

Journal of Institutional Research South East Asia

JIRSEA

Volume 3 Number 1
2005

ISSN NO: 1675-6061

All papers are refereed by two appropriately independent,
qualified experts and evaluated according to:

?? Significance in contributing new knowledge

?? Appropriateness for the Journal

?? Clarity of presentation

?? Technical adequacy



SEAIR

SOUTH EAST ASIAN ASSOCIATION
FOR INSTITUTIONAL RESEARCH



Widyatama
UNIVERSITAS WIDYATAMA

Editorial Board Members

Editor

Dr Ng Gan Che is the Principal of Australasian Consultants, Australia, and was one of the founding editors of JIRA (Journal of Institutional Research in Australasia) and founding secretary of AAIR (Australasian Association of Institutional Research).

Board Members

Dr Zoraini Wati Abas (currently President of SEAAIR) is Associate Professor of Instructional Design at the Faculty of Medical Sciences, International Medical University, Sesama Centre, Plaza Komanwel, Kuala Lumpur, Malaysia.

Dr Narend Baijnath is the Dean of Applied Community Sciences, Technikon Southern Africa, South Africa.

Professor George Gordon is the Director of the Centre for Academic Practice, University of Strathclyde, Scotland.

Professor Nirwan Idrus (currently Honorary Secretary of SEAAIR) was President / Executive Director of the Indonesian Institute for Management Development (IPMI), IPMI Graduate School of Business, Jl Raw ajati Timur I/1, Kalibata, Jakarta Selatan 12750, Indonesia.

Dr John Muffo is the Director of Academic Assessment, Virginia Polytechnic Institute and State University, East Virginia.

Dr Raj Sharma is Associate Director of Resource Planning and Analysis at Swinburne University of Technology, John Street, Hawthorn, Victoria 3122, Australia.

Professor Somwung Pitiyanuwat is the Director of The Office of Education Standard & Evaluation, ONEC Building #2, Sukothai Road, Dusit District Bangkok, Thailand 10300



CONTENTS

	Page
Editorial Board	1
Contents Page	2
Editorial	3
Articles	
<i>Compatibility of Higher Education Program With Professional Employment: a Strategic Perspective on Educational Funding Effectiveness</i> by Mame S. Sutoko and Petrina Faustine	4
<i>The Implementation of Business Management Strategies in Extension Education in Taiwan</i> by Ping-Yu Wang and Chang Lieh-Ching	12
<i>Quality Assurance and Strategic Implementation in educational institutions: A Holistic Alliance?</i> by Teay Shawyun	24
<i>IR and the Quest for Q in ODL: Managing Institutional Research and Quality at the Open University Malaysia</i> by Hairudin Harun	41
<i>Costs and effectiveness of wireless LAN in higher education</i> by Peter Ling, Richard Constantine, Geoff Arger and Raj Sharma	52
<i>MBA Student perceptions: Learning, teaching, entrepreneurial and intrapreneurial Skills</i> by Adela J McMurray and Raj Sharma	69
<i>Academic Staff's Perception of Valuing and Rewarding Good Teaching: A comparative study</i> by Wu Jing, Ng Gan Che, Raj Sharma and Yan Jun	88



EDITORIAL

The seven-refereed articles in this issue have been presented to the SEAAIR 2004 Conference themed “Entrepreneurial University of the 21st Century” held at Wenzhou, China in late September 2004. A common denominator, which appears to be able to bring together the varied topics discussed in the articles, is the subject of quality.

Quality, as dealt with in the respective articles, is expressed explicitly or implicitly in the main from the perspectives of generic skills requirement (refer to articles of Sutoko and Faustine, Wang and Chang and McMurray and Sharma), quality assurance methods (articles of Shawyun and Harun), and teaching and learning (articles of Ling et al and Wu et al).

The articles provide interesting reading and reflection for those interested in promoting quality and its sustenance to their organisation.

As part of the continuing service of SEAAIR, the next SEAAIR conference will be held in Bali, Indonesia from 14 to 16 September 2005. The conference theme is “Higher Education Reform: Facing Local and Global Changes”. The organisers promised participants that it should be an exciting and interesting learning event for all those who believe that the foundation for quality of life is built from the cement of quality of education.

We look forward to meeting you at the Bali conference.

Editor

Ng Gan Che



Compatibility of Higher Education Program With Professional Employment: a Strategic Perspective on Educational Funding Effectiveness

Dr. Ir. Mame S. Sutoko
Institut Teknologi Bandung, Indonesia

Dra. Petrina Faustine
Widyatama University Bandung, Indonesia

Research Background

Raising the issue of higher education program contents into a discussion, the immediate phenomena debated would mostly be on the subjects of the compatibility of the program with the practice at the work place. Secondly, it would be on its influence in the employment. The more compatible the program with the work place, it is perceived as the easier it will be for the graduates to be employed. This employment will “process” the graduates into professionals. In this context, it will not be exaggerating to conclude that compatibility of higher education program contents will be influential to professional employment. Consequently, the easier the graduate of the higher educational institutions be employed, the more effective the funding.

What emerge in the general perceptions are:

- ?? People perceive that the knowledge acquired in higher education institutions is not applicable in the workplace. Many people say that the theory is not practicable in the work place.
- ?? Experience and knowledge are acquired merely from the workplace, rather than from higher education institutions. This can be seen that companies normally train the students first, before they can be employed. That was why, when the graduates apply for jobs, the employer let them be trained before they jump into the job, under three months probation. This certainly gives several effects on financial rewards, such as: lower salaries for students who are just graduated and are still under probation, compared to the ones who have been in the job for a longer term.
- ?? The costs spent in higher education to acquired knowledge through the program content, is much higher compared to the income gained by the students in their early 5 years after they graduated. This is perceived as inefficient in the expenses for the funding.

