seeks to:

1. Establish the existing views of academics in UiTM towards research given the previous emphasis on teaching,
2. Outline the proposed strategies by management to change existing paradigm,
3. Relate aspects of educational identity in UiTM's management efforts to cultivate the research culture.

IMPLICATIONS FOR INSTITUTIONAL RESEARCHER

The outcome of this study will produce input that may well guide other institutional researchers who are working under similar constraints as those in UiTM. To be able to carry out quality research when teaching loads are heavy can indeed be a measure of success and in many ways a reflection of identity. The case of UiTM can be illustrative of an IHL that is working hard to meet the challenges of the academic world.

LITERATURE REVIEW

When it began in 1956, the institute was an experimental training centre with a focus on educating rural youths in commerce and cottage industries. It was initially a part of the governmental policy to offer academic opportunities to the indigenous people or the *Bumiputeras*. One of the institute's main objectives was to educate the rural indigenous people who either could not afford higher education or who did not make the grade the first time to enable them to enter universities. Throughout the years the institute held on to this objective and had continuously aided the poor and enabled a large number of them to be professionals or semi professionals. At the same time, the pioneering academic staffs at the institute were credited for their commitment towards expanding the educational level of the *Bumiputeras*. The academic focus even at that time was towards training and educating while the need for research was often secondary. With more and more students enrolling for increasing number of courses over the years, the lack of concentration on research became even more profound.

Today, UiTM is one of the leading universities in the country and there is a need to ensure that the academic focus of the university is in line with the aspirations of the nation and at par or even better with other established IHL in the country. Yet, one of the most difficult resources to convince as well as manage is the human resource. With more than 3,750 academic staffs now (Strategic Planning Unit, 2001), the university sees the need to shift existing paradigm on research priority. UiTM as a unique IHL whose students are restricted to the indigenous people of Malaysia or the *Bumiputeras* believes that it is a challenge that has to be confronted effectively so that its identity as a prime educator of the indigenous people is reflected by the success of its academic staffs as quality researchers.

Another unique feature of UiTM is in having branch campuses in every state of the country, which makes the tasks of encouraging research among its academics, and managing them more challenging. On one hand, UiTM wants to be supportive of its role as the educator of the '*Bumiputeras*' while on the other hand, the academics are urged to promote the identity of research as a culture accepted by all in the academic environment. Within the context of UiTM, this may well result in a conflict of focus in terms of what should and what needs to be done.

Chang (2001) establishes that in Malaysia, the situation is not a lack of funds but a lack of appreciation of the research culture. The highest allocation of research funding by the Malaysian

government is essentially through the Intensification of Research Priority Areas or better known as IRPA grants which is distributed through the Ministry of Science, Technology and Environment. The IRPA grant has been a major source of funding for most IHL and research institutions in Malaysia. Although the distribution of grants by the Ministry has been widespread, there have been grievances in terms of fairness in distribution amongst the IHL and the research institutions that are required to bid for the grants. The competitive bidding has been a major cause of disgruntlement and under the 8th Malaysia Plan, there is now a new policy governing competitive bidding for grants.

Under the 8th Malaysia Plan, the approval process for IRPA grants has been simplified by giving the IHL and the research institutions direct involvement in approving research projects. The approval process is now at the institutional level where IHL and the research institutions elect technical committees to approve viable projects, which are then endorsed by the Ministry of Science, Technology and Environment. This simplified approval process has encouraged an increasing number of research projects to be submitted this year.

In 1998, the highest recipient of the IRPA grant was Universiti Putra Malaysia (UPM) with almost 20 per cent of the total amount granted. UiTM or ITM as it was called then, received a mere 0.33 per cent reflecting the weak focus on research in the past. Even new universities such as UNIMAS in Sarawak obtained almost 1.1 percent of the total IRPA grant. In terms of number of projects approved, UiTM was left far behind in comparison to UPM, the highest recipient of the IRPA grant. UPM had a total of 444 projects approved in 1998 while ITM had only 7 approved projects. It is statistics such as this that is moving the management of UiTM to review its current focus on research and indirectly to reassess the educational identity of the university. Table 1 tabulates the distribution of IRPA funding by institutions for the year 1996-1998.

Table 1: DISTRIBUTION OF IRPA FUNDING BY INSTITUTIONS 1996 – 1998

PANEL	NOT APPROVED	% TO TOTAL NUMBER OF PROJECT APPROVED	TOTAL AMOUNT APPROVED RM	% TOTAL AMOUNT APPROVED
UPM	444	18.68%	91,907,963	19.55%
UM	275	11.57%	55,092,997	11.72%
MARDI	412	17.33%	53,666,087	11.42%
USM	223	9.38%	53,020,044	11.28%
UKM	188	7.91%	50,020,044	10.82%
UTM	155	6.52%	36,788,213	7.83%
IMR	118	4.96%	19,484,060	4.14%
SIRIM	52	2.19%	18,258,440	3.88%
LGM	89	3.74%	15,453,000	3.29%
FRIM	74	3.11%	13,619,308	2.90%
IPP	62	2.61%	8,417,099	1.79%
PORIM	46	1.94%	8,316,960	1.77%
MIMOS	2	0.08%	8,061,140	1.71%
MINT	39	1.64%	6,600,530	1.40%
UNIMAS	15	0.63%	5,058,744	1.08%
LKM	64	2.69%	4,901,770	1.04%
MACRES	8	0.34%	4,441,000	0.94%
JPSK	12	0.50%	2,068,412	0.44%

IPH	13	0.55%	1,998,500	0.43%
UMS	9	0.38%	1,909,360	0.41%
ITM	7	0.29%	1,550,000	0.33%
JTSK	15	0.63%	1,485,000	0.32%
UIA	16	0.67%	1,440,340	0.31%
JPS	4	0.17%	1,385,600	0.29%
JTSB	11	0.46%	997,100	0.21%
JPK	3	0.13%	849,000	0.18%
UUM	7	0.29%	729,064	0.16%
JISK	6	0.25%	533,520	0.11%
JISB	2	0.08%	449,260	0.10%
JPSB	2	0.08%	392,000	0.08%
PEGAMA	3	0.13%	276,500	0.06%
JHSB	1	0.04%	129,570	0.03%
IKRAM	0	0.00%	0	0.00%
TOTAL	**2,377**	**100.00%**	**470,136,358**	**100.00%**

Source: 1998 National Survey of Research and Development, MASTIC (2000)

Despite the increasing investment in R&D by the government, educational institutions have yet to churn out productive research findings. The government in the 8th Malaysia Plan clearly expresses disappointment over the low commercialization rate amongst IHL and other research institutions. Research findings that have reached the point of commercialization are often equated with success. To be able to produce research findings that are successfully commercialized are often seen as an indicator of research quality. Although the government provides most of the funding for public universities, these institutions still require ample resources to pursue academic excellence.

As indicated in Table 2, the IHL spent a total of RM 133.6 million in 1998 for R&D (MASTIC Report, 2000). Despite the economic downturn in 1997, R&D expenditures in Malaysian IHL increased substantially by 231.3% between 1996 and 1998. However, total R&D expenditure in ITM decreased by 58.3% between the same periods. University Malaya spent the most in R&D (RM51 million) in 1998, an increase of 11.35% as compared to the amount spent in 1996. In a survey conducted by the Malaysian Science Technology and Information Centre (MASTIC) in 1998, it was found that one of the factors impeding the expansion of R&D in many IHL and research institutions was the severe shortage of manpower in R&D (7 per 10,000 work force). It was cited that the lack of skilled workforce in research was the main factor that hampered R&D throughout all sectors. If the focus on R&D is to be expanded, human resource development in R&D should be given special attention by relevant authorities.

The emphasis on R&D has now taken centre stage and UiTM is one of the IHL that is realizing that without proper planning it is quite impossible to achieve a productive R&D. The success of R&D depends to a large extent, on the organization's ability to develop and produce new products that meet the requirements of the customers. Yet, if the research organizations were not able to capture the essence of customer requirements, it would be futile to hope for success in research and development. For IHL, the need to understand the requirements of both the internal as well as the external customers is vital towards achieving successful research efforts.

Table 2: Total R&D Expenditure in Institutes of Higher Learning (IHL) for the period 1994 - 1998

	Total Expenditure			% Change	
Institution	**1994**	**1996**	**1998**	**94 – '96**	**96 – '98**
International Islamic University (UIAM)	74,000.00	368,241.00	1,298,899.80	392.3	252.7
MARA University of Technology (UiTM)	1,309,763.60	2,846,838.00	1,188,210,30	117.4	-58.3
National University of Malaysia (UKM)	8,164,052.70	7,389,147.00	36,349,553.60	-9.5	391.9
Northern University of Malaysia (UUM)	198,367.50	182,716.00	528,395.90	-7.9	189.2
University of Malaya (UM)	5,308,820.90	4,146,292.00	51,240,733.90	-21.9	1,135.80
University of Putra Malaysia (UPM)	133,060,750.00	11,458,778.00	6,364,671.60	-91.4	-44.5
University of Sabah, Malaysia (UMS)	-	-	43,034.20	-	-
University of Sains, Malaysia (USM)	1,751,793.80	5,978,260.00	30,235,,680.20	241.3	405.8
University of Sarawak, Malaysia (UNIMAS)	188,180.00	1,103,154.00	1,811,173.20	486.2	64.2
University of Technology Malaysia (UTM)	822,975.30	6,866,347.00	4,320,750.60	734.3	-37.1
University of Technology Petronas (UTP)	-	-	217,300.00	-	-
University of Tenaga Nasional (UTN)	-	-	39,798.00	-	-
TOTAL	**150,879,503.80**	**40,339,773.00**	**133,638,201.30**	**-73.3**	**231.3**

Source: 1998 National Survey of Research and Development, MASTIC (2000)

METHODOLOGY

The study generates information through qualitative methods by interviewing top management, academic staffs as well as relevant policy makers. Secondary data information also yields supportive data on existing research involvement among academics within and outside UiTM. This is a case study approach where relevant information was generated through in-depth interviews and observations to enable the researchers to develop an illustrative case.

FINDINGS

In its efforts to enhance research activities among academic staffs, UiTM has set up a unit known as the Bureau of Research and Consultancy (BRC), to promote as well as manage all research activities in the university. The Bureau of Research and Consultancy (BRC) coordinates all research and consultancy activities undertaken by the university covering both basic and applied research. The research and consultancy areas range from science and technology to management and humanities. Besides coordinating, BRC also disseminates research findings with the purpose of improving the quality of education. BRC was first set up in 1980 as the Planning, Research and Development Centre. With a marked increased in the number of research activities, a restructuring of the centre led to the development of BRC in 1984.

For BRC, the road towards expanding research activities among the academics in the university has been an uphill battle. Although there were adequate funds provided by the Ministry of Science, Technology and Environment, the Ministry of Education and several other grant providers, the number of academic staffs who had taken the funds were very few. The common grouses among the academic staffs is lack of time to carry out research projects given their heavy workload. Such comments have prevailed from the first inception of BRC until today.

Undeniably, the grouses are valid especially with the increasing number of students enrolling for various courses year by year. As of April 2001, the total number of students at UiTM and its branch campuses reached almost 83,000 (Strategic Planning Unit, 2001). With only 3,750 academic staffs for the vast number of students, teaching loads are definitely heavy and burdensome. BRC in its efforts to promote more research activities among the academic staffs realizes the constraints faced by the academics but reduction of teaching loads is quite difficult to attain in a short run when the intake of students increases year by year.

The new university status is prompting the management to review its current strategies. With a new status and a new team of management in early 2001, the university is now aggressively encouraging research among the academic staffs while promising effective steps towards reducing teaching loads. The commitment of the management is portrayed through the development of the *21 Strengthening Strategies,* which aims to guide UiTM towards academic excellence in the twenty first century. As such, the strategies are often referred to as the *2121 strategies*. The strategies outlined 21 areas of concentration including that of R&D which spells out steps that need to be undertaken to ensure that R&D efforts in the university is in line with the vision of the nation and is capable of achieving academic excellence. A key word, which the strategy distinctively spells out, is the embodiment of a research culture among the academics in UiTM.

Research culture is indeed a forceful word to use when the level of research activities at present has not been totally promising. At present, only 20 per cent of the academic staffs are involved with some form of research activities. This may not be reflective of a strong research culture yet, but efforts towards this are essentially under way. BRC now sees its responsibility enhanced and the bureau has now become more visible among the academic staffs. If in the past, the bureau was often overlooked in terms of its contribution towards academic excellence, it now appears to be

the centre of attention when research has become a prerequisite among academic staffs towards measuring academic performance. This is indeed a long leap forward but the management of UiTM is serious in ensuring effective steps are taken towards attaining research excellence and they are equating this with academic achievements.

It is however misleading to equate research excellence with increased number of research activities. Although BRC is now aggressively promoting research among the academic staffs through incentives such as reduction of teaching loads for those with active research projects, determination of research excellence can be difficult to measure. At present, BRC is focusing on researches that have succeeded in winning awards at the national or international level as an indication of excellence. Despite the low number of research activities in the past, BRC is quite proud that a number of BRC sponsored research projects have won awards both at the local as well as international levels. Such recognition is important as a means of encouraging more researchers to step forward and undertake big research projects.

To be able to measure research excellence with the level of successful commercialization is the ideal but realistically, there are very few projects that have reached the level of commercialization. With the government's growing concern on lack of commercialization of research projects by IHL and research institutions, UiTM has responded by setting up the Business Technology Transfer Centre (BTTC) to oversee the commercialization process of viable research projects in the university. It is hoped that this move will enable more projects to reach the commercialization stage although this is by no means an easy task.

Efforts towards developing a research culture has been well debated long before the development of the *Strengthening Strategies* but the achievement of such a culture would not be easy without the acceptance and involvement of not just the academic staffs but also the administrators of the university. It would be futile to hope for such a culture to be in place if there is inadequate facilities and infrastructure to allow for research activities to progress steadily. This is in fact a dilemma faced by BRC and the management of UiTM where infrastructure development has been bogged down by bureaucratic and administrative requirements. For a 'new' player in the research field, such 'hiccups' can indeed affect the level of researchers' involvement. When faced with continuous problems inhibiting the progress of their research projects, some researchers simply give up. The development of a research culture may require more commitment from researchers as well as those directly and indirectly involved with managing the research environment.

With the *2121 Strengthening Strategies* as a basis, BRC is developing action plans for the next ten years which it hopes will succeed in bringing UiTM closer to its objective. One of the initial steps which BRC feels will change the perception of the academic staffs and administrators towards the importance of research is to appoint an assistant vice-chancellor of research specifically to oversee the management of research projects in the university. This is already a reality where an assistant vice-chancellor now heads BRC and decisions pertaining to research are directly the responsibility of the assistant vice-chancellor. The first step towards realizing a research culture is to emphasize the importance of research and with the appointment of the assistant vice-chancellor; the importance of research is now clearly etched in the minds of all in the university.

At the operational level, the research culture is promoted through the setting-up of 'mini' BRCs known as *Research and Consultancy Units* at all faculties and branch campuses throughout the country. The main function of these units is to disseminate information pertaining to research and consultancy at the operational level, approve short-term research grants that do not exceed

RM10,000 as well as monitor the progress of existing research at the levels of the faculties and the branch campuses. This strategy of reaching out to the academic staffs at the operational level is necessary to ensure that the right message is channelled to them and the emphasis on research is made much stronger. Indeed, there has been a tremendous leap in the number of proposals sent in and approved from 49 in 1999 to 97 in 2000. The leap to almost 100 per cent in the number of research projects approved is remarkable given that the heavy teaching load is still an ever-present constraint. Yet, when lured in the right way, the academics are moved towards upgrading their research commitment.

At this point, the subject of educational identity requires UiTM to reassess its focus on research so that it is in line with the teaching needs. It is quite unfair to force the university to take a stand whether a focus on research or teaching should be the basis of its educational identity because both have their merits. The evaluation of academic excellence should be based on both teaching as well as research abilities. In as much as research should be upgraded for the benefits of both students and academics, this should be carried out without jeopardizing teaching responsibilities. It is sensible to emphasize on research that will be useful for teaching purposes so that students will benefit from research findings. Integrating knowledge from research into teaching materials is likely to enhance the academic quality of lecturers. This should be the aim that academic staffs in UiTM should strive for, as academic excellence will only be achieved with the realization that the enhancement of knowledge comes from full commitment and a clear conscience that the tasks carried out will be of benefit for generations to come.

CONCLUSION

The efforts required in the development of the most effective and practical system of research and consultancy in an institute of higher learning such as UiTM can be overwhelmingly straining. It is in fact a never-ending effort demanding the commitment of all relevant parties including the policy makers, the administrators as well as the academic staffs. As long as there are academics who are sensitive to the needs of the masses, whether in Science and Technology or in the Social Sciences, there will always be room for research to grow.

In line with the government's views that applicable research should lead to commercialization, UiTM is slowly shaping its research focus towards encouraging research that will eventually be commercialized. Although the government at present is still not happy with the rate of commercialization of research projects from the IHL and other research institutions, the move towards this is very promising. What is still lacking is full support of the industries that have yet to realize the need for closer cooperation through joint research projects that may lead to successful ventures.

It is realized that the road towards achieving research excellence is still vary far away and the path may well be a winded one for UiTM. Nevertheless, the journey has already begun and the first initial steps, although bumpy at times, may very well become smoother with each passing stage. An increasing number of academics at UiTM have now seen the light and the direction which useful research may lead them. It is now up to the policy makers and implementers to ensure that what has been planned is carried out effectively. A research culture can only be cultivated with the right ingredients, which would allow the researchers to grow and to carry out their research interest in a conducive and encouraging environment. This is indeed the direction that UiTM is moving towards and with the right push, UiTM may very well move closer to the objective of creating a research culture capable of producing academic excellence.

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Do Satisfied Academic Staff understand their Students better?

Mahadzirah Mohamad
Kolej Universiti Sains and Teknologi Malaysia, Terengganu
Wan Norhayati Mohamed
Kolej Universiti Sains and Teknologi Malaysia, Terengganu

Abstract

The competitive situation within the Malaysian education industry is becoming more intense as the number of public and private higher education institutions has increased. As competition intensifies, perhaps the most useful weapon to distinguish one institution from others is through the contact personnel. They deemed to be the important source of product differentiation in many service organizations. It is said that satisfied employees would deliver satisfactory service because they are able to understand customer better -- customer focused. Therefore the main aim of the research is to examine whether satisfied academic employees in higher learning education industry are customer focused. The study, using the service perception gap to measure customer-focused, proves that employees who are satisfied with their job role may not necessarily are customer-focused. Though, satisfied with their job role, however they are not able to understand customers' needs better. The research provides a useful insight for further research on customer-focused. In addition, the findings of the study suggest that the management of the university needs to develop an appropriate service mindset especially among lecturers that instil the idea of providing quality service is worthwhile and rewarding. Once all the necessary efforts are undertaken by the management, probably the staff service quality maturity level will improve and providing quality service will become a culture within the organization.