Focus of Study

Based on the general perceptions at the research background, applicability at the workplace of knowledge acquired in higher education, as well as the experience and knowledge acquired at the workplace, are both rooted at the compatibility of higher education program content with professional employment. Whereas the other general perception is concerning more to the effectiveness of educational costs spent in acquiring knowledge.

Therefore, this study focuses on:

- ?? The compatibility of Higher Education program content with Professional Employment.
- ?? The educational funding effectiveness in Higher Education

Objectives of the Study

It cannot be denied that education is influential to the way of thinking of human being. The higher the level of education, it is expected that the higher the knowledge is acquired. It is not just acquiring tacit knowledge which is mostly about things good to know, but it is also expected to acquire functional as well as contextual knowledge that is developed and then embedded in the brain-ware. In this way, knowledge acquired by the actors in the companies can become an important asset in the establishments of knowledge enterprises, especially in the global competitive information era.

Therefore the objectives of this study are:

1. To find out whether the knowledge acquired in higher education, are compatible with the ability to overcome work challenge in the enterprises as the professional employments providers, from the point of view of the stakeholders of higher education.
2. To find out whether the current curriculum provides the experience needed by professionals to execute their tasks or to anticipate work challenge, or whether the work experience is provided at the workplace?
3. How do professionals with higher education backgrounds perceive about the knowledge acquired from higher education?
4. How do professionals think about the respects earned from the enterprises in regards of their technical competence acquired in the educational institutions, compared to their work experiences earned in the enterprises?
5. To fund spent by families as well as government in higher education compared to the suitable area of work obtained in the workplace, which correspond to the compatibility of jobs and the study background, from the economic perspective.

6. To trigger further empirical research in the areas related to the compatibility of education program contents to professional employment.

Theoretical Background

Knowledge is a self-evident concept. In philosophy it is a subject most debated epistemologically. One keeps turning around the circles when a tautological question: “Do we know what knowledge is?” because the word ‘know’ presupposes knowledge (Hertog & Huizenga, 2000).

The subject of this study is primarily on the practical issues of a higher education program content, in its relation to the professional employment in the workplace. Therefore, we define ‘knowledge’ at its practical points of departure.

The definition of knowledge in this study is the combination of:

1. Functional knowledge, which is based on various area or disciplines which knows the ‘what’ and the ‘why’ (Kogut and Zander, 1992), which maybe scientific or technological such as physics or electronics within research and development. It may also be various functions in business organizations and their environment, such as management, marketing, accounting, production, which knowledge supply comes from various organizations such as institutes, universities, or professional organizations.
2. Operational knowledge, which is primarily based on action, which is developed through action and experience, which fulfil the knowledge of ‘how’ as the central of operational knowledge. This is particularly about gaining knowledge through ‘learning by doing’ things.
3. Contextual knowledge, which is concerning with knowledge in a specific market, such as familiarity of marketers with the culture of their customers in different countries. Thus, contextual knowledge is strongly linked with the culture where products and services are delivered. Along with this knowledge, to know ‘where and when’ has also to be considered for their interactions with the ‘how’.

Based on the above explanations, the definition of knowledge is: the strategic meanings of functional, operational, and contextual knowledge for organizations, which fulfil consecutively the answers to ‘what and why’, ‘how’ and ‘where and when’, derived from higher education program content, in its relation with the need of professional employment at the workplace.

The quality knowledge acquired of any higher education institution can be measured by the compatibility of professional’s acquired knowledge from higher education, with professional placement in enterprises.

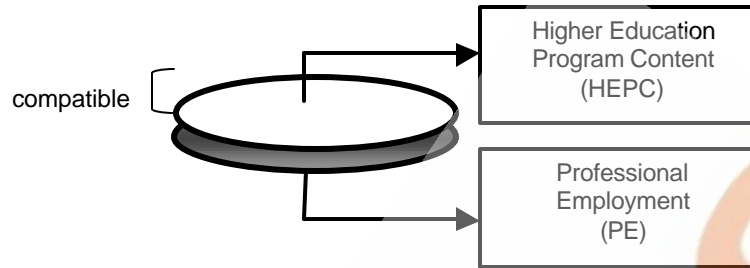


Figure 1: Compatible HEPC and PE

Consequently, this compatibility will perform in various manifestations, as well as consequences, such as:

- ?? The ability of professionals in executing their tasks in the jobs, by applying the knowledge they acquired from higher education, in forms of functional as well as contextual knowledge.
- ?? The willingness of enterprises to recruit professionals graduated from higher education.
- ?? The willingness of enterprises to reward the professionals with satisfactory remuneration.
- ?? The good image of higher education institutions being the source in providing applicable research which will generate competitive advantage to the enterprises.
- ?? The amount of income spent by the families to acquire knowledge in the higher education.
- ?? The compatibility of families' spending in education to the employment possibility.
- ?? Income generated by professionals in the macroeconomics, which will enable the cycle of production, consumption and the expenditure of the income, which will make the economics system works.
- ?? Social capital in the society, as the consequence of a good higher education, that generates better educated society, which will enable the establishments of knowledge enterprises in the global business (Hertog & Huizianga, 2001), as a social virtues that will enable the wealth creation of the nations (Fukuyama, 1995).

Nevertheless, there are incompatibilities, which apply in the workplace. They can come in these two forms:

1. Higher education program contents fulfil only part of the needs in the professional employment, which can be illustrated as follows:

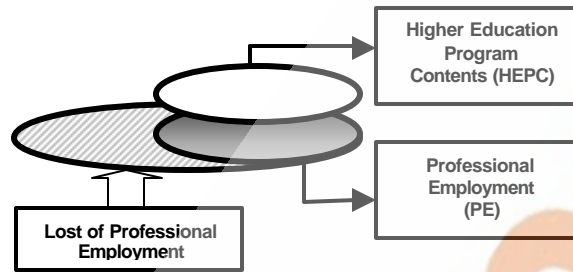


Figure 2: HEPC fulfil part of PE need

2. Higher education program contents provide unrequired professional employment needs, which can be illustrated as follows:

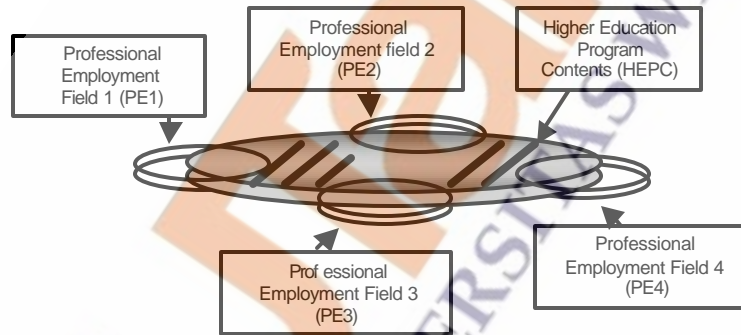


Figure 3: HEPC fulfil part of PE need and unrequired HEPC

Research Methodology

This study utilized part of 877 sets of responses from the 1120 sets of survey sent to 31 business entities done in 2002. The target companies were of medium, large sized as well as conglomerated enterprises in Java, Bali and Sulawesi islands, owned by private families.

The Likert scaled data taken from the responses are processed and analysed by using SPSS 12.00 software. This procedure resulted in the descriptive statistical frequencies of the data, related to the research focus. The results are then compared and contrasted, so that the overall findings can be compiled into the topic area of the research focus.

Data of educational backgrounds from the respondents as well as their position obtained in the company are also analyzed. The purpose is to have a stronger point on the conclusion that has to be taken out of the research, thus implications as well as further studies can be suggested.

Further to this procedures, using data generated from the ADB research done on the Financing of Education in Indonesia, costs of funding in higher education area calculated and estimated for its effectiveness, in term of the income generated by graduates when they are assumed to be employed in the workplace, compared to all the estimated expenses in the same 5 years' time spent in the workplace as well as in the higher education in acquiring knowledge.

Based on all the findings and analysis of data of expenditures in higher educations, conclusion, implications and further research suggestions are then cited consecutively.

Data Analysis & Findings

Processed data are grouped into these categories with the tabulated results as follows:

1. Acquired Compatible Knowledge from higher education, which generated from 2 responses and illustrated as follow:
 - (a) Ability to overcome work challenge with competencies acquired from higher education, and
 - (b) Owning competence to overcome work challenge.

Data collected from responses on Acquired Compatible Knowledge give indications of a median Likert scale 4, which means most of the respondents (which are over 70% of total respondents) agree that they acquired compatible knowledge from higher education. This finding is based on the organizational members toward their own compatibility of knowledge acquired from higher education.

Table 1. Acquired Compatible Knowledge

Acquired Compatible Knowledge	Ability to overcome Work Challenge with Competence Acquired			Owning Competence to Overcome Work Challenge		
	Likert	Frequency1	Percent1	Likert	Frequency2	Percent2
Valid	1	3	0.34	1	3	0.34
	2	38	4.33	2	48	5.47
	3	198	22.58	3	220	25.09
	3.74	13	1.48	3.71	1	0.11
	4	564	64.31	3.73	14	1.60
	5	61	6.96	4	539	61.46
	Total	877	100.00	5	52	5.93
			Total	877	100.00	

2. Perception on Having Compatible Knowledge from Higher Education, which corresponds to and illustrated as follow:
 - (a) Perception of “Having Sufficient Knowledge to Execute Tasks at Work”, and
 - (b) Perception of “Having Latest Knowledge Needed by the Company”.

Table 2. Perception on Having Compatible Knowledge from Higher Education

Perception on Having Compatible Knowledge	Perception of Having Sufficient Knowledge to Execute Tasks at Work			Perception of Having Latest Knowledge Needed by the Company		
	Likert	Frequency	Percent	Likert	Frequency	Percent
Valid	1	11	1.25	1	8	0.91
	2	131	14.94	2	181	20.64
	3	296	33.75	3	412	46.98
	3.34	16	1.82	3.1	17	1.94
	4	394	44.93	3.71	1	0.11
	5	29	3.31	4	236	26.91
	Total	877	100.00	5	22	2.51
			Total	877	100.00	

The median of the responses on the Perception of Having Sufficient Knowledge to Execute Tasks at Work is at the scale 4, which represents about 48% of the respondents who agree to the perception. Whereas on the Perception of Having Latest Knowledge Needed by the Company, the majority of the respondents are disagree or mostly cannot agree nor disagree on this issue. It indicates the doubts of respondents and also the tendency to disagreements, if we analyze that the majority of the responses fell into the disagreed polar.

Learning from Work, which related to the responses and illustrated as below:

- (a) Ability to Develop Knowledge at Work to Anticipate Work Challenge in the Future.
- (b) Advantageous Professional Experience Obtained at Work
- (c) Learning a lot from Work Experience
- (d) Tasks and Jobs in the Company bring Valuable Work Experience

Table 3. Learning from Work (1)

Learning From Work	Ability to Develop Knowledge at Work to Anticipate Work Challenge in the Future			Advantageous Professional Experience Obtained at Work		
	Likert	Frequency1	Percent1	Likert	Frequency2	Percent2
Valid	1	3	0.34	1	6	0.68
	2	50	5.70	2	58	6.61
	3	210	23.95	3	198	22.58
	3.71	19	2.17	3.71	15	1.71
	4	530	60.43	4	516	58.84
	5	65	7.41	5	83	9.46
	Total	877	100.00	Total	876	99.89
			System	1	0.11	
				877	100.00	

Responses to the issues that knowledge is gained from Learning From Work, the median of responses to Ability to Develop Knowledge at Work to Anticipate Work Challenge in the Future, as well as responses to Advantageous Professional Experience Obtained at Work, over 60% responses fall into the median of Likert scale 4 and 5, which means the respondents agree on the learning is obtained from work.