INTRODUCTION

Recently, the Malaysian higher education industry has become more competitive and undergoing a tremendous growth as a result of various efforts undertaken by the government to achieve its long-term objective of becoming a regional centre of excellence for higher learning, as reported in the Eighth Malaysian Plan 2001-2005. The claim that the competitive situation within the Malaysian education industry is becoming more intense is evident from the increasing number of public and private universities.

Currently there are 18 public universities, 16 private universities and about 690 private colleges in Malaysia (Jabatan Pendidikan Tinggi, Kementerian Pendidikan Malaysia, 2001). When there is a stiff competition within the industry, the rule of thumb applies, that is trying to distinguish oneself from other competing counterparts. In a service industry where copyright is less likely possible to be enforced to the products or services offered, the main question confronted by these higher learning institutions would be "what is the best way to distinguish themselves from other competing institutions?" For example, when one higher learning institution offers a MBA program it does not necessarily mean that another institutions cannot offer the same program.

As the number of public and private higher education institutions offering a variety of courses targeting both at local and foreign students increases, the intensity of the competition within the education industry increases. Therefore, the need for these learning institutions to distinguish amongst themselves becomes greater and challenging. Probably, in order to distinguish itself

from other competing institutions the higher learning institution would offer programs that tailored to its established "niche area" and deemed to be the area that distinguish one institution from the other institutions. It is well noted that the quality of the program is crucially important to any higher learning institutions because there is a governing body that is responsible to ensure the quality of programs offered to students both at public or private learning institutions.

However, focusing on customers (students and their parents) is equally important especially in a competitive situation. Perhaps, the idea of being customer focus – understanding the customers' needs and finding way to meet these needs – is a new concept especially in the education industry. The quality of the program provides the bundle of benefits to customers. Nevertheless according to Bateson and Hoffman (1999), it is often impossible for a service organization to differentiate itself from other similar organizations in regard to the benefit bundle it offers. The authors stressed that contact personnel is the important source of product differentiation in service organizations.

Falling short in service delivery, most of the time is subjected to failure by the service provider, that is people (lecturers and supporting staff) failed to deliver the promised service to customers. Authors such as Zeithmal and Bitner (2000) stressed that satisfied employees would make customers happy. According to the authors, satisfied employees can satisfy customers by delivering satisfactory outstanding service because they are able to understand customers' needs better or in another words they are customer focused In addition, Lovelock et al. (2002) argued that customer-contact personnel performs a triple role as operation specialist, marketer and be part of the service product itself.

At the end of the delivery process, customers will form perceptions of the services rendered to them. Measuring students' perceptions of the delivered service quality and comparing their perceptions with lecturers' perceptions of service quality would exhibit the extent of employees customer-focus, as the size of the perception gap signifies the level of lecturers' customer focused. The smaller the size of the gap, the closer they are to meeting the customers' needs or they are more customer-focused. Relating to what has been pointed by Zeithmal and Bitner (2000) that satisfied employees can satisfy customers, it is therefore interesting to conduct a study to investigate whether satisfied employees, in the context of academic staff, are also customer-focused.

Hence, the aims of this paper are as the following:

- To determine the current level of academic's staff job satisfaction**,**
- To determine whether lecturers of different demographic variables have different level of Job Satisfaction, and
- To determine whether academic staff' job satisfaction level has an impact on the size of service quality perception gap.

LITERATURE REVIEW

Market Orientation

Cravens (2000) highlighted that being market oriented is a business perspective that makes the customer the focal point of an organization. Earlier, Kotler et al. (1999) explained the importance of being customer focused, whereby the author argued that customer needs must be the central focus of any activities undertaken by market-oriented organizations and profits can be generated through customer satisfaction. The definition of customer-focused borrowed from Cravens (2000)

is the extent to which service employees understand customer needs and want to help customers satisfy their purchasing objectives.

According to Cravens (2000) although the marketing concept which put an emphasis on customer focus for nearly half a century, not until in 1990s the ideas gradually received growing acceptance among managers as a basis for managing a business. Higher learning education sector appears to be not excluded from this phenomena as suggested by Conant et al. (1985) who reported that institutions of higher learning education put more emphasis on meeting their own needs and considered students only as an input to satisfy their needs. Nevertheless, as pointed by Snipes et al. (1997) due to changes in the external factors, such as demographic, political and economic, successful institutions in the future will be those that apply market orientation, treating students as the valued customers, rather than a production or selling orientation.

It is now well established in the literatures (Lovelock, 2001; Fitzsimmons and Fitzsimmons, 2001; Zeithmal and Bitner 2000; and Brown and Gulycz, 2002) that there are benefits of attaining customer satisfaction. Fitzsimmons and Fitzsimmons (2001) argued that satisfied customers would turn into loyal customers. Lovelock (2001), supporting Fitzsimmons and Fitzsimmons, discussed the economic benefits of loyal customers, which include increase usage over time, reduced operating costs, profits from referrals and pay a price premium. On the same token, Brown and Gulycz (2002) stated that customer satisfaction is a competitive weapon that enables organizations to survive in today's competitive market because traditional bases for differentiation namely product features, price and distribution are no longer sufficient.

The relationship of Employee Job Satisfaction and Customer Satisfaction

The work of Heskett et al. (1994) put forth the proposition that there is a relationship between employee satisfaction and customer satisfaction. In their article entitled "Putting the Service-Profit Chain to Work", the authors discussed the links in the chain, which started with profit and growth are stimulated by customer loyalty resulting from customer satisfaction. Customer satisfaction is the outcome of the delivery of value service by satisfied, loyal and productive employees. Hence, it is important to attain high level of job satisfaction among service delivery personnel to ensure the delivery of value services to students.

Perhaps the issue of delivering value service can be addressed by examining employee job satisfaction of higher learning institutions which is defined by Hellriegel et. al (2001) as the general attitude of employees toward a job and studying the sources of job satisfaction are of most interest since they suggest corrective actions to be undertaken by the management. In addition, these authors stressed that employee job satisfaction comprises of a collection of attitudes that are related to various aspects of the job and popularly measured using the job descriptive index (JDI) which measures satisfaction using five specific aspects of a person's job namely pay, promotion, supervision, the work itself and co-workers. On the other hand, Comm and Mathaisel (2000) defined job satisfaction as the difference between employee perceptions and expectations in a service work environment.

On the hand, customer satisfaction as described by Zeithaml and Bitner (2000), renowned authors in service quality, the customer's evaluation of product or service in terms of whether that product or service has met their needs and expectation. In this regard, failure by employees to meet customer's needs and expectation is reckoned to be providing dissatisfactory product or service. However, it is acknowledged that customer satisfaction is also influenced by several factors identified as product and service features, customers' emotions, attribution for service success or failure and perceptions of equity or fairness.

In short, we can say that the role of service provider is important to the deliver of satisfactory services to customers. Employees' interactions with customers are critically important in influencing customer satisfaction and eventually retaining them. Therefore, management should not fail to take up efforts of attaining and enhancing employee satisfaction so as to be competitive in the present volatile competitive environment.

Service quality

Although, there are two main approaches of measuring quality in higher education namely manufacturing-based components of quality and service-based components of quality or user oriented, however, the most widely used approach to measure service quality according to Lovelock et al. (2002) is user-oriented approach. The dimensions used to measure service quality in the user-oriented approach include reliability, assurance, tangibility, empathy and responsiveness as postulated by Zeithaml, et al (1990). Reliability refers to the ability to perform the promised service dependably and accurately. Assurance implies the employees' knowledge and courtesy and their ability to inspire trust and confidence among customers (students). The appearance of physical facilities, equipment, personnel and written materials is identified as the tangibility of service. The term empathy brings the meaning of caring and individualized attention given to customers whereas responsiveness indicating the willingness of service delivery personnel to help customer and provide prompt service. Customers would use these five dimensions to make their judgments about the service quality rendered by any service organizations. The performance of quality service is judged by the ability of the service provider to meet or exceeding customer expectation. The more able the service provider exceeding customer expectation, the better position the service provider to be successful in a competitive market.

METHODOLOGY

The research was conducted at public higher learning institutions in the East Coast of Peninsular Malaysia. The two major populations of the study are academics staff representing the delivery staff and students, as the consumer of the service, of these institutions. Since there are only two public higher learning in the East Coast of Peninsular Malaysia, the sample of this study was selected from these two public universities namely Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) and University Teknologi MARA (UiTM). Both universities offer first-degree program in Accountancy, Management and Economics. Thus, the sample selected for this study is from the populations of lecturers teaching and students taking Management, Economics and Accountancy courses in their respective university.

Since this study involves two types of population, therefore two sets of questionnaires were prepared. The first set of the questionnaires contains, apart from the demographic details of respondents, items that measure the respondent's perception of service quality using a 7 point Likert scale, being 1 equals to "very poor" and 7 equals to "very good" and these questionnaires were distributed to student population. A total of 320 self-administered questionnaires were distributed to the respondents in the selected institutions and 262 questionnaires were returned, representing a response rate of 81.8%.

The second set of questionnaire was prepared for academic staff population. This set of questionnaire contains three parts. The first part is Service Quality Section that contains the same service quality items contained in the first set of the questionnaire distributed to students. The second part is a section on job satisfaction that contains nine dimensions of measuring job satisfaction (salary, promotion, supervision, benefits, rewards, operating procedure, co-workers, nature of work and communication) developed by Spector (1985) because they were the most

meaningful and frequently chosen topics related to job. Statements on job satisfaction were constructed using a seven point Likert rating scale, with response ranging from 1 which means extremely dissatisfied to 7 which means extremely satisfied These questionnaires were distributed to 80 lecturers working at the selected institutions. The research managed to attain a response rate of 66.3% from this sample group. The last part of the questionnaire is a section that contains questions to retrieve demographic data of respondents. The data collected from these two sample groups were then subjected to several statistical procedures, such as descriptive statistics, reliability test, ANOVA (one way analysis of variance), Independent sample t-test, and simple linear regression.

FINDINGS

Profile of Respondents

The analysis of the collected data indicates that majority of the lecturers participating in the research are relatively young, between the ages of 25 to 39 years old, and female, holding Master's degree. Most of them have recently joined the present institutions and only worked for less than six years. In addition, they were inexperience since they joint the present institutions without prior working experience in the same field. The analysis also indicates that the sample represents the different ranks of academic staff ranging from tutor to professor.

On the other hand majority of students participating in the research were female Malay students within the age bracket of 20-21 years old, taking Management Program. Probably, the findings support the fact that majority of UiTM students are Malays as the university was previously set up to accommodate especially for “Bumiputera” students. In addition, Malay race is the largest ethnic group particularly in the East Coast of Malaysia. The respondents selected in the study appear to be representing students of different years of study.

The Level of Lecturers' Job Satisfaction

The research adopted a well-validated measure of job satisfaction level developed by Spector (1985), which covers the several different aspects of job satisfaction. A reliability test was subjected to the data to determine the reliability of the instrument. The result of the test indicates that the instrument used to measure job satisfaction is reliable, as evident from the value of a Cronbach’s alpha. The value of the Crobach’s alpha in the study is 0.93. The current level of lecturers' job satisfaction is determined by using a descriptive analysis. Table 1 shows the mean scores and standard deviations of each job satisfactions' dimensions.

Table 1: Job Satisfaction Level

Dimension	Mean Score	Standard Deviation
Co-Workers	5.16	0.66
Nature of Work	5.04	0.75
Work Procedures	4.89	0.54
Communication	4.85	0.61
Supervision	4.81	0.62
Salary	4.65	0.84
Benefit	4.57	0.76
Promotion	4.52	0.75
Reward	4.37	0.70
Overall Satisfaction	**4.75**	**0.51**

The calculated overall satisfaction mean value for lecturers is 4.75 on a scale of 1 as being "extremely dissatisfied" and 7 as being "extremely satisfied". The findings of the research indicate that the current level of lecturers' job satisfaction is at a moderate level implying that there are areas for improvement to enhance lecturer job satisfaction level particularly on job aspects such as reward, salary, promotion and benefits. Referring to the attained value of standard deviation, which is 0.51, it indicates that majority of the academic staff shared the same feeling on the job satisfaction level and there is a little variation in their views on this aspect. Interestingly, the co-workers aspect of job satisfaction have the highest mean score, which is 5.16, clearly indicating that there appeared to be no widespread interpersonal problems among the academic staff. Probably, they have good interpersonal relationships with their colleagues. This kind of friendly atmosphere reflects a positive feedback and is useful to these institutions as academic staff perform many aspects of their job role, for example research works, in groups or teams.

Lecturers of Different Demographic Variables have Different Level of Job Satisfaction

One-way analysis of variance (ANOVA) test which examines the significant mean score differences between more than two groups was used in this study to determine whether lecturers of different demographic variables have different satisfaction levels. The results of the ANOVA test are presented in Table 2. As shown in the Table 2 there was a significant difference in job satisfaction level among the lecturers at $p<0.05$. The significant difference exists for three demographic variables: the lecturers' length of service at the university they are working at, the rank of the academic staff and their academic field or specialization.

Table 2: Length of Service at Present University, Rank, Area of Academic Field and Job Satisfaction

Demographic Variables	Sum of Squares	Degrees of freedom	Mean square	F	Significance
Length of Service in Present University:					
Between Groups	2.922	5	0.584	2.588	0.038
Within Groups	10.614	47	0.266		
Total	13.536	52			
Rank:					
Between Groups	3.402	3	1.134	5.483	0.002
Within Groups	10.134	49	0.207		
Total	13.536	52			
Area of Academic Field:					
Between Groups	3.352	6	0.559	2.523	0.034
Within Groups	10.184	46	0.221		
Total	13.536	52			

The ANOVA results presented in Table 2 indicate that the satisfaction level of the lecturers varies according to the length of their service at the universities with a significant level of 0.038. When the length of service was considered, the satisfaction mean score for lecturers worked 5 years or

less is 4.66 and began to drop among respondents who had served for between 6 to 10 years. As displayed in Table 3, job satisfaction level of the lecturers began to increase progressively after the 10 years of service for each additional five years of service and reached the maximum satisfaction level of 5.81 after they had served the university more than twenty years.

Table 3: Descriptive Statistics – Length of Service

Length of service (Years)	Mean	Standard Deviation
0-5 years	4.66	0.39
6-10	4.41	0.40
11-15	4.88	0.72
16-20	4.97	0.49
21-25	5.81	0
26 and above	5.52	0

It is illustrated in Table 4 that the satisfaction level of professor was higher compared to those of lecturer and tutor. The results suggest that academic staffs in the high ranks are more satisfied with their job than their junior staffs do. The descriptive statistics in Table 5 show that Mathematics lecturers were more satisfied with their job compared to lecturers from other academic disciplines. Perhaps the number of mathematics lecturers at the selected institutions is small compared to lecturers from other academic fields could explain the findings. Since they are in a small number, they are able to work closely with one another and enjoy their co-workers' company.

Table 4: Descriptive Statistics - Rank

Rank	Mean	Standard Deviation
Professor	5.52	0
Associate Professor	5.44	0.45
Lecturer	4.65	0.48
Tutor	4.74	0.17

Table 5: Descriptive Statistics – Academic Field

Academic Field	Mean	Standard Deviation
Mathematics	5.49	0.36
Marketing	4.98	0.69
Accountancy	4.73	0.39
Management	4.74	0.55
English	4.60	0.50
Economic	4.23	0.75
Other	4.82	0.31

Table 6 shows the job satisfaction level of female and male academic staff is 4.96 and 4.61 respectively. The finding indicates that female lecturers were less satisfied with their job compared to the male lecturers. The data were then further subjected to an independent sample t-test to see if there were any significant differences in the satisfaction level of male and female lecturers. Table 7 depicts the results of the independent sample t test that indicate the attained job satisfaction mean score for male and female academic staff did not come from populations with equal means. Perhaps, this dissatisfaction may be due to the dual role the female lecturers are

expected to play, as academic staff and homemakers who are responsible to the child-care and household work.

Table 6: Descriptive Statistics - Gender

Gender	N	Mean	Standard Deviation
Male	22	4.96	0.50
Female	31	4.61	0.47

Table 7: Independent Sample t-Test

		Levene's Test for Equality of Variances		t-test for equality of means				
		F	Sig.	t	df	Sig. 2-tailed)	Mean Difference	Std. Error Diff.
Job Satisfaction	**Equal Variances Assumed**	0.181	0.672	2.615	51	0.012	.3527	0.1349

Lecturers and Student Perception of Service Quality

The perceptions of lecturers and students on service quality of these institutions are determined by conducting descriptive analysis. On a Likert Scale of 1 to 7, where 1 is equal to “very poor” and 7 is equal to “very good”, the attained mean score of lecturers perception is 4.71 with the standard deviation of 0.74. This finding indicates that lecturers perceived that the service quality at their university is fairly good. Similarly, the students perceptions of the service quality rendered by their universities is also fairly good based on calculated mean score of 4.37 and a standard deviation of 0.92.

The Lecturers and Student Perception Gap

The difference between lecturers' and students' perceptions of service quality is termed as the service quality perception gap. The service quality perception gap construct was derived by subtracting the mean score of lecturer's service quality perception from the mean score of student's perception of service quality delivered. The size of service quality gap indicates the extent to which the academic staffs are able to understand students’ needs. The narrow gap indicates that lecturers are able to understand their students’ needs better and they are customer focused. Apparently, we interpret the size of the service perception gap is very small, which is only 0.34. Interestingly, the finding implies that the lecturer and student perception is almost similar to one another, although students’ perception is lower than those of lecturers. Inevitably, to some extent, these lecturers are customer focused.

The Impact of Lecturers' Job Satisfaction Level on the Size of Service Perception Gap

A regression analysis is used to determine the impact of job satisfaction level on the size of service perception gap. There is only one independent variable in this study, which is

job satisfaction. Therefore, the simple regression analysis will examine the effect of job satisfaction on the size of service quality gap. The result of simple regression analysis indicates that there is no significant relationship or effect of lecturers' job satisfaction level towards the size of service quality gap. The finding indicates that when there is a change in the level of employees' job satisfaction it will not lead to a change in the size of the service perception gap. In other words, even though the lecturer satisfaction level increases or decreases it will not affect the customer-focused level of lecturers.

DISCUSSIONS AND CONCLUSION

The findings of the study are able to provide some useful insights with respect satisfied academic staff is being customer focused. On the whole, the study is able to indicate that the lecturers were moderately satisfied with their job and they are customer-focused. They were particularly satisfied with their co-workers and nature of work. The findings suggest that good relationship exits with their co-workers and performance of their duties jointly. This finding is similar to the study conducted by Oshagbemi in 2000, which documented that 70 percent of the UK academic staff was satisfied with their co-workers behaviour. However, the lecturer was fairly satisfied with work procedures, communication and the behaviour of their supervisor.