The same finding is with responses to point c. and d. above, the respondents seems agree that learning is more from work, rather than in higher education program, as per details shown on the below table.

Table 4. Learning from Work (2)

Learning From Work	Learning a lot from Work Experience			Tasks and Jobs in the Company Bring Valuable Work Experience		
		Frequency3	Percent3		Frequency4	Percent4
Valid	1	2	0.23	1	2	0.23
	2	22	2.51	2	24	2.74
	3	126	14.37	3	134	15.28
	3.71	1	0.11	3.71	1	0.11
	3.91	15	1.71	3.91	16	1.82
	4	609	69.44	4	593	67.62
	5	102	11.63	5	107	12.20
Total	877	100.00	Total	877	100.00	

3. Company Respect on Employee, which responded to the following points:
 - (a) Company Respect on High Technical Competence
 - (b) Company Respect on Work Experience

Table 5. Company Respect on Employee

Company Respect on Employee	Company's Respect on Work Experience			Company Respect on Work Experience		
		Frequency1	Percent1		Frequency1	Percent2
Valid	1	63	7.18	1	3	0.34
	2	358	40.82	2	48	5.47
	2.73	13	1.48	3	220	25.09
	3	235	26.80	3.71	1	0.11
	4	184	20.98	3.73	14	1.60
	5	24	2.74	4	539	61.46
	Total	877	100.00	5	52	5.93
			Total	877	100.00	

Finding from data analyzed on responses to the questions of Company Respects on High Technical Competence shows the median of responses to disagreement. Whereas towards Work Experience from other work or from the previous work the respondents have done, the result shows company respects on it. This finding can be interpreted as the tendency of the incompatibility of technical competence of the employees, which is supposed to be acquired in the higher education program. Details of the data analysis are as is compiled in the Table 5.

Data of Graduate Employments in the 31 companies

The findings, which indicate the incompatibility of the higher education program with the professional employment, need to be analyzed further. The result of the data after classifications and compilations come to the details as shown below:

Table 6. Matrix of Education Background and Position Obtained In Professional Employment

Position Obtained in Professional Employment	Managerial	Secretary	Marketing	Accounting, Cashier	Staff, Administration	Supervisor, Production, Operator	?	Total	Pct
Social, Political, Law	10	1	2	2	7	19	0	41	9.40
Economics, MBA	43	8	11	16	38	45	12	173	39.68
Engineering, Science, Mathematics	32	0	2	5	10	77	1	127	29.13
Agricultural Studies	5	0	2	2	3	0	0	12	2.75
Psychology, Behavioural Science	3	0	0	0	4	2	51	60	13.76
?	3	4	0	3	4	8	1	23	5.28
							Total	436	100%

Hypothesis of Compatibility of acquired knowledge with professional employments seems to be unproven for the study background in economics, management, and business and administration studies, as well as for engineering, science, and mathematics. The compatibility in this study was proven about 68 percent of the respondents are getting the relevant jobs in their professional employments.

However, there are 32 percent of the other subject studies which shown incompatibility in their professional employments. These findings emphasize the preliminary perception about the focus issue of this study. Therefore, a further exploration on studying the effectiveness of expenditures in entering higher education as oppose to working is worthwhile to be done, in order to see further the impacts, which may arise, due to this incompatibility.

Expenditures in Indonesian Higher Education

For the purpose of calculating the expenditures in Indonesian Higher Education, figures of costs used in this study is based on the pessimistic calculation, that is to utilized the 1995-1996 data, of the research done on the Financing of Education in Indonesia.

Table 7. Cost of Studying in Higher Education and Source of Funding

Source of Funding	Cost of Studying in Higher Education (in Rupiah)	Income of Working in Enterprises (in Rupiah)
Family :		
Bachelor of Art = 500.000	500,000,000,000.-	375,000,000,000.-
Public H.E. = 853.000	2,021,610,000,000.-	4,265,000,000,000.-
Private H.E. = 1.450.000-	6,090,000,000,000.-	4,640,000,000,000.-
	8,611,610,000,000.-	
Government:		
Recurrent+Devlp. In Public HE	6,851,650,000,000.-	
Recurrent+Devt. In Private HE	296,885,000,000.-	
	7.148.535.000.000.-	
Within-Institution:		
Fees+Other in Public HE	1,189,150,000,000.-	
Fees+Other in Private HE	15,513,590,000,000.-	
	16,702,740,000,000.-	
Grand Total	32,462,885,000,000.-	
	9,280,000,000,000.-	9,280,000,000,000.-
Approximate Inefficiency: (in every 5 years)	23,182,885,000,000.-	~ US\$ 2,520,000,000.-

Sources: (a) Clark, Hough, Pongtuluran, Sembiring, Triaswati (1998), Financing of Education in Indonesia, Asian Development Bank Comparative Education Research Centre, The University of Hong Kong.

(b) Random sampling on favourite and non favourite private higher education tuition fee, and average salaries gained by graduates and bachelor of arts in the workplace (Petrina Faustine, 2004).

S.A. Chowdury supervised the research team and Asian Development Bank and Comparative Education Research Centre at the University of Hong Kong published the report in 1998. We purposely used the pessimistic calculation, which was based on the exchange rate of Rupiah 2,190 per United States Dollars. This is to prevent a ballooning amount, when the real cost is calculated. However, to know the current costs, a multiplication of 5 times of the Rupiah would be sufficient. Looking into this huge amount of funding, which is assumed to have been wasted, it is not too exaggerating when we suggest that this finding could be a trigger for more in depth research. This is to obtain better results before taking any remedial actions on the predicted issues.

Conclusions

The study shows there are indeed tendencies of incompatibility of higher education program contents and professional employment. Although it is not significantly high in the percentage, a more in depth research may give even more surprising findings, than what has been revealed in this study.

We might have never realized that higher education funding involves such an enormous amount of funding, derived from the family, government, and other institutional sources such as World Bank, ADB, IDB and also other social institutions which donation can be an extra to the calculation. Therefore, an effective as well as careful utilization of the funds available should be decided with full considerations of the maximum advantage, at the strategic perspectives from macro economy point of view.

Implications on Higher Education Program

Based on the findings on the company respects of work experience, as well as the learning at the work place, the implications on higher education program can be on:

- ?? Work integrated learning in higher education, in order to met the needs arise in the professional employment, as oppose to the acquired knowledge from higher education program.
- ?? Higher Education Program Content should give alternatives to enable students to pursue further academic studies after high school. This will give the possibilities to do practical studies for both undergraduate and postgraduate studies. Linkage with industries for internships would be beneficial for both

the higher education institutions as well as the students and the companies for recruitments of talented students who meet the needs of the work place.

- ?? Effects of Professional Employment Needs and Funding Effectiveness on national macro-economy, should be viewed in their strategic perspectives to the maximum benefits of a nation. These factors need to be taken seriously into considerations, when designing higher education program, so graduates can be a source of income producers, which will multiply the effects on the macro economy-wise.

Recommendations for Researchers

This is an exploratory study. Therefore, a more in-depth empirical research should be conducted, especially on the following issues:

- ?? Classification of the higher education programs in further studies, to be defined more accurately
- ?? Factors influencing professional employments of graduates from higher education, as well as choices of graduates in the professional employments, are both to be explored from various perspectives
- ?? Needs of industries or the workplaces are to be defined more clearly, in order to enable a feasible program design of higher education, which can absorb the funding effectively
- ?? Create effective models of higher education funding from: family, government and other institutions, in response to the quality of graduates required in the workplace.

Reference

- Hertog, J.Friso & Huizenga, Edward (2000). *The Knowledge Enterprise*. Imperial College Press, 31-36.
- Kogut, B. & Zander, U. (1992). 'Knowledge of the firm, combinative capabilities, and the replication of technology.' *Organization Science*, 3 (3), 383-397.
- Sveiby, Karl Erik (1997). *The New Organizational Wealth, Managing & Measuring Knowledge-Based Assets*, Berrett-Koehler Publishers, Inc. San Francisco. 9- 48.
- Bray, Mark & Thomas, R. Murray (1998). *Financing of Education in Indonesia*, Asian Development Bank & Comparative Education Research Centre The University of Hong Kong.

SWOT Analysis

The demands of consumers will change with the influence of the general environment. Therefore, if organizations are to determine and satisfy the demands of consumers, the marketing management must analyze resources. By comparing the advantages and disadvantages of the organization with those of competitors they can then decide how to effectively use the resources and create the greatest value for consumers. When marketing managers analyze the resources and environment, they use the famous SWOT analysis in marketing. S means Strength; W means Weakness; O means Opportunity; and T means Threat. A clear SWOT analysis can help the university extension unit to segment the market, discover the target learner, and design the suitable marketing mix and solution. (Teng, 1998)

Strength -- Lifelong education role

With the development of science and technology and changes in society and economic structure, the learning desires of people are very strong, The continuing education opinion that education and learning are on-going, has become the common knowledge of the social masses (Huang, 1999). Therefore, adult education in university has become the mainstream of the advanced education system (Munger, 1986).

All universities are expanding the role of providing lifelong education, with all departments providing trans-department adjustment. In the future, it will assume the role of an academic leader (Cheng, 2004). The role of extension education is to teach the masses practical knowledge transferred from research, which can be accepted by common social masses. In this way, common social masses have their requirements fulfilled (Lin, 1997). Learning is also a process that will continue for a lifetime. All people must continue to study in each stage of their life. As the workers must promote the labour productivity and competitiveness to increase new working skills with the change of working market, the education and training opportunities must continue lifelong (Tsai, 1999). In addition, adults have rich and various experiences. If the course can evaluate relevant working and life experience and give credits, it will become an attractive factor. (Huang, 1997)

Weakness

The current situation of Taiwan is that in previous times, the extension education of universities was aimed at mainly providing non-normalized education to the social masses. The guidance of government policy has always put emphasis on normal education. However, as there are constraints on the admission examination for evening classes of normal degree university courses, there are only 10% of adults joining the courses. Extension education receives very few subsidies from the government with no encouragement and no opportunity for full development.

Additionally, universities in Taiwan have the following problems in the development of extension education:

1. **Blur concepts:** As for the current education system, the biggest shortcoming was that normal academic education did not differ with the professional education extension. For example, both the university and independent institutes had master and PH.D for academic classes, it also had the evening classes of extension education, as well as short-term professional courses, including from languages to computer. What is the focus of the universities? (Lin, 1997)
2. The organization structure of the extension education organization is not stable.
3. **Personnel and finance** are the main factors of the stability of the organization. Within personnel, the further education departments had no specialized personnel and all staff came from the current working staff of the university. (Lin, 1997)
4. **Attending school for study:** As students must go to a certain location for study, barriers may be created against the participants. Therefore, convenient location and times were the main factors considered. (Yang, 1996)
5. The course and scheme are mainly affected by the organization characteristics of the promotion units, university environment characteristics, but not the strategic choice result of the promotion units (Cheng, 1998).
6. As the market governs the growing popularity of education, high education is facing a development crisis.
7. The tuition system of the university extension has problems of both “profit for school” and “social responsibility”, with the crisis of making education a commodity.
8. The rules and regulations of university extension education vary in regulation and openness. (Cheng, 2004)

The current status of education promotion implementation will be analyzed and examined in administration organization, education methods, courses and teaching material, and professional personnel. This is explained below (Tsai, 1999):

1. **Administration organization:** Administration organization of current promotion education is not complete. The levels are low and it is deficient in personnel, this means that the functions are not clear and have omissions.
2. **Education method:** The adult further education department has different learning characteristics within the daily university departments. If university teaching does not have any effect on the university students, adult students will feel frustrated. If the teaching contents are too academic, adult students will feel they are not practical, and the willingness to learn will wane. This is often the case in extension.
3. **Courses and teaching materials:** Current college education courses and teaching materials are provided by the current university courses of the

organization. There are few that can comply with demands of the students and do not reflect upon the characteristics and demands of the community.