The four aspects of employees' jobs identified in the study to be least satisfied were reward, promotion, benefit and salary. The finding conformed to the finding in another study undertaken by Olsen (1993), who stressed that those extrinsic job factors such as salary and reward have been seen as source of dissatisfaction for academic staff. Salary has been a significant issue, because academic incomes have failed to keep pace with the increase in the cost of living and levels of compensation in other professional domains.

Although the study proves that the sample selected is customer focused, staff satisfaction level, interestingly, has no impact on the size of the service perception gap. This indicates that satisfied lecturers might not necessarily be customer focused, which proves otherwise as contended in the literature discussed earlier. Perhaps, the nature of work in higher learning institutions is different from other service sector leads to this type of finding. Academic staff of these institutions is described to be enjoying their work and having good relationships with their co-workers, however they failed to have a better understanding of their students' needs. This type of employees has been identified by Piercy (1995), as "internal euphoria". According to the author, internal euphoria can be described as the situation where the employees are satisfied with their job, enjoy their co-workers' company, love their work and they like their organization. As they are having a good time with their job, they do not bother to understand their paying customer.

Probably, the first possible explanation to the situation is due to the perceptions of the lecturers towards their students. Conant et al. (1985) stressed that traditionally lecturers perceived students as the product of their university, but not their customers. There is a likelihood that this kind of perception still applies in these institutions. Therefore, when lecturers do not perceive students as their customers they will not take the "extra miles" to learn and understand the needs of their students better.

The second possible justification that supports the findings of the study is that academic staff who are satisfied on the several aspects of their job role is the group of people that may be enjoying their work, which include mainly researching and publishing apart from teaching. It is widely accepted that, academic staff's promotion exercises are based mostly on their superb work in conducting research and making publications and less emphasis on teaching. Teaching is said to

be “a must”, everybody have got to do it. Inevitably, the focus of these satisfied academic staff would most likely be on areas, which carry more weight in their performance evaluation – researching and publishing. Without realizing it, the call for duty to do researching and publishing will be top in their priority list and perhaps this would reduce their time to pay attention in understanding students’ needs.

The third probable explanation to this kind of finding is, perhaps, related to the type of respondents involved in the research who are described as majority young and most of them have recently joined the present institutions and only worked for less than six years, therefore they are relatively inexperience. As we all have already known, young and inexperience academic staff would probably need more time to do preparation for lecturing and in the process of mastering and enhancing their teaching skills, apart from they are also encouraged to do research and publish, which leave them little time to really understand students needs.

Although the findings of our research are backed by convincing statistical evidence, but we would like to remind the readers to exercise some cautions when interpreting the finding of our research due to several limitations. First, we measure customer-focused by using the service perception gap which may be to some researcher insufficient to cover the definition of customer-focused comprehensively. Perhaps in future research, the measurement of customer-focused should include other validated dimensions that measure the construct. Secondly, all the data were gathered from only education industry in a limited geographic area that is in the East Coast of Malaysia and generalizing the results to higher education industry as a whole is unlikely possible. It would be interesting to replicate the study on a national sample. The third limitation is that our study did not include personality traits that might have impact on lecturers to become customer-focused. Although the study is able to prove that satisfied employees are customer-focused, the detail analysis (regression analysis) indicates that employees job satisfaction have no impact on the size of the service perception gap which is used to measure customer-focused in our research.

In summary, our research suggests that satisfied academic staff may not necessarily be customer-focused or otherwise. Perhaps lecturers’ service-mindset has influence on being customer-focused. Therefore to build student-focused lecturers the management of the public higher learning institutions needs to develop appropriate service mindset among lecturers, besides the management also shares the same service mindset, probably through training and short courses. In addition, the research suggests that academic staff performance evaluation should put equal weight particularly, on teaching, researching and publishing. The findings of the research suggest that further research to identify factors that contribute significantly academic staff becoming customer-focused. In our view, further research should include studying the underlying personality traits (e.g. extroversion, agreeability) of lecturers, so that understanding of factors, which explains why academic staff are more student-focused than others, can be determined.

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Generic Skills Assessment in a Malaysian Tertiary Institution: A survey of Stakeholders' Perceptions

Enn Ong
Head of Studies, Swinburne Sarawak Institute of Technology
Raj Sharma
Associate Director, Resource Planning & Analysis, Swinburne University of Technology
Ken Heskin
Deputy Vice-Chancellor and CEO Swinburne Sarawak Institute of Technology, Sarawak

Abstract

The impetus for the greater focus on generic skills development in tertiary education internationally has its roots in documents such as the Dearing Committee Report published in the UK in 1997. What are generic skills? Which ones are important to students, academic staff and potential employers? This study considers such issues from the perspective of various stakeholders of a Malaysian tertiary institution. Areas of convergence and divergence of stakeholder viewpoints are considered. Academic policy implications of the findings of the study are considered in the context of a South East Asian country.

INTRODUCTION

Tertiary education is now a mass activity rather than an elite activity. Developed countries such as Australia are finding an increasing number of their degree graduates who are equipped with theoretical knowledge re-enrolling for technical and further educations certificates and diplomas to equip themselves with hands on practical skills prior to obtaining employment. On a similar note, developing countries are finding the need to produce knowledge workers who have life long learning skills and the capability for continuous update their knowledge. To enable successful employment and career paths there is an increasing need for graduates to "hit the ground running" and to be able to continue running in their workplaces. This highlights the increasing importance of generalist or generic skills and the need to incorporate them within tertiary programs to successfully produce employment ready graduates. However, identifying the right combination of generic skills is not an easy task and requires input from the stakeholders.

METHODOLOGY

In order to ascertain the important generic skills as perceived by the stakeholders to aid in our attempt to identify a good combination of generic skills to incorporate, we surveyed our current degree students and academic lecturers. The generic skills survey investigated these important issues:

- The survey enquired if the stakeholders were aware that some of these generic skills were already embedded within our courses.
- The survey required the students to rate the programs contribution to the development of 15 generic skills and the importance of these generic skills as perceived by the students.
- The survey highlighted 35 generic skill outcomes and asked the stakeholders to indicate the importance of each from a scale ranging from not important at all to very important.
- The survey investigated each individual students perception of accomplishment for each of the 35 generic skill outcomes.

- Gender differences in terms of generic skills perceptions of students by program was also considered and significant differences highlighted.

Over one hundred surveys were completed for this study, which comprised of 81 students and 23 academic lecturers. These completed surveys were collated and compiled, with the results highlighted and reported within this paper.

LITERATURE REVIEW

Kerka (1992) indicates that that US movement to integrate vocational and academic education found that high order thinking skills are essential and must be taught. This proponent suggested the ability to think creatively, making decisions, solve problems, visualise, reason, analyse, interpret and know how to learn are the most often mentioned components of the definition of critical thinking. Further Kerka (1992) indicated that characteristics of critical thinkers are perseverance, flexibility, meta-cognition, transfer of knowledge, problem orientation, open mindedness, use of quality standards and independence; it is stated that this list represents the many descriptions of the desirable qualities of the future workforce.

Ng, Heskin and Sharma (1994) studied the stakeholders' priority regarding generic skill outcomes from an Australian program. They found that all three stakeholders including students, staff and employers were in agreement in terms of five priorities that could define generic skills including analyse and solve workplace problems, develop professional skills, ability to work unsupervised, ability to think laterally and think logically and critically. However, they found that students perceived the importance of writing skills significantly lower in importance than either staff or employers. It is noted that the present study largely uses the instruments developed by Ng, Heskin and Sharma (1994).

Jackson (1997) notes that a sensitive point in universities is whether more attention should be given to the training of students to make them more suitable for employment in the corporate world. He indicates that while some academic staff are nervous about universities abandoning their traditional emphasis on the liberal arts, other academics argue that unless universities cater more to the employment needs of students and to the needs of employers for suitably trained individuals, they will become less vital as students opt for training programs in other educational institutions. Jackson (1997) concludes that it is in the acquisition of key generic skills that the job concerns of students, the interests of their traditional liberal arts university, and the needs of their corporate sector meet.

Imel (1999) suggests that during the past two decades, skills needed to succeed in the workplace have changed significantly. Although suggesting that technical skills remain important, she notes that increasingly employers recognise that it is another category of skills that are crucial to our workers ability to work "smarter, not harder". Imel (1999) notes that generic skills (or other labels used for it including "soft skills", "core skills", "non-technical skills", "essential skills", or "new basics") are required for organisations to adopt new forms of organisation and management in which workers operate in teams with greater autonomy and accountability.

An Australian Department of Education, Training and Youth Affairs (2000) publication reported on a research undertaken by AC Nielsen who conducted research project to establish the extent of employer satisfaction with the skills of new graduates entering the labour market in Australia. It established that, taking into account the relative importance of the skills to employers, the greatest skill deficiencies among new Australian graduates were perceived to be in the areas of:

- Creativity and flair;
- Oral business communications; and

- Problem solving.

A recent document by the New Zealand Department of Labour and Ministry of Education (2001) notes that New Zealand's workforce needs a higher level of generic, transferable skills. This is considered essential to give their workforce the flexibility that is needed to meet the challenges in the knowledge economy. The document observes that New Zealand's industry training system of the future inter alia requires to raise the quantity and quality of skills held by the workforce; respond rapidly to changing skill needs of the economy; equip more New Zealanders to successfully participate in the workforce; and become more accessible and responsive to all groups in the workforce, including minorities.

SURVEY OF GENERIC SKILLS

Students' Perceptions

The first series of questions considered the programs contribution to the development of generic skills and students. Here a 4-point scale was used ranging from 1 (no contribution) to 4 (great contribution). It is noted that the course under study made the maximum contribution to the students' ability to learn new skills and procedures, be open to new ideas and possibilities and think and reason logically. The mean scores in these three cases were above 3 suggesting a significant contribution being made towards the formation of these skills. The three areas with the lowest program contribution to the formation of generic skills included understanding the ethics and social/cultural implications of decisions, question accepted wisdom and communicating in writing. However, as can be seen from Table 1, the program under study made very significant contribution to the students ability to communicate orally, work in a team, make decisions, solve problems, adopt knowledge to new situations, work with minimum supervision, think creatively, analyse, and make mature judgement.

TABLE 1: Development of Generic Skills: Program Contribution

GENERIC SKILL	PERCEIVED MEAN CONTRIBUTION SCORE
Communicate Orally	2.74
Communicate in Writing	2.60
Learn New Skills and Procedures	3.15
Work in a Team	2.86
Make Decisions	2.75
Solve Problems	2.74
Adopt Knowledge to New Situations	2.96
Work with Minimum Supervision	2.64
Understand the Ethics and Social/Cultural Implications of Decisions	2.42
Question Accepted Wisdom	2.59
Be Open To New Ideas and Possibilities	3.09
Think and Reason Logically	3.09
Think Creatively	2.77
Analyse	2.95
Make Mature Judgement	2.81

The next question sought student's response to the question "Are you aware of the generic skills within your course?" 60.5% of the respondent did have awareness of generic skills with 13.2% not being aware and a significant proportion (26.3%) only becoming aware of the issue of generic skills through

this survey. This suggests that the survey had a positive effect of raising awareness of such skills on campus.

The next section in the questionnaire requested the students to indicate with simply a tick if the listed generic skills were regarded important to them. The results are shown in Table 2 below. Table 2 suggests a relatively high proportion (greater than 70%) assigning importance to a number of generic skills including communicate orally, plan new skills and procedures, solve problems, be open to new ideas and possibilities and capacity to analyse situations. Generic Skills that were considered unimportant to the students included work with minimum supervision, understand the ethics and social/cultural implications of decisions and to question accepted wisdom.

TABLE 2: Importance of Generic Skills to Students

GENERIC SKILLS	% OF STUDENTS REGARDING IT IMPORTANT TO THEM
Communicate Orally	72
Communicate in Writing	60
Learn Knew Skills and Procedures	75
Work in a Team	69
Make Decisions	68
Solve Problems	74
Adopt Knowledge to New Situations	67
Work with Minimum Supervision	47
Understand the Ethics and Social/Cultural Implications of Decisions	43
Question Accepted Wisdom	35
Be Open To New Ideas and Possibilities	71
Think and Reason Logically	70
Think Creatively	67
Analyse	71
Make Mature Judgement	60

Next part of the questionnaire listed 35 possible outcomes in terms of generic skills for the students from the Institute and sought student opinion on a 5 point scale ranging from 1 (Not Important at all) to 5 (Very Important). Table 3 provides the mean score in terms of each of the 35 generic skills outcomes. It suggests that the top ten generic skills outcomes of importance to students include capacity to think logically and critically; proficiency in analysing and solving problems in the workplace; understanding of career options and establishment of career goals; competence to speak well in public; self confidence; knowledge for continued growth and self development; ability to listen to people carefully and understand what they are really saying; ability to plan; self discipline and ability to manage time. The ten least important perceived generic skills outcomes from the Malaysian Institute include ability to serve society in useful ways; ability to avoid and resolve inter personal conflicts and difficulties; capacity to contribute to the development of the community; development of personal and ethical values; sensitivity to other peoples problems and difficulties; understanding and appreciation of Social and Behavioural Sciences; understanding and appreciation of Mathematical disciplines; competence to use Library and other information resources; ability to think laterally; and sensitivity to other people's problems and difficulties.

Students were then asked to indicate their degree of accomplishment of the previously mentioned 35 generic skills outcomes. The mean accomplishment scores are contained in Table 4 below. They

suggest that the top ten most accomplished generic skills include capacity to think logically and critically; understanding of career options and establishment of career goals; awareness of consequences (good and bad) of new technology on people and their environment; self-confidence; knowledge for continued growth in self-development; competence to use library and other information resources; ability to listen to people carefully and understand what they are really saying; ability to plan; capacity to function affectively as part of a team; and self-discipline. However, the ten least accomplished generic skills include ability to serve society in useful ways; preparation for further postgraduate study or specialist training; capacity to contribute to the development of the community; proficiency in analysing and solving problems in the workplace; development of personal and ethical values; sensitivity to other people's problems and difficulties; competence to speak well in public; knowledge to appreciate and maintain professional ethical standards; ability to earn a good salary; and ability to generate wealth in commerce or industry. Assuming that the students can identify reasonably which generic skills are important to them, it may be necessary for the institute to bring about the learning environment conditions to achieve such generic skills.

TABLE 3: Mean Importance of Possible Generic Skills Outcomes

GENERIC SKILL	MEAN IMPORTANCE
An understanding of themselves and their potential	4.07
Ability to serve society in useful ways	3.72
Capacity to think logically and critically	4.26
Preparation for further postgraduate study or specialist training	4.07
Ability to avoid and resolve Interpersonal conflicts and difficulties	3.84
Capacity to contribute to the development of the community	3.82
Proficiency in analysing and solving problems in the workplace	4.20
Ability to write well	3.91
Development of personal and ethical values	3.72
Sensitivity to other people's problems and difficulties	3.57
Understanding of career options and establishment of career goals	4.22
Competence to speak well in public	4.24
Understanding and appreciation of social and behavioural sciences	3.82
Knowledge to appreciate and maintain professional ethical standards	4.01
Awareness of the consequences (good and bad) of new technology for people and the environment	4.09
Understanding and appreciation of mathematical disciplines	3.78
Self-confidence	4.28
Knowledge for continued growth and self-development	4.22
Ability to earn a good salary	4.10
Competence to use library and other information resources	3.86
Ability to listen to people carefully and understand what they are really saying	4.23
Capacity to be trainable or re-skilled to the changing needs of the workforce	4.01
Ability to think laterally	3.89
Ability to generate worth in commerce or industry	4.05
Self-reliance	4.15
Initiative	4.12
Ability to plan	4.37

Capacity to function effectively as part of a team	4.15
Capacity to attend to detail	3.95
Self-discipline	4.17
Ability to manage time	4.32
Capacity to work with minimum supervision	3.94
Sensitivity to other people's problems and difficulties	3.75
Ability to elicit accurate information from others	4.00
Motivation and enthusiasm for work	3.96

In other words, all other things being equal, the generic skills that recorded high priority by students (who after all are paying clients) would also score highly in terms of accomplishment. Fortunately this intersection of importance and accomplishment is achieved in seven out of ten cases including capacity to think logically and critically; understanding of career options and establishment of career goals; self confidence; knowledge for continued growth and self-development; ability to listen to people carefully and understand what they are really saying; ability to plan; and self-discipline.

TABLE 4: Perceived Degree to which Generic Skills are being accomplished

GENERIC SKILLS	**MEAN ACCOMPLISH-MENT SCORE**
An understanding of themselves and their potential	3.10
Ability to serve society in useful ways	2.81
Capacity to think logically and critically	3.37
Preparation for further postgraduate study or specialist training	2.94
Ability to avoid and resolve interpersonal conflicts and difficulties	2.99
Capacity to contribute to the development of the community	2.67
Proficiency in analysing and solving problems in the work place	2.82
Ability to write well	3.05
Development of personal and ethical values	2.96
Sensitivity to other people's problems and difficulties	2.93
Understanding of career options and establishment of career goals	3.21
Competence to speak well in public	2.96
Understanding and appreciation of social and behavioural sciences	2.99
Knowledge to appreciate and maintain professional ethical standards	2.97
Awareness of the consequences (good or bad) of new technology for people and environment	3.29
Understanding and appreciation of mathematical discipline	3.08
Self-confidence	3.26
Knowledge for continued growth and self-development	3.28
Ability to earn a good salary	2.58
Competence to use library and other information resources	3.30
Ability to listen to people carefully and understand what they are really saying	3.41
Capacity to re-trainable or re-skilled to the changing needs of the work force	3.07
Ability to think laterally	3.04

Ability to generate wealth in commerce or industry	2.66
Self-reliance	3.18
Initiative	3.18
Ability to plan	3.26
Capacity to function affectively as part of a team	3.37
Capacity to attend to detail	3.15
Self-discipline	3.30
Ability to manage time	3.14
Capacity to work with minimum supervision	3.06
Sensitivity to other people's problems and difficulties	3.13
Ability to elicit accurate information from others	3.12
Motivation and enthusiasm for work	3.14

STAFF PERCEPTIONS

The student questionnaire was also administered in part to academic staff. This section analyses staff responses to this instrument. Academic staff was asked to indicate whether they were aware of the embedded generic skills within the programs taught at the institution. 68.4% indicated that they were aware of these skills but 31.6% only became aware as part of this survey. Again it appears that the survey served an important role in raising awareness of the issue of generic skills formation within the institution and its programs.

The next question asked academic staff to indicate how important the generic skills were to them as teachers. Unfortunately virtually all the 15 generic skills listed were ticked as being important by most of the lecturers. Only three were rated below 80% including understanding their ethics and social/cultural implications of decisions (70%), question accepted wisdom (61%) and make judgement and take responsibility in moral, social and practical matters (78%).

Academic staffs were also asked to indicate their estimate of the importance of possible outcomes of the previously mentioned 35 generic skills. The perceived importance scores are contained in Table 5 below. It shows that the top ten most important generic skills include capacity to think logically and critically; proficiency in analysing and solving problems in the work place; knowledge for continued growth and self-development; ability to listen to people carefully and understand what they are really saying; self-reliance; initiative; self-discipline; ability to manage time; capacity to work with minimum supervision; and motivation and enthusiasm for work. However, the academic staff regarded a number of generic skills as being the least important including ability to serve society in useful ways; preparation for further postgraduate study or specialist training; capacity to contribute to the development of the community; understanding of career options and establishment of career goals; competence to speak well in public; understanding and appreciation of the social and behavioural sciences; understanding and appreciation of mathematical disciplines; ability to earn a good salary; ability to generate wealth in commerce or industry; sensitivity to other people's problems and difficulties.

GENDER DIFFERENCES

Gender differences in terms of generic skills perceptions of students by program was considered. In terms of the Business program, the following important gender differences are noted:

- Female students rated the capacity to contribute to the development of the community (mean = 4.2) as of greater importance than male students (mean = 2.5) with the difference being highly significant (t=6.3, p is less than 0.01).

- Female students also rated their achievement in the knowledge to appreciate and maintain professional ethical standards (mean = 3.1) greater than male students (mean = 2.5) with the observed differences being statistically significant (t = 2.1, p is less than 0.05).

- Further, female students perceived greater achievement of the generic skill "awareness of the consequences (good and bad) of new technology for people and environment" (mean = 3.32) than male students (mean = 2.6) with the difference being statistically significant (t = 2.14, p is less than 0.05).

- Female Business students also scored more highly in their perceived achievement of ability to listen to people carefully and understand what they are really saying (mean = 3.83) in comparison to male students (mean = 3.18) and the difference was statistically significant (t = 1.86, p is less than 0.05).

TABLE 5: Staff Estimate of Importance of Possible Generic Skills Outcomes

GENERIC SKILLLS	**MEAN PERCEIVED IMPORTANCE**
An understanding of themselves and their potential	4.35
Ability to serve society in useful ways	4.22
Capacity to think logically and critically	4.78
Preparation for further postgraduate study or specialist training	3.78
Ability to avoid and resolve interpersonal conflicts and difficulties	4.26
Capacity to contribute to the development of the community	4.22
Proficiency in analysing and solving problems in the work place	4.65
Ability to write well	4.39
Development of personal and ethical values	4.39
Sensitivity to other people's problems and difficulties	4.26
Understanding of career options and establishment of career goals	4.22
Competence to speak well in public	4.22
Understanding and appreciation of social and behavioural sciences	3.83
Knowledge to appreciate and maintain professional and ethical standards	4.39
Awareness of the consequences (good and bad) of new technology for people and the environment	4.30
Understanding and appreciation of mathematical disciplines	3.78
Self-confidence	4.61
Knowledge for continued growth and self-development	4.70
Ability to earn a good salary	3.61
Competence to use library and other information resources	4.39
Ability to listen to people carefully and understand what they are really saying	4.74
Capacity to be trainable or re-skilled to the changing needs of the work force	4.61
Ability to think laterally	4.43
Ability to generate wealth in commerce and industry	3.48
Self- reliance	4.65
Initiative	4.74
Ability to plan	4.61
Capacity to function affectively as part of the team	4.57

Capacity to attend to detail	4.26
Self-discipline	4.74
Ability to manage time	4.74
Capacity to work with minimum supervision	4.70
Sensitivity to other people's problems and difficulties	4.24
Ability to elicit accurate information from others	4.55
Motivation and enthusiasm for work	4.70

Similarly statistical testing of gender differences in terms of the Engineering program revealed the following:

- The only statistical significant result was the higher importance score assigned by female students to the ability to write well (mean = 4.4) in comparison to male students (mean = 3.5) and the result was statistically significant ($t = 2.12$, p is less than 0.05).

Finally these statistical testing on Information Systems students revealed only one significant result, namely, female students have felt that their courses contribution to communicate in terms of writing was great (mean = 3.25) in comparison to male students (mean = 2.29) with the result being statistically significant ($t = 2.26$, p is less than 0.05).

DISCUSSION AND CONCLUSION

This study has attempted to ascertain which generic skills should be included in our tertiary programs through a survey of the stakeholders. Assuming that the students and staff surveyed can reasonably identify the important generic skills quite a few interesting results can be summarized from the collected and collated data. These results can help the institution to develop suitable learning environment conditions, which incorporate these identified generic skills.

Summary of interesting results:

- Our tertiary programs contribute to the development of the generic skills ranked as important by the students. Our programs made significant contribution to the six generic skills regarded as important by the students.
- Over 60% of the staff and students indicated that they were aware of the generic skills within our tertiary programs. However 31.6% of staff and 26.3% of students only became aware of the issue of generic skills through this survey.
- The intersection of importance and accomplishment is achieved seven out of ten cases.
- Six out of the top ten generic skills outcomes of importance to students and staff matched.
- Five out of the ten generic skills outcomes perceived as least important to students and staff matched.
- Engineering female students assigned a higher importance score to the ability to write well. Whereas Information Systems female students felt that their course contributed more in writing communication.
- Business female students perceived a higher degree of accomplishment than their male counterparts in the knowledge to appreciate and maintain professional ethical standards; their awareness of the consequences (good & bad) of new technology for

people and the environment; and their ability to listen to people carefully and understand what they are really saying.

We are planning to make these generic skills surveys an annual exercise in our institution and will also be extending the survey to employers in the Sarawak region. If the continuing annual survey results of the three stakeholders confirm the above findings, we will be able to establish a set of useful guidelines to aid in enhancing the quality of teaching and learning processes in our institution by focusing attention on the specific generic skills outcomes viewed as important by the stakeholders.

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A Socialisation Model for Information and Communication Technologies: Towards the Professional Development of Teachers

Judith Guevarra Enriquez
School of Engineering, Curtin University of Technology, Sarawak

Abstract

This paper suggests a socialisation model that may serve as a guiding framework for the formulation of educational policies that relate to the employment of information and communication technologies (ICT) in teaching, and towards improved quality assurance in educational institutions .The model is derived from the analysis and investigation of the cultural aspect that influence and to some extent control the integration of technology into 'teacher teaching'. It investigates the conditions for effective professional development of the teaching practices of teachers whose roles and functions have been changing. Teachers play a central role in influencing the level of technology use by students for their learning and of educational institutions in general. Issues of the conditions of the professional development of teachers also point to contextual factors that determine the level of integration of ICT into the classroom, which are technical, personal and social in nature. It is within the interplay among these conditions, and contextual factors of ICT integration into actual teaching practice that a socialisation model of technology is presented, and within which educational policies and quality assurance in terms of ICT use may be guided.

INTRODUCTION

With projects on ICT integration into schools both in Australia and the UK, the common realization in the integration of ICT has always come to a 'way forward' that is focus not so much on the technology itself but on the teaching and learning processes, wherein technology becomes a means not an end in rethinking pedagogy (*i.e.* Australian Council for Computers in Education, 1999; Frayer, 1999).

On closer inspection, technology is by no means culturally neutral nor is it just another tool outside the cultural reality of schools (Apple, 1979; Schostak, 1988; Friedrich, 1999; Brown and Duguid, 2000). Rather, it is a cultural system, which consists of a subsystem of technological knowledge, technical actions and technological artefacts (Dutton, 1996). Thus, in this paper, ICT is understood as this cultural system of complex knowledge, actions and artefacts.

In a modernist perspective of treating technology separate from culture, there is the tendency to regard it as the legitimate yardstick imposed on the 'way we do things'. However, an effective application of skill with ICT is not solely determined by technology competency in terms of computer literacy, rather, with a high level of computer self-efficacy as well, which is highly influenced by cultural factors within the school environment of teachers.

Training teachers to use computer and software applications will not necessary change neither the way they teach nor the way they relate and perceive their roles. It is no guarantee that the incorporation of ICT into the classroom setting will change the culture and habitual arrangement of things even the teacher-student relationship (Somekh and Davis, 1997).

Once again, this brings to perspective that technology with its innovations must be integrated into the existing cultural tradition and not forced upon it (Friedrich: 1999). Thus, changing the culture of institutions is the real agenda and issue to transform teaching and learning (Atkinson, 1990; Fullan, 1993).
This paper directs its focus on teacher teaching rather than student learning in ICT integration. The underlining assumption of this perspective is that all claims regarding learning technologies will ultimately have significant impact if and when teachers are able to use ICT effectively and personally in their teaching as they engage students in classroom interaction.

Stoll and Frank (1996) has captured the theme of this paper in the following words:
'Probably nothing in a school has more impact on students in terms of skills development, self-confidence, or classroom behaviour than the personal and professional growth of their teachers' (p152).

It is 'skills development' and 'self-confidence' of teachers that are believed to influence their 'classroom behaviour' within the conditions that exist in the schools. These conditions include the kind of technological infrastructure that is in place, the guiding principles and learning goals shared among teachers and with the administrators and lastly, the rewards that are present as incentives and benefits.

Cheng (1996) defines a school as *"an organisation in a changing and complicated social context, bounded with limited resources and involving multiple constituencies such as education authorities, school administrators, teachers, students, parents, taxpayers, educators, and the public"* (p3). This definition is adapted to define all levels (from primary to secondary) of educational institutions (from schools to private institutes) in this paper. The rationale for doing this is that educational challenges in terms of ICT use in the teaching practice are also pressing realities at tertiary education, though much of the studies that have been dominantly funded and initiated by the government in ICT integration into teaching and learning have focused on primary and secondary levels of schooling.

Research in higher education has largely focused on open and distance education (*i.e.* Brown, 1997; Bennett, et. al., 1999; Katz, et. al., 1999), which almost assumes ICT competency among educators at tertiary level.

It begins with the discussion of educational context and conditions of work of teaching in schools. This is followed by the changing roles of teachers with the deployment of computers and employment of learning technologies. Then, from the educational context and conditions of work of teaching described, the inter-process of socialisation between the necessary conditions for professional development of teachers and the contextual factors of the technological integration that influence and determine teachers' involvement and role in ICT integration will be analysed within different integration strategies applied in schools. Finally, a socialisation model of technology is presented as a guiding framework for a cultural change in educational institutions with the integration of ICT into the teaching and learning practices. Furthermore, the socialisation model may provide insight on how policies may be redefined to support and sustain the professional development of teachers.

This paper suggests a model for the process of technology integration towards the professional development of teachers termed as 'socialisation'. The term is commonly used in another discipline, *i.e.* psychology or child development, where it generally means a social process by which individuals learn skills, knowledge, values, motives and roles *acceptable* and *appropriate* to their physical and social environments.

'Socialisation: The social process through which children develop an awareness of social norms and values and a distinct sense of self'. (Giddens, 2001:699).

However, the term is used in this paper not in direct reference to human development but rather as the 'social process' necessary for the *acceptance* of teachers of ICT in teaching and the *appropriateness* of ICT use in the current conditions of teaching.

EDUCATIONAL CONTEXT AND CONDITION OF TEACHING

Before the advent of computer technology, schools are viewed as "closed systems" wherein the importance of the wider environment or context is not fully recognized, as schools tend to be, generally, non-politicised in a sense that they are not exposed to different levels of external criticism and stakeholder involvement, with less change and with high regard of teacher status (Dinham and Scott, 2000).

However, with the advancement of technologies, the demand of technological changes through different government initiatives impinge on schools exclusive domain. This has forced teachers to be open and to participate more with the external environment, which has designated them the sole responsibility of producing citizens who qualify with the mandated directives of economies or global processes. Thus, the conception of a clear boundary between what is internal and external to schools has slowly been blurred by the deployment of ICT.

'Schools and teachers are thus exposed as never before to "outside" influences' (Dinham and Scott, 2000:392). This reality widens the context and conditions of work of teachers. And in such an educational context, a teacher is criticized for being outdated or 'out of touch' with the current demands and development in society. Thus, this questions the teacher's ability to prepare students to meet up with socio-economic expectations.

In short, teachers are expected to teach with ICT wherein the teaching conditions and requirements go beyond the classroom and wherein the issues involved are not within their control or 'power'.
In this 'open' school environment, teachers are expected to play different roles for their students, but schools usually limit them to the roles dictated by the transfer model of education.

According to Scrimshaw (1997:112), "teachers need to teach the processes of learning rather than its products [and a] teacher is to assist learners to find out how to collaborate with and learn from others". However, teachers themselves need more opportunity and support in using the new technologies in collaborative contexts. For example, in Malaysia, the dominant pedagogy in secondary schools is still having teachers as information provider and students as passive receptacles of information and the students are basically assessed based on their retention and recall of the information provided by their teachers (Ahmad, 1998).

Teachers at this point are learners too who have been 'products' of a similar educational system where they find themselves teaching. Thus, their background of study with technology is most probably the blackboard and the textbook – a mono-media orientation, which has not changed much. However, this orientation is now challenged with the multimedia exposure of the students. And the integration of ICT demands the teachers to adapt this multimedia orientation in their teaching.

Having identified changes in the teaching condition, the key reality that has to be taken into account in the educational context of teachers is their level of satisfaction in teaching. According to Dinham and Scott (2000):

'Overall, teachers' major sources of satisfaction were found to lie within the domain of the 'intrinsic' rewards of teaching and centred on pupil and teacher achievement, while dissatisfaction was found to be more 'extrinsic' to the core business of teaching and centred on societal factors, the employer and governments' (p380).

If this were the case, then one can almost surmise that the 'intervention' of the external environment in schools may affect teachers' satisfaction negatively. This may lead to the erosion of the intrinsic teacher satisfaction, which is "grounded within the work itself" (Dinham and Scott, 2000). The educational context and condition of teaching are presented here to introduce them as essential components of ICT in its 'socialisation' process into teacher teaching.

The conditions of professional development, which are identified as important in the 'socialisation' process of ICT are: INFRASTRUCTURE, VISION and REWARD. A professional development of any kind would not be successfully implemented without the availability and accessibility of resources required for mastering the new technology. 'Vision' refers to the shared learning goals and experience with the use of technology in teaching and learning by teachers and school administrators. Without a vision, ICT which has almost no proven value in being able to alleviate schools from its modern conception of a 'factory' may not successfully penetrate this persisting modern and bureaucratic structure of schools without a transcendental meaning for technological integration within the intrinsic satisfaction teachers find in their teaching profession. Lastly, a vision, which is geared towards a transformational leadership, is not generally cultured within a bureaucratic system of schools. Thus, to motivate teachers to be learners from a transactional leadership, reward schemes must be designed and implemented, especially if it is the case that the 'intervention' of governments or of the external domain into teachers' space generally reduced their satisfaction.

Surrounding the conditions above are contextual factors, namely, PEDAGOGICAL VALUE of the technical aspect of integration, level of computer SELF-EFFICACY of teachers and SUPPORT in terms of positive feedback and encouragement from colleagues and head teachers/administrators.

THE CHANGING ROLES TEACHERS MUST PLAY WITH ICT IN SCHOOLS

With the 'collapse of the classroom walls', the scope of professional development of teachers must be within the perimeter of the changes in the educational context and condition of teaching as presented earlier.

The multiplicity of teachers' roles and functions is emphasized with an 'open system' endorsed by the educational changes that confront schools. This multiplicity of teachers' roles has been recognized in the report by Williams, *et. al.* (1998) to Scottish Office Education and Industry Department (SOEID) as the following:

a) classroom practitioner
b) manager
c) planner
d) learner

These multiple roles overlapped and are coordinated by teachers in schools, whose functions are multi-levelled and complex within both the external and internal domains of teaching.

The technical push of different government initiatives such as the Smart School Project in Malaysia or the National Grid for Learning (NGfL) in the UK, even the Australian Council for Computers in Education (ACCE) suggest that teachers' professional lives need changing if they are to provide children with authentic learning experiences. This suggests that teachers must be able to mimic the complex realities and changes present in society at large and in effect, be able to teach with relevance and know the kind of skills and attitudes students need to develop to participate and contribute in a 'global' society.

The external domain has identified education as the catalyst and agent for social and economic change. And this notion has penetrated the internal domain of schools wherein ICT in some ways through government initiatives has decided for teachers the roles and responsibilities they should take on. Within the internal domain of teaching, it is claimed that ICT widens the teacher's range of possibilities in delivering lectures or in conducting classes in general and that it is the key resource to transform the transfer model of teaching and learning. What is most clearly propagated is that ICT will shift the teacher-centred classroom towards a learner-centred setting, wherein the key role of a teacher is a facilitator than an expert in the classroom (*i.e.* Smart School Project in Malaysia).

With the notion of globalisation, the role of a teacher encompasses an international arena beyond the classroom and yet the extended domain of the teacher's responsibilities does not broaden their authority outside the classroom walls. Furthermore, in these changed conditions in the educational context of teaching, teachers are still engaged to ensure that the students are learning and to a very large extent, that students are generally learning the same, measured with the same set of evaluation criteria for all students regardless to some extent of learning preferences (Cheng, 1996). Within a political conception of teaching, existing educational policies and practices that are imposed upon the curriculum content and assessment methods in schools may be key determinants of the level of socialisation of ICT towards the transformation of teaching and learning. Thus, in redefining educational policies towards quality in education, which largely emphasised the use of ICT, the curriculum content and assessment methods defined by the current educational practices have to be re-evaluated. The socialisation of ICT will be further slowed down if the educational policies fail to reflect and attend to the educational context and changed conditions of teaching.

BEYOND ICT INTEGRATION OF TECHNIQUE

The first condition for the integration of ICT is INFRASTRUCTURE, without which integration leads to impossibility. In the early stages of adopting technology, the common issue is availability of and access to computers. Professional development of teachers begins with training on using the computer itself, software applications or productivity tools. It may be said that at the adoption stage, the professional development of teachers is focused on the technological/vocational dimension of ICT usage, wherein ICT serves the teachers administrative function for greater productivity (Johnson, 1996; Williams, *et. al.*. 1998). However, being able to serve the administrative role of teachers does not make the expense and effort put into ICT integration in schools worthwhile if it does not penetrate teacher teaching.

It is evident that at the early stage of integration, even with the necessary condition of INFRASTRUCTURE in place, contextual challenges and cultural factors emerge within the

TECHNICAL aspect of integration, especially in the transition to the adaptation stage, wherein the use of technology within the teaching and learning practices are put to test.

For example, in an LEA (Local Education Authority) project in the South East of UK, 840 teachers in primary, secondary and special education were provided with portable computers and a range of software for use in the curriculum and administration. The result of a survey conducted indicated that the actual use of the ICT resources in the classroom appeared to be limited. Besides, the project website was not used by 89.1% of the teachers involved. One of the main reasons expressed is that teachers do not see its immediate use and direct relevance to their teaching, especially when they have extra work within the school calendar of activities (Loveless, *et. al.*, 2000). Thus, the availability and accessibility of technological resources do not necessarily initiate teachers to use ICT into their teaching.