4. **Professional capacity:** Extension education personnel in the universities, including administration personnel and teachers, lack the professional capability of adult education, and will hinder the extension education.

Opportunity

1. **Lifelong education:** At present, knowledge develops with each passing day. "Lifelong Education" has become the objective for modern people to continuously fulfil themselves. With the increasing population and concepts of recurrent and lifelong education becoming popular, there is a tendency that adults will further their studies by attending university. Therefore, with the amendment of government high education policy, university extension education has become the important channel of developing social service functions and establishing a lifelong educational society. (Huang, 2002)
2. **Social changes:** Countries in the world now pay more attention to university extension education. Influenced by the concepts of lifelong and recurrent education, the number of adults participating in university education has greatly increased. This is especially true in those countries highly developed in education. (Huang, 1997). Take the general environment of university extension education in Taiwan as an example. In recent years, with the development of IT (technical environment), aging society (demographic and economic environment), and MOE encouraging universities to promote extension education (social and legal environment), the number of adult students has greatly increased. This has created the development opportunities of extension education. (Teng, 1998)
3. **Technology development:** The rapidly changing media allows universities to carry out the extension education. Advanced technological media is used to overcome the time and space limitations and gain advantages in furious market competition. For example, international academic networking can be used to overcome the time and space barrier to shorten time and distance when obtaining information. Those channels have also brought more convenience to the compiling of teaching materials and data resources. (Lin, 1997)

Threat -- Competitive Pressure

In Taiwan, as the concept of lifelong education has just started to gain the attention of MOE, it is listed as one of the focuses of education reform (Tsai, 1999). However, with the development of globalization and Taiwan's entry to the World Trade Organization, future higher education will become more open and people will experience greater opportunities in receiving education. Therefore, university extension education will face more furious competition, even from other countries. (Lin, 1997)

Additionally, overseas universities have gained rich experience and theories in university extension education. Therefore, if the new-born university extension units have not prepared themselves well and found countermeasures for the time of lifelong education and the challenges of foreign education organizations, they will face elimination. (Tsai, 1999)

Marketing Mix Analysis

The word “marketing” contains extensive meanings; the definitions by scholars are all different. Brown (1984) believed that marketing included the complete process of consumer demands, development and implementation solution. Thus, the marketing solution is successful if the demands of consumers are satisfied. Hung (1997) concluded the core concepts of marketing should include all activities such as product development, channels distribution, pricing and promotion. We generally call those activities marketing mix.

The purpose of marketing activities is that through the matching of marketing mix we create value and satisfy consumers' demands. Marketing must have a market where the buyers and sellers can transact. The function of marketing is to guide the financial resource and services so that in the process of exchange between buyers and producers, demand and supply are effectively matched to maximize the satisfaction degree. We learn from the above definitions that marketing is different from sales and promotion. Sales and promotion are only one stage of marketing, but marketing is a complete process to satisfy the demands of consumers. Through the marketing process, social resources can be effectively utilized to create huge social values.

Huang (1994) points out that any adult education scholars believe that the university extension should take the demands of the masses as the core. Therefore, admission conditions, course contents, teaching method, or evaluation method should all be flexible to serve the demands of adult students. Hu (1996) thought that the biggest difference of extension education and normal education was that it did not focus on organization, teachers or subject contents. In contrary, the design of extension education should fully consider the demands of learners. It then provided the technology and knowledge that is required to serve their needs.

The extension education theory with students' demands as the core, matches the concepts of marketing orientation. Strategic marketing planning procedure not only facilitates the universities into providing appropriate courses so as to serve the needs of the masses, but also improves the learning interests of people, increasing the number of adult students. Therefore the exchange of knowledge and experience can bring these effects into full play, fulfilling the function of popularizing education and serving society. (Teng, 1998)

Although the word “marketing” has origins in the commercial environment, Huang (1997) and Karen (1995) have applied the theories and experience developed from marketing to the educational environment. The purpose of the article is to discuss how universities can plan extension education from the perspective of strategic marketing. The article will then explain the meaning and functions of marketing, demonstrating the steps of strategic marketing by bringing extension education functions into full

play, serving the needs of learners and fulfilling the objective of maximization of social value.

Therefore, from marketing concepts, extension education can be decomposed into four factors: product, price, promotion and place. As the four words of the factors all start with P, we can call it 4P model. All marketing strategies and solutions change from the marketing mix of 4P (Teng Wei-Cheng 1998). We discuss the factors as follows:

Product

In recent years, extension education has been affected by adult education, philosophy and the establishment of various extension education institutions. With increasing social demands, all classes have rapidly grown (Lin, 1997). Classes set by the current extension education organization can be classified into the following types, according to the times that courses were provided.

1. **Evening Class:** The popular method for adult further education classes is to hold them in the evening in Taiwan.
2. **Weekend class:** Adults can use their afternoon time, Saturday evenings and the whole of Sunday to further their studies. The class can help those who cannot study on weekday evenings, or those that live far from the education location and cannot go back every day.
3. **Summer Vacation Class:** This class is mainly for teachers who have winter and summer vacations for further study.
4. **Education in the air:** Education in the air is the most feasible method for students who do not want to be prevented by barriers.
5. **Short-term intensive class:** Commercial society lays great emphasis on efficiency. Some organizations have launched short-term research classes. In one day, one week, or one month, the whole course is lectured. This type of class is very popular in non-credit classes, and worth advocating. (Yang, 1996).