The technical context must clearly demonstrate PEDAGOGICAL VALUE in the teaching and learning practices beyond obtaining the skills necessary to use the technological resources put in place within schools. Research has gathered that training in computer skills is not sufficient, first because training does not make teachers extend their use of technology to their teaching in the classroom and that having the competency to use a computer and software applications does not guarantee competency in adapting the technology available for teaching and learning. If training can only upgrade the technical skills of teachers, then the impact of ICT may be short term. For a longer and lasting impact, training must be able to support teaching in the curriculum.

This means that the training should not be just a parade of technical skills or how to use different productivity tools and educational software. Firstly, teachers should be trained within their school context given their present technological infrastructure. Otherwise, training would be just a waste of their time and effort. Secondly, ICT must be presented convincingly to have a well-defined PEDAGOGICAL VALUE through which the curriculum can be developed and delivered. Ultimately, training must bring about 'ownership' of ICT in the teaching and learning processes espoused in practice by teachers. The identification and implementation of the possible educational potentials necessitate that teachers 'control' the curriculum content they deliver. Otherwise, teachers will avoid the use of ICT and remain within the comfort of their most familiar pedagogy.

ICT INTEGRATION GETTING PERSONAL

As already mentioned, the whole socialisation process may be slowed down by the political function of teachers in which the curriculum content and assessment methods may not be easily modified by teachers as they are provided and mandated from the top. In the research of Pratt (1997), one of the reasons identified as hindrances or which delay the incorporation of ICT into teaching and learning is *"the difficulty in getting the correct balance between the development of teachers' skills and curriculum implementation"* (p245).

This reiterates what Heppell (1995) has illustrated in a simple analogy:

'Imagine a nation of horse riders with a clearly defined set of riding capabilities. In one short decade the motorcar is invented and within the same decade many become highly competent drivers, extending the boundaries of their travel as well as developing entirely new leisure pursuits (like car racing). At the end of the decade government ministers want to assess the true impact of automobiles on the nation's capability. Extrapolating from the present model, they would do it by putting everyone back on the horses and checking their dressage, jumping and trotting as before, looking to see if the advent of cars had developed better riders' (p104).

This reality of new skills being applied and assessed using old techniques happens basically because the curriculum content and assessment methods remain unchanged and the school culture is difficult to penetrate. As Irving (1999) pointed out, *"secondary school pupils… are still locked into a culture of examinations and academic success, graded in accordance with their ability to internalize and regurgitate given knowledge, with little demonstration of its applicability"*(p421). Teachers generally do not have a clear sense of the reasons for educational change (Fullan, 1991). They do not question their teaching practices and are well satisfied with the current educational processes (Underwood, 1997 cited by Cox, *et. al.,* 1999).

One of the roles of teacher identified in section III is being an effective learner, which emphasizes on lifelong learning to maintain his/her high status in society. And yet, there is little evidence that teachers are 'personalising' ICT as a learning tool for themselves (Williams, *et. al.,* 1998). It seems, if at all the computer is used in the classroom, it is mainly used to support the traditional teaching practice (Jager and Lokman, 1999). As reported to SOEID, "word-processing is the most frequent use, and for many teachers the only use, made of computers" (Williams, *et. al.*, 1998, Online).

Teacher training does not produce teachers who perceive ICT to be an integral part of their teaching profession except that it is a requirement of government initiatives and projects. It is still a common perception among teachers that ICT should be treated and taught as a separate subject and that it is just another tool (Johnson, 1996; Jager and Lokman, 1999).

Based from the teachers' roles identified in section III, teachers seem to only adapt ICT in their 'planner' and 'manager' roles and not so much as learners for their teaching and professional development. This scenario may be explained with their limited exposure and experience in using ICT and the curriculum design from content to assessment has remained within its political format of uniformity and conformity of students who are measured and controlled within the persisting modern structure and culture of bureaucratic school organization.

In the report to SOEID, it was clearly stated, "if ICT is to be an integral element of teaching and learning, it is also vital that teachers are able to relate the training they are offered to their existing goals and aspirations" (Williams, et. al., 1998, Online). Thus, VISION becomes another necessary condition for the integration process, wherein teachers must learn to reflect upon their teaching practices and be able to set personal goals for developing skills that are appropriate for their personal needs and professional development.

Such motivation to set learning goals may be the thread that will direct the professional development of teachers in ICT towards the promotion of lifelong learning. However, such condition, which may be said to be vital in establishing the 'culture for change' in schools, is not easily found within the existing organizational structure wherein there is adherence to transactional leadership.

To further demonstrate that VISION is an essential component of ICT integration, Speier *et. al.* (n.d.), in their research findings on attitudes toward computers and how these affect performance, suggest that training does not directly mitigate technology apprehension. Teachers' attitudes do not change with training but rather in being able to see beyond the computer as a tool, focusing on learning goals that may be achieved with the use of ICT.

And to set learning goals for their teaching that improve the learning outcomes of students, teachers must be able to concretise their goals through effective use of learning technologies.

They must develop more confidence in their use of technology through increased computer self-efficacy (CSE).
'Self-efficacy' can be defined as the beliefs of a person have about their capabilities to successfully perform a particular behaviour or task or more specifically, to actualise learning goals. CSE, which relates with teachers' attitudes toward technology use, is an important PERSONAL factor identified to be crucial in determining the success of ICT integration in schools (*i.e.* Fulk, *et.al*., 1987; Pratt, 1997; Albion, 1999; Lawson and Comber, 1999). It generally refers to the confidence of teachers in using technology and their satisfaction in their profession.

A number of researches have demonstrated the correlation between CSE and computer experience of individuals, wherein the emphasis is not the experience per se but the type of experience or tasks performed with the computer, that is, the quality of experience and not the quantity (*i.e.* Hill, et al., 1987; Ertmer, *et. al.*, 1994; Compeau and Higgins, 1995). This implies that positive past experience with computers increases self-efficacy beliefs while negative experience reduces self-efficacy beliefs.
Levels of self-efficacy have been influenced by 1) computer exposure, in terms of past experience and familiarity with computer software packages, owning a computer and computer training; and 2) computer-related task in terms of task requirements, complexity of the task and motivation towards the completion of the task (Bandura, 1986). Bandura (1986 cited by Cassidy and Eachus, n.d.) suggested that the perception that one has capabilities to perform a task would increase its likelihood of reaching its completion.

The CSE of teachers implies that their attitudes towards technology form general notions or beliefs with regards to the technology itself in terms of the task they perform, the type of experience they have with the task and ultimately, the level of satisfaction in completing the task or set goal. All these point to the relevance and impact of technology in the teaching delivery employed by the teachers themselves, in short, the pedagogical value of using technology in the teaching and learning process.

ICT INTEGRATION AS A REWARDING SOCIAL ACTIVITY

Generally, the preparation required to use ICT in teaching demands a great deal of time within the existing teaching schedules of teachers. For example, in using the Internet or in designing presentation materials, the duration or length of time required to finish a targeted task is almost always approximated. Such indefinite time requirement is not at all appealing to teachers who already virtually take overtime in doing their work, especially at times where they have to mark exams, tests or homework. Consequently, such time constraint may reduce teachers' satisfaction and CSE.

To sustain teachers' motivation and vision and for the integration of ICT to have a more encouraging reception from teachers, REWARDS must be set. And there is no reward most encouraging to teachers than having some released time to allow themselves to engage in the use of technology, which will be effective if teachers are given the opportunities to engage themselves in tasks which relates to their teaching with technology and which leads them to accomplish their learning goals. Furthermore, Kobulnicky (1999) has identified two ways to motivate or reward teachers through: 1) the availability of more resources to support their independent scholarship and 2) recognition.

Indeed, the recognition of administrators or head teachers also plays an important role. Aside from the influence of the success or failure in past experiences with using technology, other

identified factors that determine levels of efficacy are 1) vicarious experience (observing others successes and failures) and 2) verbal persuasion (from peers, colleagues, relatives) (Cassidy and Eachus: n.d.). These factors reveal that the integration of ICT has to be a social activity of learning, wherein every teacher sees its pedagogical value in their teaching and learning through shared learning goals and interest in its use.

Support does not solely refer to computer training nor reward simply means released time and additional resources, but more importantly in the social context of integration, these refer to the attitudes of head teachers or educational administrators and that of fellow teachers with regards to the use of technology. Lawson and Comber (1999) had identified that the attitude of senior management is one of the personnel factors that should be considered for integrative schools in the UK. This social factor draws towards a collaborative environment of learning-by-interaction through transformational leadership and a more collegial culture in schools.

CONCLUSION: TEACHERS SOCIALISING WITH ICT

The different conditions within the contextual factors for the 'socialisation' process of ICT that must be considered for the professional development of teachers given their changing roles within an 'open' education system are presented in a socialisation model below:

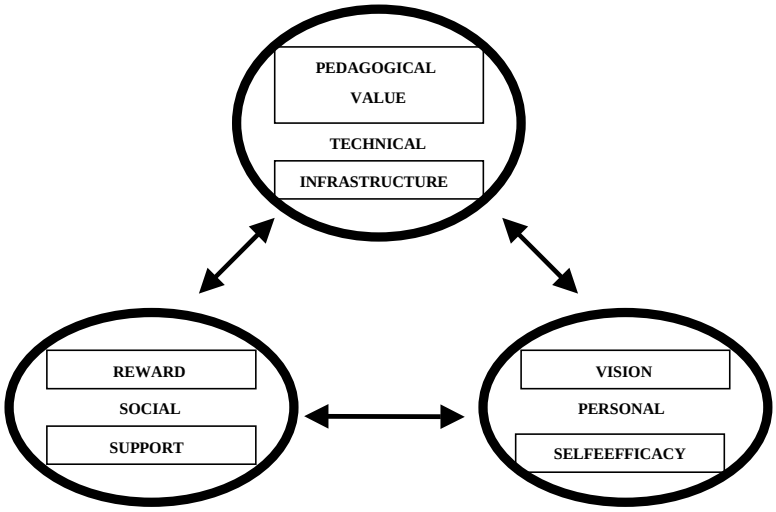

Figure 1: A Socialisation Model of ICT

In summary, the necessary conditions for the professional development of teachers are INFRASTRUCTURE, VISION and REWARD. And the following contextual factors that have emerged in the discussion regarding the process of technological integration are PEDAGOGICAL VALUE, SELF-EFFICACY and SUPPORT within the technical, personal and social aspects of the school culture surrounding the teaching environment.

Under the technical factors – infrastructure and pedagogical value, availability of resources and level of accessibility of technologies are identified. The training received must be within the available technological infrastructure of the schools. Secondly, the content of the training should be relevant to the curriculum design and the timing of the training must not be in conflict with the teaching schedule of teachers.

Under the personal factors – vision and self-efficacy, it is important to note that to effect cultural change, teachers must be able to identify with the technology they are using by having a personal purpose or a meaningful goal to achieve with the use of ICT. Secondly, they should be able to internalise the techniques and skills for lifelong learning. And thirdly, they should be able to master ICT to extend its functions for their own purpose of personal and professional development towards high level of CSE, which is influenced by the following realities:

1) Computer Exposure
- Quality of past experience and exposure
- Owning a computer
- Training and support

2) Computer-related task
- Task requirements
- Complexity of the task
- Motivation towards completion of the task

Under the social factors – reward and support, a unifying element of all factors in terms of increasing motivation among teachers is the reward scheme, which may be in the form of released time to engage themselves in the use of technologies, recognition or promotion, even stipends or student support for any of their administrative functions. Furthermore, positive impression from others may be the main contributor towards teachers' positive attitudes or motivated disposition regarding the use of learning technologies. Positive feedback from colleagues may be in the form of on-going support from senior management and positive attitudes from fellow teachers towards the use of technology.

The socialisation model presents equal considerations of the interactions of the technical, personal and social aspects of the teaching profession to achieve a cultural change that may enable teachers to adapt ICT into their teaching and respond to the demands of the external environment. Thus, in an 'open' education system and with changing teacher roles, it is inadequate to integrate technology by solely focusing on learning technology. Attention must also be directed on the educational context and condition of teacher teaching and on how the technology fits the teaching and learning process. In the socialisation of ICT into teaching and learning, the conditions for professional development and the contextual factors for technological integration must develop a 'learning culture with ICT' and not just 'learning ICT'.

In this light, educational policies may only achieve the kind of quality that suits the current educational context in being able to outline innovative and development procedures and practices that consider the following:

(a) Clear educational potential of learning technologies made available in schools (Pedagogical Value)
(b) 'Match between the technologies available and the circumstance and priorities of the educational institution' (DfEE, 1997:28, cited by Dawes, 2001:64)
(c) Match between the training and the infrastructure or technological resources available in schools for use
(d) Match between the training provided and the needs of the teaching practice
(e) 'Teacher control over curriculum content' (DfEE, 1997:28, cited by Dawes, 2001:63). Current educational policies must be able to empower the teacher in pursuing their personal vision and in innovating their teaching with ICT
(f) Reduced workload to accommodate the transition and preparation involved in using ICT tools
(g) Ease of use and relevance of the technologies available (Self-efficacy)

(h) 'A high-level of support for ICT use' (DfEE, 1997:28, cited by Dawes: 2001, p63)
(i) A high number of staff actively using ICT (DfEE, 1997:28, cited by Dawes, 2001).

In short, educational policies must be defined within the current educational context of teachers with careful consideration of the changed conditions of teaching and of the shift in perception of the teacher's status alongside their widening responsibilities both in the external and internal domains. This calls for a change towards a collegial culture under a transformational leadership in managing the curriculum. The professional development of teachers must be outlined and planned within educational policies as the kind of 'quality' that may be achieved in schools is determined by the 'quality' of teachers who engage learners in teaching and learning.

RECOMMENDATION

The socialisation model for ICT integration into teaching and learning is presented and derived in a discursive manner with full reference to studies of ICT integration in different contexts of research. This way, it is very limited. However, in its limitation, it may serve as a guide in investigating further teacher development with respect to learning technologies.

The socialisation model may also be used as a theoretical framework for the formulation of an instrument for further study of teacher teaching level of socialisation with ICT and to investigate how teachers' socialisation with ICT influence their pedagogy and assessment methods which are not directly determined and defined by them.

Lastly, further research in how the curriculum and the current educational practices may gradually be transformed towards learner-centred teaching environment within appropriate educational policies may also be pursued in being able to investigate the correlation of each of the conditions and contextual factors presented with the shaping of curriculum content on the one hand and assessment methods on the other, which have been suggested to be key determinants of the level of the socialisation of ICT into the teaching and learning practices within the socialisation model towards 'quality' in educational institutions.

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A Development of the Global-Mindedness Scale in Thai Socio-Cultural Context

Nuttaporn Lawthong
Faculty of Education, Chulalongkorn University, Bangkok, Thailand

Abstract

The purpose of this research was (1) to develop conceptual framework of global-Mindedness by reviewing literature and interviewing experts, (2) to develop a global-mindedness scale in Thai socio-cultural context, and (3) to compare how fit three measurement models of global-mindedness between and among American and Thai contexts. The sample consisted of 1,739 undergraduate students at four public universities. The research instruments were the global-mindedness scale built by Hett (1993) and the global-mindedness scale developed for Thai socio-cultural context. Confirmatory factor analyses were performed to determine the construct validity through LISREL. Pearson's product moment correlation coefficients were examined to determine the criterion-related validity. Cronbach's alpha internal consistencies were estimated for the reliability of the scales.

The results indicated that the global-mindedness scale developed for Thai socio-cultural context contained 43 items representing 4 factors, including (a) acceptance of different cultures, (b) care in the world's problems, (c) interconnectedness and peace, and (d) world citizenship. The global-mindedness scale in Thai socio-cultural context correlated significantly with Hett's global-mindedness scale at $p = 0.01$ ($r = 0.70$). The internal consistency reliability of the global-mindedness scale in Thai socio-cultural context is 0.84. Three measurement models of global-mindedness were consistent with the empirical data. The model of global-mindedness scale in Thai socio-cultural context accounted for 86 percent of variance in the global-mindedness variable. The model validation of the best-fitted model provided a chi-square goodness-of-fit test of 1.40, $p = 0.24$, $df = 1$, GFI =1, AGFI = 1, and RMR of 0.

Acknowledgement

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BACKGROUND AND SIGNIFICANCE OF THE PROBLEM

The development of well understanding among people of nations of the world has been one of the primary interests of UNESCO since 1948. They have so far organized two conferences namely "Tensions That Cause Wars" and "Toward World Understanding" both of which involve ethnic prejudice, aggressive nationalism during World War II and world-mindedness "*which views the value of perception of problems of humanity rather than that of any particular nation as essential***."** (Sampson and Smith, 1957; Saxton, 1995) The eight dimensions involving the analysis of world-mindedness are religions, immigration, government, economics, patriotism, race, education and war.

The world-mindedness scale developed by Sampson and Smith (1957) using the framework above have been used and criticized at a latter time for its lack of modernity when applied to the present social context, besides the value and concern of time limited scale. (Barnes and Curletle, 1985; Der Karabetian, Jarolimek, 1971; Der-karabetian, Shang, and Hsu, 1985; Hett, 1993; Parker, Glenn, Mizoue et al, 1997). That is, world-mindedness continues to recognize internationalism and nationalism as two different concepts rather than to incorporate them together. Despite the criticism, it has become the foundation of global-mindedness.

Hett (1993) has produced documents and research on the global-mindedness and understanding of the world by interviewing individuals of nine nationalities. The interviewees were identified through personal contacts and through regional and national professional associations in the United States of America. She analyzed the data obtained from documents and the interviews and used it to define the scope of definition for global-mindedness. The five essential key-phrases are interconnectedness of humanity, cultural pluralism, ethic of responsibility and care, futurist orientation and global-mindedness behaviours.

Hett has developed items based on these five key-phrases and used exploratory factor analysis to analyze them. It was found that global-mindedness is consisted of five dimensions: Responsibility, Cultural Pluralism, Efficacy, Global-centrism and Interconnectedness. Hett (1993) has defined global-mindedness based upon the study above as "*a worldview in which one sees oneself connected to the world community and feels a sense of responsibility for its members*." All thirty items for the global-mindedness scale developed were verified for their reliability using the internal consistency method, which was 0.90 and the alpha coefficient of five sub-scales ranged from 0.65 to 0.80. The result of factor analysis, the items loaded on a factor at above 0.35. The correlation with the Chauvinism subscale was 0.65 (when reverse scored). It showed a lower correlation of 0.32 with the International Concern sub-scale. The scale is considered modern when compared to other scales which measure similar qualities such as Attitudes of World Citizenship of Lentz (1950), World-mindedness Scale: W Scale of Sampson and Smith (1957), Culture Shock Inventory of Reddin (1975), Global-mindedness Scale for Youngsters of Schmidt (1975), Future World Perspectives Scale of Silvernail (1979) and Global Understanding Project of Barrows et al (1981).

It is obvious that most previous studies on the understanding of the world and global-mindedness are based upon western concept which is in accordance with the statement of Myong Won Suhr, Former Education Minister and the Chairman of the Presidential Education Reform Committee of Korea; "We have been encouraging westerners to be more understanding of one another for many years. Frankly speaking, people of the east know more about the west while westerners do not know the east as well" Zhou Nanzhao, educator and a professor at the National Education Research Institute, People's Republic of China, has pointed out that national and regional cultural context must be taken into consideration when contemplating of western concepts as well. (Reports of the International Committee on Education in the 21st Century to UNESCO, 1997)

Whether the use of global-mindedness scale as developed by Hett (1993) with Thai people or the development of global-mindedness framework based upon Thai socio-cultural context is more appropriate is an interesting issue. Additionally, the difference between global-mindedness in Thai socio-cultural context and its western counterpart, as well as how complete the global-mindedness would be, if the positive parts of both cultures are integrated, are not yet known. Therefore, the researcher is interested in comparing the global-mindedness scale models according to western social context, its Thai counterpart and the model integrated from western and Thai socio-cultural contexts.

PURPOSES

1. To develop a global-mindedness conceptual framework from interviews with experts and study on relevant researches and to develop a global-mindedness scale model in Thai socio-cultural context.
2. To develop a global-mindedness scale in Thai socio-cultural context from the defined conceptual framework by verifying the quality of global-mindedness in terms of internal consistency reliability, criterion-related validity, and construct validity.
3. To compare how fit three measurement models of global-mindedness scales between and among the global-mindedness model according to the Thai socio-cultural context, the model developed by Hett (1993) and the integrated one.

SCOPE OF THE STUDY

This research studied documents and researches on the development of global-mindedness scale or other scales, which measure similar qualities, based primarily on the global-mindedness scale as developed by Hett (1993). As well, the data obtained from nine experts in sociology, anthropology, political science, history and culture, economics, science, education, measurement and evaluation and fields related to global-mindedness and world study including 11 personnel of international organizations was used to develop items on global-mindedness for undergraduate students of the four regions.

METHOD

Phase 1: The development of global-mindedness conceptual framework in Thai socio-cultural context

1. Study and gather concepts and theories from documents and researches on global-mindedness and developed scales.
2. Define the group of experts and criteria of expert selection for the development of interview schedules, and interview them. This is consisted of nine experts who are academics and 11 operational personnel.
3. Analyze the content of the interviews and relevant documents to develop a scale like Likert scale or summated ratings scale.

Phase 2: Development and trial of scale

1. Develop items to measure the global-mindedness according to the conceptual framework. The experts determine the content validity by using item objective congruence index (IOC). 74 items have IOC value of greater than 0.60 while 59 of them have IOC value of 1.
2. Review items with undergraduates to determine the quality of scale by computing correlation between total score and each of the scale to select the items for actual use.

Phase 3: Scale quality verification

1. Use the selected items to obtain data from samples of 1,739 undergraduates from four universities namely Chulalongkorn University, Khon khaen University, Chiang Mai University, and Prince of Songkla University.
2. Verify the quality of the scale both in terms of construct validity, criterion-related validity and internal consistency reliability.
3. Calculate the normalized score by transforming the score obtained from the scale to T-score and percentile.

RESULTS

Global-mindedness definition and conceptual framework in Thai socio-cultural context as a result of conceptual framework, interviews with experts and study of relevant documents and researches is as follows:

Global-mindedness is an extensive view of the world that takes into consideration cultural pluralism and cares of global issues especially the use of resource and the preservation of the environment. All countries are interconnected and live peacefully together. Every human being is a citizen of the world who bears equal rights and freedom.

The four factors of global-mindedness are:

(1) Acceptance of different cultures: The appreciation and awareness of values of other cultures. One should not believe that his culture is the only perfect culture but should pay attention to the issues involving foreign cultures or languages and be eager to communicate with people of different nationalities or cultures.
(2) Care of world's problem: One must be interested in and aware of the present and possible future problems of the world especially those related to the use of resource and preservation of environment.
(3) Interconnectedness and peace: The realization of value of mutual living of the humanity in which countries provide assistance to and depend upon one another as well as the importance of living together in harmony.
(4) World citizenship: Feeling that oneself is a citizen of the global society in addition to being a member of his society or country. One should behave as a good citizen, view people of all nations and languages as equal, realize the value of fellow human beings as well as respect their rights and freedom.

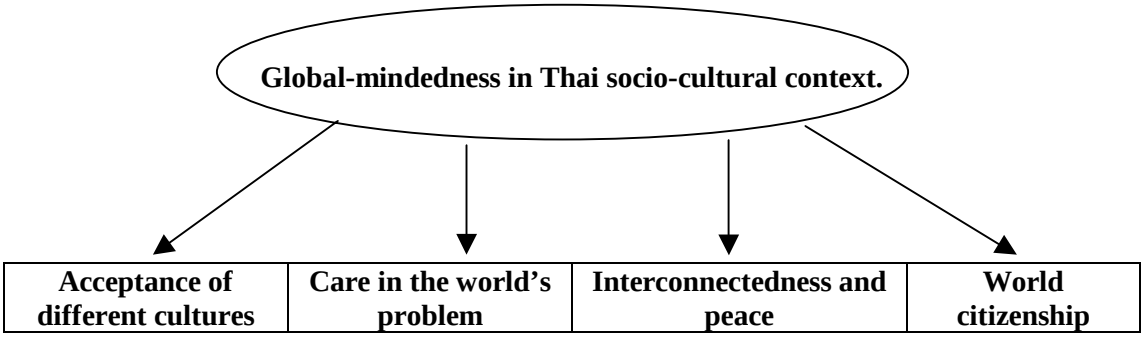


Figure 1: Model of global-mindedness measurement in Thai socio-cultural context.

The result of global-mindedness scale development from the defined conceptual framework and quality verification is as follows:

1. Construct validity

The global-mindedness scale in Thai socio-cultural context has construct validity as determined by confirmatory factor analysis. The global-mindedness scale in Thai socio-cultural context, which has four factors and 43 items, was consistent with the empirical data as shown in Tables 1 and 2.

Table 1: Appropriateness of data to using factor analysis.

Factor	Barlett's test	KMO	MSA < 0.7	Eliminated items	Number of items
1. Acceptance of different cultures.	2057.76**	0.80	2 items (9,4)	2 items(9,4)	10
2. Care of world's problem.	2025.41**	0.81	-	-	12
3. Interconnectedness and peace.	1172.10**	0.71	3 items (7,11,39)	2 items(7,11)	10
4. World citizenship.	1611.66**	0.72	4 items(8,28,36, 40)	1 item (40)	11

** $p < 0.01$

Table 2: Goodness of fit of the model of global-mindedness in Thai socio-cultural context

Factors	Chi-square	P	GFI	AGFI	RMR
1. Acceptance of different cultures.	35.44	0.08	1.00	0.99	0.01
2. Care in the world's problem.	45.33	0.14	1.00	0.99	0.02
3. Interconnectedness and peace.	33.97	0.14	1.00	0.99	0.01
4. World citizenship.	44.57	0.07	1.00	0.99	0.02

2. Criterion-related validity

Global-mindedness scale in Thai socio-cultural context has criterion-related validity bearing correlation with the global-mindedness scale as developed by Hett of 0.70 at 0.01 statistical significant level.

3. Internal consistency reliability

The global-mindedness scale in Thai socio-cultural context has internal consistency reliability at the level of 0.84 for the whole scale. The Cronbach's alpha of two subscales; acceptance of different cultures and care in the world's problem are 0.66. The Cronbach's alpha of Interconnectedness and peace, and world citizenship are 0.58 and 0.52 respectively as shown in Table 3.

Table 3: Internal Consistency Reliability, Mean, Standard Deviation, and Standard Error of Measurement of global-mindedness in Thai socio-cultural context measurement model.

Scale	Number of items	Alpha	Mean	S.D.	SEM
Subscale					
1. Acceptance of different cultural.	10	0.66	39.64	4.61	2.69
2. Care of world's problem.	12	0.66	47.91	5.28	3.07
3. Interconnectedness and peace.	10	0.58	36.63	4.05	2.62
4. World citizenship.	11	0.52	37.96	4.47	3.10
Whole scale					
Global-mindedness in Thai socio-cultural context.	43	0.84	162.27	14.50	5.80

Comparison among three global-mindedness models (the global-mindedness model in Thai socio-cultural context, Hett's model and the integrated model) have yielded the following result:

The three models are consistent with empirical data without any difference. However, the global-mindedness model in Thai socio-cultural context can most effectively explain the variance in the global-mindedness variables to 86% with Hett's model and the integrated model being 82% and 61% respectively. Some parts of these results are shown in Tables 4 to 6 and Figures 2 to 4.

Table 4: Mean, Standard Deviation, Sampling Adequacy and Correlation Matrix of global-mindedness measurement sub-scales.

	Ttotal	TC	TP	TI	TM	Utotal	UR	UC	UE	UG	UI
Ttotal	1.00										
TC	0.79**	1.00									
TP	0.83**	0.58**	1.00								
TI	0.77**	0.45**	0.48**	1.00							
TM	0.76**	0.43**	0.46**	0.53**	1.00						
Utotal	0.70**	0.55**	0.58**	0.56**	0.50**	1.00					
UR	0.48**	0.32**	0.37**	0.44**	0.37**	0.75**	1.00				
UC	0.60**	0.57**	0.51**	0.44**	0.35**	0.81**	0.54**	1.00			
UE	0.44**	0.32**	0.36**	0.37**	0.35**	0.66**	0.37**	0.39**	1.00		
UG	0.36**	0.27**	0.36**	0.21**	0.25**	0.49**	0.06*	0.24**	0.25**	1.00	
UI	0.59**	0.42**	0.45**	0.51**	0.45**	0.76**	0.57**	0.56**	0.44**	0.17**	1.00
Mean	162.27	39.64	47.91	36.63	37.96	110.23	26.32	31.00	17.49	16.61	18.76
S.D.	14.50	4.61	5.28	4.05	4.47	10.70	3.60	3.68	2.42	3.11	2.51
MSA		0.87	0.89	0.91	0.90		0.86	0.87	0.93	0.82	0.90
	Barlett's test sphericity = 5359.95 P< 0.00 Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.88										

* $p < 0.05$ ** $p < 0.01$

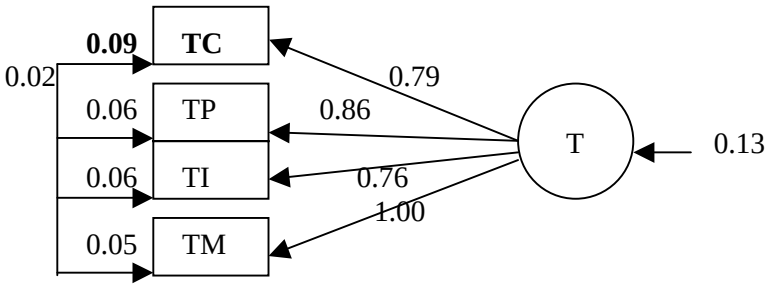
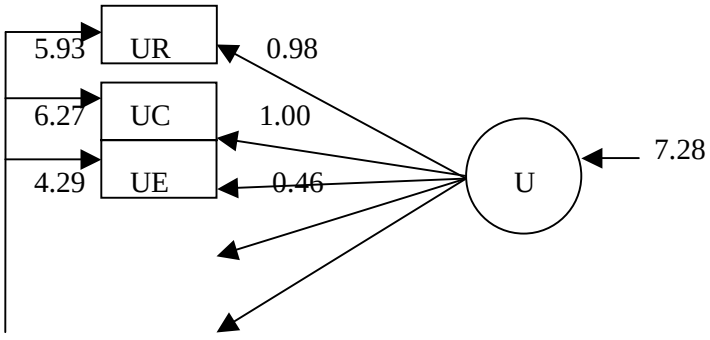


Figure 2: Global-mindedness measurement model in Thai socio-cultural context.



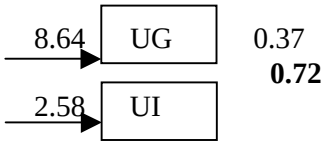


Figure 3: Global-mindedness measurement model as developed by Hett.

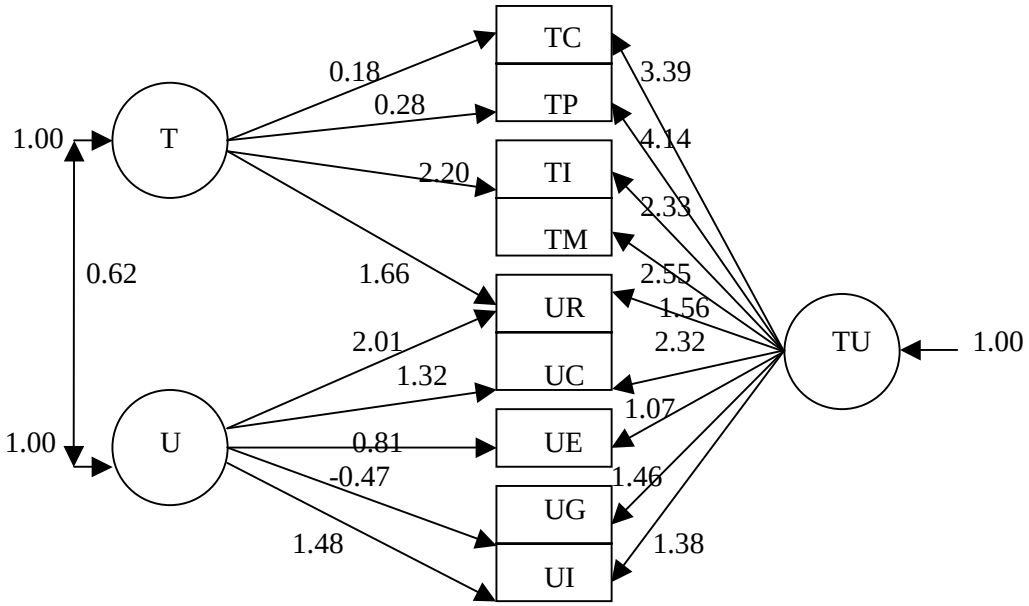
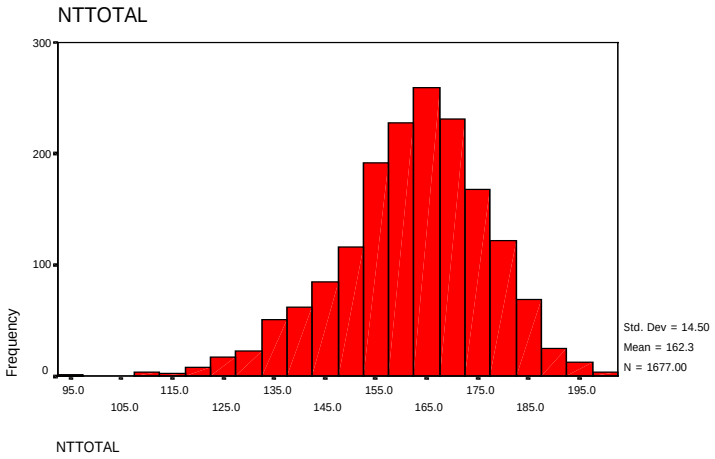


Figure 4: Global-mindedness measurement model.

Table 5: Comparison of the global-mindedness measurement model in Thai socio-cultural context developed by Hett and the integrated model.

Global-mindedness model	Df	χ^2	χ^2/ df	GFI	AGFI	RMR	R-Square
Thai socio-cultural context (T)	1	1.40	1.40	1.00	1.00	0.00	0.86
As developed by Hett (U)	1	1.55	1.55	1.00	0.99	0.04	0.82
Integrated model (TU)	10	7.50	0.75	1.00	1.00	0.08	0.61
χ^2_{TU-T}= 6.10	df_{TU-T}= 9				Table of χ^2_9= 16.92		
χ^2_{TU-U}= 5.95	df_{TU-U}= 9				Table of χ^2_9= 16.92		

Analysis of normalized score and interpretation of global-mindedness score in Thai socio-cultural context are shown in Figures 5 and table 6.



Mean = 162.27 Mode = 163 Median = 163 S.D. = 14.50 Skewness = -0.48 Kurtosis = 0.47
Rang = 103 Min = 97 Max = 200

Figure 5: Histogram displaying the categorization of global-mindedness scores in Thai socio-cultural context.

Table 6: Interpretation of global-mindedness scale in Thai socio-cultural context.

Raw score	T-score	Percentile	Meaning
185 or more	66 or more	92 or more	Excellent global-mindedness
170-184	55-65	70-91	Good global-mindedness
155-169	45-54	28-69	Moderate global-mindedness
140-154	35-44	8-27	Low global-mindedness
Less than 139	Less than 34	Less than 7	Very low global-mindedness

DISCUSSION

The results of global-mindedness scale in Thai socio-cultural context yielded the following noteworthy issues:

Global-mindedness in Thai socio-cultural context conceptual framework

The study of relevant researches and interviews with 20 experts in different fields have led to the definition of global-mindedness in Thai socio-cultural context as "*an extensive view of the world, which takes into consideration cultural pluralism and care of global issues especially the use of resource and the preservation of the environment. All countries are interconnected and live peacefully together. Every human being is a citizen of the world who bears equal rights and freedom"*. Such definition is in accordance with a study of Sampson and Smith (1957) which defined world-mindedness as "a framework used as a reference or to value the perception of the world as a problem of humanity rather than that of any particular country" as well as Hett's definition (1993) of "*a view on the world and oneself in relation to the global society and the awareness of responsibility to the world as one of its members*". The developed definition is in

accordance with the meaning of world-mindedness of Sampson and Smith (1957) and Hett (1993).

With regard to the factors of global-mindedness in Thai socio-cultural context, the study has categorized four of them as acceptance of different cultures, care in the world's problem, interconnectedness and peace and world citizenship. Sampson and Smith (1957) has defined eight dimensions which are religions, immigration, government, economics, patriotism, race, education and war which Enloe, Minoura, Wills et al (1991) adapted to six which are immigration, war, economics, race, world citizenship and culture while Hett (1993) categorized the dimensions of global-mindedness after an analysis of investigative dimensions as responsibility, cultural pluralism, efficacy, global-centrism, and interconnectedness.

The global-mindedness in Thai socio-cultural context shares similar sub-dimensions with the studies of Enloe, Minoura, Wills et all (1991) and Hett (1993): culture or cultural pluralism; Enloe, Minoura, Wills et all (1991): world citizenship; Hett (1993): interconnectedness. Once global-mindedness in Thai socio-cultural context is compared to researches on the characteristics of world citizenship, it is found to be in accordance with the studies of Cogan and Kubow (1997) Cogan and Derricott (1998) and Buranasiri (1989) as follows:

The studies of characteristics of world citizenship in the next 25 years from nine countries have revealed characteristics similar to five of eight dimensions of global-mindedness in Thai socio-cultural context which are 1) Ability to look at and approach problem as a member of a global society. 2) Ability to understand, accept, and tolerate cultural differences. 3) Willingness to change one's lifestyle and consumption habits to protect the environment. 4) Willingness to resolve conflicts in a non-violent manner and 5) Ability to be sensitive towards and to defend human rights (e.g., rights of women ethnic minorities, etc.).