Price

Tuition includes tuition cost, discount or payment method. The most popular method to calculate tuition is Break-even point analysis. Firstly we must analyze the cost and expenses incurred in one by one course. This includes fixed cost and variable cost. Fixed cost is the expense that will not change with the number of students, such as hour expense, advertisement, and facility depreciation. Variable cost means expenses that will change with the number of people, such as paper handout expenses and food. Break-even analysis will help the planners in understanding the relationship between tuition revenue and the number of people.

Currently MOE does not have tuition standards for extension education. National universities are under pressure to raise 20% of the expenses by themselves. Therefore, some schools separate the corporation economy credit classes for high credit tuition.

However, there are still many people who are eager to attend (Chang, 1997). Therefore, high tuition cost will not prohibit students from enrolling in the class. Additionally, in order to encourage learners in advance enrolment and control the numbers of students in advance, thereby reduce marketing expenses, universities can adopt the method of reducing miscellaneous expenses. Although the payment method is not the main consideration of students, some universities have begun a credit card payment method for paying tuitions and miscellaneous expenses. (Teng, 1998)

To those non-credit classes, expenses are lower or similar to the courses held by general institutions, because universities can fully utilize the existing facilities and teachers. The expenses are determined mainly, by course types and duration. Generally, expenses range anywhere from 2,000 to 3,000 or even 6,000 to 7,000NT Dollars. Credit expenses and miscellaneous expenses range from 1,000 to 4,000 NT Dollars. (Liu, 1996)

Promotion

In extension education, the main purpose of promotion is to effectively transmit course information to the learner, attempting to influence their choice. The channels for transmitting information can be classified into advertisements (newspaper, TV, magazine, carriage, and internet), news, DM, personal introduction, posters, and fax. Before determining the publicity channels, we must understand the most frequently reached media and habits of the target consumers. Only by understanding the consumers, can we make publicity to the maximum effect within the limited budget.

For realization of the propaganda effect, we can consider extensiveness and time. Extensiveness means how many target consumers can reach the information that universities intend to transmit. This is to increase the impression of the consumers and to encourage enrolment. In addition, the specific marketing plan shall be made according to marketing strategies. On the planning process, we must master the time schedule factors. If promotion time is too short, then the effects will be negative. (Teng, 1998)

Place

For part-time learners, location is the main factor considered that affects their intention of signing up. Some students only select the university that is near to their office or home. Classroom facilities and personal service are the important factors that will affect the satisfaction degree of students and decide whether or not they will continue to purchase or introduce others to enrol.

Some universities thought that the job of marketing was to recruit students. They neglected the service quality once the students attend school. The public appraisal of the universities was poor. This will not only affect the students' intentions in signing up, but will also cause to the loss of previous students. Therefore, when promotion units are making marketing strategies, they must understand the demands of the target consumers and the dynamics of the competitors to make optimal choices. (Teng 1998)

Additionally, some extension education of universities has formed strategic alliance with public organizations and private enterprises to realize a win-win situation.

Conclusion & Implication

From the study results, after we analyzed the perplexity of the further education development, we need to further discuss feasible counter strategies as follows (Cheng 2004):

1. The development of further education shall connect vertical and horizontal systems, and establish clear connection relationships.
2. Education development strategy oriented with lifelong education must consolidate and relate to relevant policies of the adults and advanced education. This will form a leading and foreseeing university adult education development strategy that is oriented with lifelong education.
3. The high tuition system of university extension education shall provide high quality effects and services to learners, education products, and university finance.
4. According to the characteristics of the universities, MOE shall subsidy a certain proportion of expenses in promoting the community service of the university, alliance of university and industry, the alliance among universities, and public service development of universities.
5. The department of universities shall provide a certain proportion of expenses to enhance public topics and multi-culture courses to avoid the loss of function of social responsibility, culture protection and respect.
6. In organization, various forms of learning stations shall be set up to be closer to the market and the resources.
7. In human resources, a special training centre for administration executives and teachers' professional capability promotion committee shall be established to avoid the issue of inadequate expertise.
8. In performance evaluation, we shall establish clear evaluation indicators and pay attention to the forming of individual characteristics and qualified indicators
9. In order to smoothly complete university courses, the university must develop preparation courses to help those adults who left school a long time ago to acquire the capability of learning. The preparation courses shall enhance their language capability, reading capability, and mathematics capability.

10. Credits for adult education shall accumulate without time limitation to obtain the degree. All credits from all universities shall be acknowledged. Therefore, a credit acknowledgement and accumulation system shall be established.
11. There will be various types of university extension education. In addition to face-to-face education and outside university education, distance learning is becoming more common. With the development of science and technology, distance education has developed from mail, TV, and radio to computer networking. It not only breaks the constraints of time and space, but also makes the interactions between distant teachers and learners instantaneous.
12. While encouraging adult education, we must also pay attention to the fairness of opportunities. The implementation of extension education shall not become the privileges of the middle class. Therefore, some nations shall establish laws or regulations so that the university education opportunities will assist socially vulnerable groups. This is the embracement of protection of learning rights in lifelong education theories.
13. Universities start to pay attention to the research of adult education to improve the effects of adult learning. In the UK and the USA, adult education, which derived from university extensions, has gradually become an academic study, and has trained many adult education professionals. With the development of the profession, and research gradually gaining focus, the arrangement in extension courses, education methods, and teaching materials can continue to improve.
14. Flexible education system: When we shall increase part-time and distance education degree courses for adult further education, we must make the study system flexible, so that adults can study according to the time and needs of themselves, as they still work and raise families, therefore, universities shall increase more part-time education and distance education methods. Part-time education systems usually limit the credits that learners can obtain in one term, but do not limit the years of study. Distant education courses will make it convenient for learners everywhere, at any time, and teachers will provide self-study teaching materials for them. (Tsai, 1999)