The factor of global-mindedness in Thai socio-cultural context is in accordance with the study on characteristics of world citizenship by Buranasiri (1989). The study has examined foreign and local documents on world study and world citizenship and summarized that characteristics of world citizenship are responsibility as a good citizen of a country, respect of others' rights and freedom, acceptance of different cultures, understanding of use of natural resource, acceptance of different religions, interest in news on the problems of the world and their solutions and promotion of peace.

Construct validity

Confirmatory factors analysis of global-mindedness model in Thai socio-cultural context, as developed by Hett and the integrated model has shown that the global-mindedness model in Thai socio-cultural context can best explain the variance in global-mindedness variables to 86% with Hett's model and the integrated model being 82% and 61% respectively. Upon comparison of Goodness-of-Fit Index (GFI) using chi-square, it is found that three models were consistent with empirical data without statistical significance.

In spite of the fact that the global-mindedness scale in Thai socio-cultural context has only four factors which is less than Hett's five and the integrated model's nine factors, it can best explain the variance in global-mindedness variables. This is hard to be possible according to principle of path analysis and regressions analysis which states that models with more predictors shall better explain the variance of variables (Wiratchai, 1999). The reasons why the global-mindedness model in Thai socio-cultural context can better explain the variance in global-mindedness

variables than other models is probably that the correlation coefficient between pairs of observable variables or factors of global-mindedness in Thai socio-cultural variables is in the range of 0.50-0.66 which is higher than correlation coefficient between pairs of factors developed by Hett which is in the range of 0.06-0.57.

One of the probable reasons why the global-mindedness model in Thai socio-cultural context can best explain the variance is that it was developed through the study of local document researches as well as interviews with domestic experts.

Factors of the integrated models

Upon further analysis of the integrated models, two significant latent variables can be categorized:

(1) Global-mindedness variables measured by different scales. There are global-mindedness latent variable measured by four observed variables, or the factors of global-mindedness in Thai socio-cultural context and global-mindedness latent variable measured by five observed variables, or the factors of global-mindedness developed by Hett.

(2) Overall global-mindedness latent variable measured by nine observed variables of both scales. A confirmatory factor analysis has shown that four observed variables measured by global-mindedness scale in Thai socio-cultural context is able to explain the variance in global-mindedness variables with R-square of 0.54, 0.62, 0.63 and 0.46. On the average, it is able to better explain the variance in the global-mindedness variables than five observed variables measured by the global-mindedness scale developed by Hett with R-square of 0.50, 0.53, 0.31, 0.24 and 0.65.

Upon the investigation of the related factors of the two scales which are acceptance of different cultures of global-mindedness scale in Thai socio-cultural context and cultural pluralism of Hett's global-mindedness scale. It is found that both can explain the variance in the global-mindedness variables to a similar degree with R-square of 0.54 and 0.53 respectively. Another pair of related variables is interconnectedness and peace of global-mindedness scale in Thai socio-cultural context and interconnectedness factor of Hett's global-mindedness scale, which can also explain the variance in the global-mindedness variables to a similar degree with R-square of 0.63 and 0.65 respectively.

An analysis of the factor loading of four observed variables as measured by the global-mindedness scale in Thai socio-cultural context, it is noted that they range from 2.33-4.14 which are greater than the five observed variables of Hett's global-mindedness scale which bears the factor loading of 1.07-2.32. Another factor loading of all observed variables has shown that care in the world's problem measured by global-mindedness scale in Thai socio-cultural context bears the greatest factor loading 4.14. This factor does not exist in Hett's global-mindedness scale. It is apparent that this factor is significant and in accordance with the studies of Cogan and Kubow (1997) and Buranasiri (1989). These studies discovered that two significant characteristics of world citizenship are to be able to look at and approach problems a member of a global society and to be interested in the news on the world's problems and solutions.

Internal consistency reliability

The internal consistency reliability of the global-mindedness scale in Thai socio-cultural context is 0.84 which is greater than Hett's 0.81. This may be because of the different numbers of items

(global-mindedness scale in Thai socio-cultural context of 43 items and Hett's global-mindedness scale of 30 items), which is in accordance with a traditional testing principle that test length affects the reliability coefficient. The more items the test or measurement tool has, the greater the reliability coefficient (Gulliksen, 1950; Kanjanawasee, 2001).

The internal consistency reliability of four factors of global-mindedness in Thai socio-cultural context is in the range of 0.52 – 0.66 while Hett's is in the range of 0.28-0.70.

Groups of different global-mindedness

A study of literature on global-mindedness has revealed that the background variables affect the difference of global-mindedness average are gender, year of study, participation in international activities or programs, interest in the news, political viewpoint, experience abroad, foreign language skills. The researcher has performed a comparative study of certain background variables on the global-mindedness average of the two scales, which are consist the global-mindedness scale in Thai socio-cultural context and Hett's global-mindedness scale. It is found that all studied variables have shown the same results. The differences of global-mindedness scores are found in gender, educational institution/university, major, hometown, plan to study abroad, participation in camps or field trips with foreigners. That is in accordance with the previous studies (Ballou, 1996; Boatler, 1991; Deng and Boatler, 1993; Carlson and Widaman, 1988; Ernster, 1976; Garrison, 1961; Hezeltine and Rezvanian, 1998; Hett, 1993; Torney-purta, 1982).

The variables in which no difference in global-mindedness average is found are age, religion, year of study, number of foreign languages one is able to speak and plan to work abroad. That is not in accordance with some studies (Barrows, Ager, Bennett et al, 1981; Boatler, 1992a; Drake, 1984; Garrison, 1961; Hazeltine and Rezvanian, 1998; Hett, 1993; Langston, 1976; Lucero, 1988). However, certain researches, (Boatler, 1992c; Deng and Boatler; 1993; Wilson, 1975) did not find the difference in age and year of study. This result of this study is in accordance with these studies.

Once Thai educational system especially formal university level institution is considered, it is realized that the ages of students in each year do not differ (17-21 years old) as those in informal university level institutions or foreign university level institutions. This may be a reason why no difference is found in such variables. A further study has revealed that students of each year are of different ages as some of them did not finish grade 12 formally but passed the equivalent exam instead. The difference of global-mindedness between the two scales was not found.

Previous studies have shown difference between global-mindedness and world-mindedness between the groups with the ability to speak different number of foreign languages (Barrows, Ager, Bennett et al, 1981; Boatler, 1992c, Hazeltine and Rezvanian, 1998; Lucero, 1988). It should be noted that those studies were conducted in countries where people are native speaker of English. They may not pay as much attention to foreign languages as those with other languages or those whose government does not use English as a formal language. The latter need to study foreign languages from formal education in order to be able to use them for further study and in their vocation.

It is obvious in this study that the researcher does not mention construct validity as a kind of known group techniques in the objectives of the study. However, in the studies of (Ballou, 1996; Hett, 1993), it was found that students who have participated in international activities or programs are with higher global-mindedness. Therefore, this study's finding that students who

have the opportunity to participate in camps or field trips with foreigners as measured by the global-mindedness scale in Thai socio-cultural context and Hett's global-mindedness scale have different global-mindedness from those who have not with statistic significance. This is evidence supporting that the tool has construct validity as a kind of known group method.

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A Development of Activity Organizing Pattern for Developing Moral in Vocational Education Industrial Education students based on Cognitive Behaviour Modification Approach

Wallapa Chantrpen
Photharam Technical College, Ratchuburi, Thailand

Abstract

The purposes of this research were (1) to develop the activity organizing pattern for developing moral of vocational industrial education students based on Cognitive Behaviour Modification Approach; and (2) to compare moral behaviour by using activity organizing pattern based on cognitive behaviour modification approach with conventional approach.

The development process of activity organizing pattern consisted of five steps, namely, (1) studying, collecting, analyzing and synthesizing basic data for the construction of activity organizing pattern; (2) drafting and improving the activity pattern based on cognitive behaviour modification approach prior to the experimentation; (3) constructing the instrument; (4) testing pattern by implementing it in Photharam Technical College; and (5) Evaluating and revising the pattern.

The experiment was divided into three phases according to the ABF design, which composed of the baseline phase, the treatment phase, and the follow-up phase. The moral behaviours (diligence, responsibility discipline) of all subjects were observed and recorded through their behaviour within and outside classroom daily on campus during the experimentation. Self-report test scores on the moral behaviour were collected prior treatment, immediately after treatment, and two weeks after treatment.

The activity organizing pattern for developing moral behaviour of vocational industrial education students based on cognitive behaviour modification approach was composed of four stages, namely, (1) cognitions management, (2) thinking skills for self-control, (3) Rational -Emotive-Behaviour Therapy and (4) Application.

INTRODUCTION

Education in Thailand has evolved with the times. During the last decade a reform of education was put forward with an aim to bring about relevance of education to national development needs. Implementation of reform proposals has been successful to a certain extent. However, there remain some further actions to be taken up. Right now the Thai education has been challenged with the rapid pace of change, especially in the information age. It is obvious that education lags far behind other sectors, for example, the economy and information technology. Education itself has been held accountable for failures in social and economic development. Education is now placed at the forefront of development strategies.

The goals of education emphasize balanced and harmonious development of the individual in four aspects: wisdom, spiritual, physical and social development. In my opinion in four aspects, spiritual development was the most important. Because spiritual development was the ability to train

one's mind to become morally developed, to be self-controlled and self-discipline in one's behaviour in accordance with moral code of conduct, to uphold religious principles, to be modest and moderate, and to posses concentration and perseverance which are essential for working and living.

During the last decade to the present, there were many problems in our society. For example, poverty, drugs, environmental degradation, violation of women's and child's rights and disintegration of basic social institutions including family and community. In this respect, education system is being called upon to play a more critical and proactive role in the preparation of human resources to their full potential, leading to the successful development of Thai society. Therefore education must provide Thai people with adequate learning skills and enthusiasm for knowledge and new information. It should also provide the people with an ability to think critically, to give rational opinions and make well-informed judgments, to differentiate between right and wrong.

The public, including most students, regarded vocational schools as a place where leftover M4 graduates gather. Vocational student's negative attitude toward their study and the society they live in has deteriorated. This negative perspective is reinforced by the high unemployment rate of vocational graduates or the misplacement in different industries which require skills different form what they have learned and been trained for. Since they cannot focus on meaningful activities due to the total uncertainty about their future, their interests are then placed in carefree activities, which easily lead them to associate with social evils such as gambling, drug, prostitution, violence and corruption.

In the future, the teachers should managed activities for moral behaviours development of the students, especially the vocational industrial education students who were adolescent age. Adolescent's problem behaviours are aggressiveness, juvenile delinquency, vandalism, disobedience, uncooperative, distractible, drug taking, persistent, irresponsibility and AIDS. The causes of these problems were derived from immoral influences. The moral is directed to rational creatures that can act in accord with the principles and rules, which structure behaviour. Moral is important to society and nation as it can influence national development. A nation with people of high moral can prosper and succeed in nation building.

Moral reasoning is related to both cognitive and emotional development. Formal operations and empathy in particular play important roles in a progression through Kohlberg's stages and levels. As we have seen, abstract thinking becomes increasingly important in the higher stages of moral development, as children move from decisions based on absolute rules to decisions based on principles such as justice and mercy. Empathy, the ability to see another's perspective and to imagine alternative bases for laws and rules, also enters into judgments at the higher stages.

Adolescents show five main advantages in thinking is possible, not only what is real; in thinking about abstract things: in thinking about the process of thinking itself (referred to as meta-cognition); in thinking in multidimensional terms; and in seeing knowledge as relative, rather than as absolute.

Several theories have been proposed about the processes that underlie the development of more advanced thinking in adolescence. These main viewpoints are Piagetian, or cognitive developmental; psychometric; and information processing. According to the Piagetian view, the development of more sophisticated thinking of adolescence is due to the development of advanced logical abilities. Piaget believed that adolescence marked the transition into qualitatively different way of reasoning a stage of thinking based on "formal operations", the

formal operational adolescent is able to employ an abstract system of logic in a variety of social and scientific situations.

From the past, there were many researches found that moral behaviours can be developed through behaviour modification especially adolescents' moral behaviours, In addition, when considering about ages and abilities of the vocational industrial education students, it was found that cognitive should be combined with behaviour modification for developing desired moral behaviours. So the author was interested in using cognitive behaviour modification approach for developing the students' moral behaviours.

THEORETICAL FRAMEWORK

The Cognitive Behavioural Approach

The cognitive approaches all contain behavioural elements, but tend to emphasize the primacy of cognition in influencing client difficulties and to stress the importance of modifying cognitions in any attempt to deal with such difficulties. While these approaches continue to recognize the role of the mediating effect of cognitions in determining behaviour, and, therefore, in influencing the development and maintenance of clients problems, they now stress equally the importance of other response systems and the reciprocal nature of the interaction between these response systems and the environment. These approaches are now generally referred to as cognitive-behaviour therapies (CBTs). As has been noted, cognitive psychology represented a significant challenge to the assumptions of behaviourism, and cognitive-behaviour therapy was and equal challenge to the assumptions of behaviour therapy, at a time when therapists were beginning to examine problematic issues such as treatment failure and client compliance.

Cognitive-behavioural approaches to psycho- therapy made their initial mark in the 1950s and early 1960s through the work of Beck, Ellis, Kelly, Phillips and Rotter among others. It was in the early 1970s, however, that these approaches began to come to the forefront of the psychotherapeutic scene due mainly to the work of Bandura, Goldfried and Davison, Lazarus, Mahoney, Meichenbaum and the continuing contribution of Beck and Ellis. A recent survey has shown that cognitive-behavioural approaches are now one of the leading forces in current psychotherapeutic practice (Smith, 1982).

Historical overview

The Cognitive-Behavioural Therapies (CBTs) consist of a collection of assumptions about disturbance and a set of treatment interventions in which human cognitions are assigned a central role. Because these approaches have been derived from various sources and are not the product of a single mind, there is diversity in the assumptions adopted and the interventions preferred. It should come as no surprise that the key term **'cognition'** has been defined and employed in diverse ways by the various proponents of CBTs; the purpose of this paper is to review the ways in which this term 'cognition' has been used in CBTs.

Except for approaches that employ cognitions solely for the control of behaviour, cognitions are presumed to be crucial mediators in the creation of emotions and behaviours. The key figures in the development of CBTs have used the term **'cognition'** to refer to several different mental activities, including conceptions and ideas, meanings, images, beliefs, expectations, attributions,

and others, including variations of the preceding terms. While several different strategies have been proposed for changing and modifying cognitions, in no instance is the cognition taken as a target of change in and of itself. Most forms of CBTs assume that cognitions, as crucial mediators of emotions and behaviours, need to change in order to effect lasting changes in the target emotions and behaviours.

The early contributors to CBTs were Albert Ellis and Aaron T. Beck. Both were trained in and practiced psychoanalysis, but came to reject it as both theory and technique. Ellis (1962) replaced psychoanalytic passive listening with active, direct dialogues with clients about the philosophies they lived by. Like Freud, he believed that people could use reason to guide their lives. However, while Freud thought that one could only rely on reason when id was subjugated by insight, Ellis believed that people could consciously adopt reason to replace the irrational thoughts they rather naturally lived by. Ellis assumed that people could also choose self-acceptance rather than achieve it only through interactions with an empathetic and accepting therapist, as Carl Rogers held.

Beck (1963), through his research, came to realize that the Freudian view of depression was incorrect. His research into the dreams of depressed persons failed to reveal themes of anger turned inward, as Freudian theory predicted. Instead, depressed persons saw themselves as victims in their dreams. Beck developed an alternative theory of depression in which negative thoughts about oneself, the world, and the future are key elements in depression. Negative thinking can be identified and replaced by collecting evidence against its validity.

Bandura's (1977) work on learning by vicarious experience as opposed to direct reinforcement led to a reformulation of behaviourism and of behaviour therapy. The key concept is that of expectancy of reinforcement. The notion of expectancy is clearly cognitive, and therefore antithetical to radical behavioural approaches. This important shift in emphasis led to a legitimacy of cognition within a scientific behavioural theory of human action. In the mainstream of CBTs, several seminal works appeared in addition to those already cited. Mahoney's (1974) and Meichenbaum's (1977) early work emphasized cognitive control of behaviour, if not the production of emotions and behaviours due to cognitive processes.

In academic psychology, meanwhile, the study of mental activities had once more become respectable. CBTs are not based on modern cognitive psychology, but there are correspondences here and there. A very good example is Guidano and Liotti's (1983) integration of some well-known findings, especially Piaget's, into clinical theory and practice. A result of these developments was a revised version of human nature. Psychoanalysis and behaviourism assumed that humans were passively driven by internal or external forces. **CBTs,** as a whole, assume that humans are processors of information and decision-makers in their own lives.

COGNITIONS, EMOTIONS AND BEHAVIOURS

Cognitive-behavioural approaches to psychotherapy are not a single variant or technique within behaviour therapy. There is diversity as well as uniformity. While there is no single model of emotions and behaviours to which all forms of CBTs subscribe in detail, there are certain common general features that can be identified. All forms of CBTs agree that cognitive mediators process stimuli to produce emotional and behavioural responses.

Mahoney (1977) pointed out that CBT differ from traditional behaviour therapy by assuming that environmental events do not per se determine behaviour; rather, information encoded as symbolic representations of environments determines behaviour. No one goes so far as to claim that (a)

cognitions are the sole determining variable;(b) some responses may not be cognitively mediated; or (c) cognitions are not in turn affected by emotions and actions. Indeed, it seems best to think of cognitions, emotion, and behaviour as interdependent. Bandura (1977), for example, points out that perhaps the most effective way to change cognitions is to change one's performance; while verbal persuasion - DuBois's method – is a wholly cognitive procedure and may be the least effective.

Although there is on single universally agreed-upon model within CBTs, most forms of CBTs, as A. A. Lazarus (1981) has noted, assume many features of Plutchik's (1980) theory of emotion. The main points of this theory are summarized in the following sequence:

(a) A stimulus event is
(b) Cognitively processed, resulting in
(c) Physiological arousal and subjective feeling states, which lead to
(d) Impulses to action, and
(e) Overt behaviour that
(f) Has the effect of satisfying a motive or of adapting to circumstances in ways that promote survival.

Clearly, CBTs do not ignore affect, but without clarifying the various meanings of cognition in CBTs, controversies about cognition, emotion, and action can easily continue.

The CBTs are not, therefore, sets of techniques, but sets of orientations and models of human experience. They articulate general goals in the modification of that experience. CBTs share a common view of human response which describes that response as being base on 'reciprocal determinism' (Bandura 1978), a process whereby human cognitive structures, processes and contents, behaviours and antecedents and consequences of those behaviours in the environment are intimately related in a multi directional fashion. Thus, cognitions and behaviours are not only shape by the environment, but shape it, giving to the client an active role in creating future outcomes (Turk et al 1983). The goals of the CBTs are linked to this concept of reciprocal determinism, and involve the client's becoming aware of the interaction between dysfunctional cognitions and behaviours though a combination of cognitive, behavioural and physiological intervention.

A NEW CHALLENGE

Cognitive-behavioural approaches to psychotherapy have generally held that behaviour and affect are the results of cognitive variables. Zajonc (1980b) has challenged this view while promoting his own, that affect is both primary and independent of cognition. The debate over primacy of affect or cognition is hampered by definitions of what is cognitive and what is not (Plutchik 1985). Greenberg and Safran (1984) have proposed Leventhal's (1974) perceptual-motor model to integrate affect and cognition. This model features the simultaneous generation of perception and emotion and the input of perception and emotion into planning and decisions for action. Emotional experience is said to result from a pre-attentive process whose components lie outside focal awareness; therefore, 'conscious changes at the conceptual level will not necessarily produce changes at the affective level, since emotional experience is as much a function of changes that take place at a perceptual-motor, pre-conceptual level as it is a function of conceptual cognition' (Greenberg and Safram 1984, p. 568). However, they warn against falling into polarized thinking about affect and cognition.

The evoking of emotional experiences may be done through hypnosis, in vivo procedures, or imagery. The purpose of their evocation would not be to relive an emotional experience,

abreaction, or catharsis. Rather, they would be evoked in order to elicit the cognitions that are associated with these affects and that would otherwise remain implicit. Whether affect must be evoked in order to identify relevant cognitions and for therapeutic changes to occur is an important research question with relevance for both the theoretical foundations and practice of psychotherapy using cognitive-behavioural approaches.

HISTORICAL DEVELOPMENT OF COGNITIVE-BEHAVIOUR MODIFICATION

A comprehensive integration of cognitive and behaviour approaches requires attention to the origin and function of behaviour as well as its structure. A perspective integrating functional and structural aspects of responding can be the basis on which cognitive-behaviour modification techniques are explained and expanded. It is crucial for the cognitive-behaviour modification therapist to analyze how the client came under cognitive/verbal control in the first place. Especially important is the origin of cognitive activity variously referred to as cognitive structures (Meichenbaum 1977), schemata or scripts (Abelson, 1981). Cognitive-behaviour modification are discussed from the perspective of a functional theory of behaviour, that of radical behaviourism (Skinner 1953, 1957, 1969, 1974).

Radical behaviourism is a philosophy of the science of behaviour in which internal behavioural events are given consideration as elements in ongoing sequences of responding. Radical behaviourism seeks to provide explanations for both internal and external responding by using events outside of the behaving individual, that is, genetic and environmental factors, as causal factors.

A refinement of the techniques of cognitive/verbal control may be possible when consideration is given to the origins and functions of the client's cognitive/verbal processes. Moreover, consideration of the radical-behavioural perspective alongside the cognitive one may do more to make cognitive-behaviour modification a truly integrative approach. In short a better understanding of the '**hyphen'** in cognitive-behaviour modification may be achieved.

Treating emotional and behavioural problems through cognitive-behaviour modification involves collaboration between therapist and client to (a) achieve an understanding of the client's own instances of behavioural over control and/or under control and (b) establish stimulus control over emotional and behavioural responses with new, more coping-orientated cognitive activity (or adaptive rules). In short, the client learns to control maladaptive responses by replacing unproductive rule control with control by adaptive rules. Cognitive-behaviour modification therapists use a variety of specific coping techniques, but the overriding goal is to enhance adaptive rule following with stimulus control by adaptive rules.

The rules the client learns may be stress-coping skills (Jaremko 1984; Meichenbaum and JaremKo 1983), problem-solving skills (D'Zurilla and Nezu 1982), or communication and social skills (Guerney 1977); but in each case the cognitive-behaviour modification therapist tries to establish a generic attitude of 'personal science' (Mahoney 1977b) so that the client deals better with the many challenges to which he or she will be exposed. Cognitive-behaviour modification, therefore, is a preventive approach, which attempts to achieve maximum generality in treatment effects by training generic cognitive skills.

Cognitive-behavioural interventions for conduct disorders, impulsivity/hyperactivity and social withdrawal employ behavioural strategies and include a special focus on-teaching children thinking processes. For example, self-instructions and cognitive problem solving are important

components of cognitive-behavioural procedures. Additional research is needed to develop the most efficacious methods for integrating cognitive and behavioural procedures. The present blending of behavioural and cognitive methods was stimulated by the limitations of both psychodynamics and radical behaviourism. This blending was facilitated by the presence of several theoretical models that incorporated cognitive variables along with the scientific and experimental rigor so precious to behaviourists.

Cognitive Psychologists have influenced behavioural view, pointing, for example, to the importance of self-regulation in learning. Students can apply behaviour analysis of their own to manage their own behaviour. Teacher can encourage the development of self-management skill by allowing students to participate in setting goals, keeping track of progress, evaluating accomplishments, and selecting and giving their own reinforcements. Teachers can also use cognitive behaviour modification, a behaviour change program describe by Meichenbaum in which students are directly taught how to use self-instruction.

Ellis believed that people could consciously adopt reason to replace the irrational thoughts they rather naturally lived by. Ellis assumed that people could also choose Self-acceptance rather than achieve it only through interactions with an empathetic and accepting therapist, as Carl Rogers held.

SELF-INSTRUCTIONAL TRAINING (SIT)

Self-instructional training is a cognitive behaviour modification technique, based on the premise that cognition plays a major role in shaping behaviour, and that by modifying cognition, behaviour can be shaped or changed. The goal is to bring about change by modifying thinking. This strategy is behavioural, in that it targets specific problems or problem areas, and involves structured use of reinforcement. According to Blandford and Lloyd (1987), self-instruction has five common characteristics. They are:

- Students are active participants in the learning process;
- Overt verbalizations is usually required at some point;
- The desired response is identified by a series of discrete steps;
- Modelling of the target strategy is employed during training; and
- The goal of training in self-instruction is a planned reflective style.

The general goal of self-instructional training is to teach children to think and plan before acting. Five steps are involved.

1. Cognitive Modelling: The adult model performs a task while talking aloud ; the student observes.
2. Cognitive participant modelling: The student performs the task as the model verbalizes the instructions aloud.
3. Overt self-instructions: The student performs the task while verbalizing the instructions aloud.
4. Faded of overt self-instructions: The student performs the task while whispering the instructions.
5. Covert self-instruction: the student performs the task, while saying the instructions to herself or himself.

These five steps of modelling and rehearsal can be performed on six types of statements. They are: problem definition; focusing of attention; planning response guidance; self reinforcement; self evaluation; coping; and error correction statements.

SELF-INSTRUCTIONAL TRAINING IN PERSPECTIVE

Self-instructional training (SIT) has been used for more than 20 years with a wide array of target behaviours, including impulsive behaviours, schizophrenic behaviours, social withdrawal, anxiety (for example, test, speech, and social anxiety), anger, obesity, assertive behaviours, problem solving, leisure skills, and creativity. Although more often employed with children, self-instructional training is also used with adults, Generally, self-instructional training is one component of a treatment package.

Thus, Meichenbaum's cognitive-behavioural interventions are closely linked to the mainstream of behaviour therapy and to notions of covert reinforcement. Meichenbaum intended that SIT be a flexible, broadly applicable set of interventions, and has demonstrated a particularly strand commitment to empirical studies of treatment packages derived from SIT (Dobson and Black 1988). This commitment, coupled wit the closeness of SIT to the behavioural tradition, has led to a great deal of popularity for the method among clinicians (Hawton et al, 1989). In summary, SIT is a skills-acquisition model of therapy.

RATIONAL EMOTIVE BEHAVIOUR THERAPY (REBT)

Rational Emotive Therapy, or RET, was developed by Albert Ellis in 1955. In June 1993, the name of rational-emotive therapy (RET) was changed to rational emotive behaviour therapy (REBT) because the theory "has always been highly cognitive very emotive, and particularly behavioural" (Ellis, 1993). Essentially, Ellis changed the name to reflect the theory's broad focus more accurately on the interaction among thoughts, feelings, and behaviours. The central theory of REBT is that events or situations do not upset you; instead, it is belief about what has happened that does. In essence, emotions and behaviours stem from thoughts or belief.

The approach uses the letters "ABC"

A Stands for activating event, situation, or experience.
B represents beliefs or thoughts about the activating event.
C means consequences

In the ABC's of REBT, Ellis concludes that it is beliefs (B), which are the activators (A) of behaviour or consequences (C)

There are six principles of REBT Theory, namely,

1. Cognition is the most important proximal determinant of human emotion. This means that humans feel what they think.
2. Dysfunctional thinking is a major determinant of emotional distress.
3. If emotional disturbance were largely caused by holding irrational beliefs, the best way to conquer distress is to change thinking. REBT does this through cognitive, emotive, and behavioural intervention
4. Multiple factors, including both genetic and environmental influences, are etiologic antecedents to irrational thinking and psychopathology.
5. REBT emphasizes present rather than historical influences on behaviour in large part because humans maintain their disturbance through repeated self-indoctrination.
6. Beliefs can be changed, although such change will not necessarily come about easily. Clients typically do not surrender their deeply held irrational beliefs without some resistance.

Ellis (1993) points out that cognitions, emotions, and behaviours are interactive in that each influences the other, He contends that people tend to hang on to distorted thoughts, feelings and

actions and keep repeating there even though the outcome is negative. REBT helps people challenge irrational beliefs and change their lives. Ellis explained that people who carry around such overgeneralizations have a hidden "masturbatory" agenda and end up making themselves miserable. Challenging irrational beliefs is necessary for mental health. You can begin by changing the forcing words and, thus, chalk up another step in creating happiness.

Ellis (1962) has postulated 12 irrational beliefs believed to be at the core of a majority of emotional disturbances. These beliefs have been condensed to 4 fundamental irrational beliefs:
(1) Self-worth or self-rating statements (often leading to depression): "I'm a rotten person because I made a mistake";
(2) Demanding or should statements (often leading to anger): "Others should treat me fairly";
(3) Awful statements (often leading to anxiety): "Things are terrible, awful, and horrible if I don't find easy solutions to my problems";
(4) Low frustration tolerance statements (often leading to avoidance or withdrawal): "I can't stand it when things don't work out perfectly" (Ellis& Harper, 1975)

The goals of REBT practitioners are to make clients increasingly aware of their self-talk and internal dialogue so they will be able to think more rationally, clearly, and logically, REBT practitioners try to teach clients to evaluate the content of their beliefs in hopes of allowing clients to experience fewer disturbed emotions. Finally, REBT practitioners attempt to help clients gain skills using rational-emotive principles so they will act in a more appropriate manner and be better able to achieve their goals in life (Wilde, 1992).

REBT principles have been used with children and adolescents in school and found to be an effective intervention with many commonly occurring difficulties. Rational-Emotive Education (REE) has been found to be successful in reducing anxiety (Brody, 1974; Klaus & Boor, 1975; Meyer, 1981; Miller & Casanova, 1978; Ohio, Lo, & William, 1986; Von Pohl, 1982;); in increasing frustration tolerance (Brody, 1974); in reducing impulsivity (Meichenbaum & Goodman, 1971); in improving academic performance (Block, 1978; Tangelos, Brossard, & Mines, 1980), in reducing depression (Wilde, 1994), and in improving self-concept and coping capabilities (Devote, 1974; DiGiuseppe, 1975, Ellis, 1979; Omizo et al., 1986; Wasserman & Vogrin, 1979). There have been several studies that have examined REE and its effect on rational thinking in students (Wilde, 1994).

The goal of this educative approach is to help the students overcome self-defeating emotions and behaviours that prevent them from achieving their goals and achieving happiness. The following homework strategies are often used to help those students in need:

- Instruction on the A-B-C-D-E-F framework, which helps the students understand the nature of disturbance and how to remedy it;
- Self-help reading material: specific homework assignments designed to help clients practice concepts between sessions;
- Role playing and modelling, and teaching the student how to use rational-emotive imagery and coping self-statements.

THOUGHT-STOPPING

Recurrent unconstructive ruminations are sometimes problematic. This thought was related to a wide variety of external and internal events. Thought stopping was employed, in conjunction with other procedures, to decrease these thoughts (Wolpe, 1958). The students are trained to identify negative thoughts, to covertly tell themselves to stop, and to focus on the task at hand. The potential of achieving control over one's thoughts can be dramatically demonstrated to

students by requesting them to verbalize their negative thoughts and by shouting at them, **"Stop!"** Typically, their speech will be interrupted. This procedure is repeated with an inquiry each time as to whether the student's thought pattern was interrupted. If it was blocked, the student gradually assumes blocking control and learns to covertly say, **"Stop,"** when negative thoughts start to occur.

Rimm and Masters (1974) have presented the most detailed description of thought stopping, breaking the procedure down into **four phases.** During **the first**, the student describes the situation in which his negative thoughts take place, as well as the thoughts themselves. The thoughts are thus placed in the context in which they usually occur, including the presence of positive thoughts and constructive attention focusing. The student is interrupted in his verbal description when negative thoughts first occur by loudly saying, **"Stop!"** This step in repeated until the student reports that the thoughts were blocked. In **the second phase**, the student imagines the same sequence of events and is requested to raise a finger when a negative thought just starts, at which point the counsellor loudly says, **"Stop!"** This stage is also repeated until the student reports successful blocking of thoughts. **Phase Three** provides for the student's overt blocking of thoughts just as they begin. Notice the focus on "catching" the negative thought-chain when it first begins. This is important, because it is easier to disrupt a chain of behaviour or thoughts at the beginning than at the end. During **the fourth stage**, the student practices the covert blocking of his thoughts. An important part of thought stopping is teaching the client to redirect attention and thoughts to constructive events, because a blank mind refuses to stay blank. The situation in which the student finds himself provides cues for attention. Rimm and Masters (1974) suggest that thought stopping be complemented by requesting the student to covertly say positive self-assertive statements appropriate to problem-related situations, following blocking of a thought by saying**, "Stop."** These self-assertions are similar in nature to the coping self-statements described by Meichenbaum. The combination of thought stopping and self-reinforcement has been found to be more effective than thought stopping alone (Hays and Waddell, 1976) Thought stopping has been employed with children as well as with adults. The students can say any of the following loudly, clearly, and angrily. "Stop thinking this way!" "This is unrealistic" "I won't think it!" or just "STOP!"

The purposes of this research were:

1. To develop an activity-organizing pattern for developing moral of vocational industrial education students based on cognitive behaviour modification approach;
2. To compare moral behaviour by using an activity-organizing pattern based on cognitive behaviour modification approach with conventional approach.

METHODOLOGY

The design of the research was an experimental research. The development process of activity-organizing pattern consisted of five steps, namely,

1) Studying, collecting, analyzing and synthesizing basic data for the construction of the activity-organizing pattern.
2) Drafting and improving the activity pattern based on cognitive behaviour modification approach prior to the experimentation.
3) Constructing the instruments.
4) Testing pattern by implementing it in Photharam Technical College, Ratchaburi Province.
5) Evaluating and revising the pattern.

The experiment was divided into three phases according to the ABF design, which composed of the baseline phase, the treatment phase, and the follow-up phase. The experimentation took 16 weeks; two weeks for the first phase, twelve weeks for the second phase and two weeks for the third phase.

The moral behaviours (diligence, responsibility, discipline,) of all subjects were observed and recorded through their behaviours within and outside classroom daily on campus during the experimentation. Self-report test scores on the moral behaviour (the Responsibility behaviour Test, the Discipline behaviour Test, the Diligence behaviour Test) were collected prior treatment, immediately after treatment, and two weeks after treatment.

The instruments used were the observation forms and the recording forms, the Responsibility behaviour Test, the Discipline behaviour Test and the Diligence behaviour Test. The data concerning moral behaviours of all subjects were presented in the form of graph to show the development. The scores on self-report were analyzed by using the percentage ((%), arithmetic mean ($\bar{x}$), standard deviation (S.D.) and t-test for paired samples, by which t-test was used to analyze pre-test/post-test differentiation.

The subjects were vocational industrial education students from Photharam Technical College, Ratchaburi Province. The subjects in the experiment group were 40 students, which were selected on a voluntary basis. The subjects in control group were 40 students, which were selected from the same department and years of study.

The expanded subjects were the students who were studying in the same classroom of the subjects and agreed to develop their moral behaviours. The subjects in the experiment group were trained to observe and record behaviours, which were manage thoughts-feelings-behaviours cycle, analyze behaviours, thought stopping, think forward, self-instructional training, Rational-Emotive-Behaviour Therapy in workshop for two days and rehearsal, feedback and reinforcement in every two period per week for 12 weeks. In addition the subjects in the experiment group set up a moral behaviour development project to help their peer groups in the same classroom, while the subjects in the control group did normal college activities.

The activity-organizing pattern for developing moral behaviours of vocational industrial education students based on cognitive behaviour modification approach was composed of four stages, namely,

Stage 1 Cognitions Management
- thoughts-feelings-behaviours cycle
- behaviour analysis

Stage 2 Thinking skills for self-control
- Self-Instructional Training (SIT)
- Thought Stopping
- Think forward

Stage3 Rational –Emotive Behaviour Therapy

Stage 4 Application
- Project help peer groups
- Informative Feedback and Reinforcement
- Repeated rehearsal

The process of the pattern was divided into two sessions, namely,

Session 1: Intensive workshop for moral behaviour development based on the cognitive behaviour modification approach last for two consecutive days.
Session 2: Application stage. This session comprised the following: 1) expanding by writing the project for help peer groups. 2) repeated rehearsal, and 3) information feedback, and reinforcement.
Each activity consisted of described period of time, content, major concepts objectives, activities, media, and evaluation. At the present the experimentation is in the period of session two and expected to be completed at the end of September 2001.

CONCLUSION

A development of activity-organizing pattern for developing moral of vocational industrial education students based on cognitive behaviour modification approach is a cognitive intervention pattern to teach the students to think and plan before action. The cognitive-behavioural approach is set within the context both of clinical psychology as a whole and of research in behavioural and cognitive psychology. The cognitive behavioural therapy (CBTs) are defined by their emphasis on the interaction between the cognitive, behavioural and physiological systems, and their readiness to target any or all of these systems both for intervention and eventual change. REBT teaches that a change in belief will change the consequences. Self-Instructional Training is used to teach the students to instruct themselves in how to cope effectively with difficult situations. Cognitive techniques work best for those who have the ability to reflect on their own thoughts.

The activity organizing pattern for developing moral behaviours of vocational industrial education students based on cognitive behaviour modification approach was composed of four stages, namely, 1) cognitions management; 2) thinking skills for self-control; 3) Rational-Emotive-Behaviour Therapy; and 4) application.

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