In addition, Yang (1996) suggested that universities should set up special units responsible for the professional implementation of adult education. A good organizational design will facilitate the implementation and control of marketing plans. In organizational designs, there are often two methods. One is function-oriented, and the other is product-oriented. In the function oriented school organization, the course design is often responsible for the "courses planning group". The administrative structure includes a division for education, a division for general affairs, and counter administrators. (Teng, 1998)

On the other hand, although all domestic schools do not have uniform practices regarding extension education held by teaching staff, the difference is especially large between private and public universities. We believe that in order to promote the development of extension education, we can start with the following directions:

1. To promote the professional quality of teachers and executives - With the fast development of extension education in all universities, and the government policy for recurrent education, we shall plan to handle the training of various professional personnel and extension education teachers.
2. To promote that all universities pay attention to human resources development such as the overview, evaluation, and praise of the human resource development performance in extension education organizations of the universities.
3. All universities should publicly acknowledge and credit teaching staff, who perform well in extension education. For example, the extension education teaching shall be listed in the criteria for promotion of teachers. At the same time the relevant research on extension education is to be encouraged. There should be an optimal student class size for each subject.

The salary of lecturers and executives should be indexed annually based on the CPI. The hourly pay of teachers and executives should be improved. Professional staff should have performance appraisal and those who have outstanding performance should be rewarded with bonuses. Executives who are working on holidays or have evening duty should be given high flexibility in return.

Temporary staff should a secure salary and benefits structure so as to encourage them to stay in the system. Staff benefits system such as insurance, holiday and retirement pensions should be established so that temporary staff will not feel insecure.

4. To increase the extension professional teachers recruited by universities and improve the recruitment procedures of part-time teachers and external teacher resources.
5. To utilize teaching technology such as distance education or even Internet education to reduce the burden of the teachers, reduce the transportation time of teachers and students, and provide flexible study options. (Huang, 2002)

In general, the university extension education in Taiwan relies on the cooperation and assistance of higher education and adult education sectors. These sectors examine the existing problems and difficulties from the perspective of implementation and put forward effective strategies. Only through continuous efforts and improvement of the extension education sector could it face the challenges and changes of the growing number of adult students in higher education and find a suitable development direction for Taiwan's higher education. (Cheng, 2004)

References

- Brown, S. A. (1984). Marketing extension programs. In D. J. Blackburn, (Ed.), *Extension Handbook*. University of Guuelph, Canada, pp. 141-149.
- Chang, S. C. (1997). Non-degree classes bring great fortune: Prosperous credit class in extension education. *China Times*. Taipei: China times publishing.
- Cheng, C. Y. (2004). Difficulties and solutions of the development of college and university extension education. *Journal of Adult and Continuing Education*, 1(1). Taiwan: National Taiwan Normal University. pp. 38-44.
- Cheng, T. Y. (1998). Environment, organization and plan: Exploring the factors of university extension education. *National Chung Cheng University School Plan*. Taiwan: National Chung Cheng University.
- Chinese Culture University Extension Education Centre. <http://www.ccc.pccu.edu.tw>
- Hu, M.C. (1996). Concept One: Prepare yourself to an adult lifelong learning /Chapter one: Understand the meaning and purpose of adult learning. *University guideline of adult learning*. Taiwan: Ching Jiang Life-long Learning Centre of National Chung Cheng University.
- Huan, H. M. (2004). *Research in China Culture university extension department*. Taipei: National Taiwan Normal University Book Store.
- Huang, F. S. (1994). University extension education in United States. *Journal of University Adult Education*. Taipei: National Taiwan Normal University Book Store.
- Huang, F. S. (1997). *Strategic marketing of adult education. Journal of theory and practice in extension education*. Taipei: National Taiwan Normal University Book Store.
- Huang, F. S. (1997). The implementation of extension education in Teacher University in Taiwan: The application of the theory of university extension education development. *Challenge and future in continuing and extension education*. Taiwan: Teacher University Publishing.
- Huang, F. S. (1999). University extension education and the development of community college. *Journal of Adult Education*. 52. Taiwan: National Taiwan Normal University. pp 39-45.
- Huang, M. C. (2002). The Staff development plan in university extension education. *Journal of Adult Education*. Taiwan: National Taiwan Normal University. pp 48-51.
- Hung, S. C. (1997). Marketing process and management, *Business Overview*. Taipei: Wheat Field Publishing.
- Lin, S. H. (1997). The change and development of university extension education. *Theory and practice in continuing and extension education*. Taiwan: Teacher University Publishing. pp. 145-163.

Liu, L. T. (1996). Concept One: Prepare yourself to an adult lifelong learning /Chapter two: University extension education. *University guideline of adult learning*. Taiwan: Ching Jiang Life-Long Learning Centre of National Chung Cheng University.

Munger, P.D. (1986). Challenges to Continuing Higher Education. *The Journal of Continuing Higher Education*, 34(1), 5-7.

Teng, W. C. (1998). Strategic marketing of university extension education. *Journal of Adult Education*. 45. Taiwan: National Taiwan Normal University. pp 37-39.

Tsai, H. M. (1999). Form the theory of lifelong learning to view the development of university extension education. *Journal of Adult Education*, 3. Taiwan: National Chung Cheng University. pp. 117-144.

Yang, K. T. (1996). Guideline Two: Access to adult lifelong learning /Chapter two: University extension education. *University guideline of adult learning*. Taiwan: Ching Jiang Life-long Learning Centre of National Chung Cheng University.



UTAJAR
UNIVERSITAS WIDYATAMA