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Abstract	Since a unique feature of Malaysia is its cultural heterogeneity, the primary goal of educational and training policy has been to foster national unity and personal/moral development, therefore the mainstream schooling sector has received the most emphasis compared to the other sectors. Nevertheless, there has been an increasing awareness, perhaps some consensus in Malaysia today that lifelong learning will need to be at the centre stage now and in the future, and that it should play a major role as a integral part of the national education and training system with equal importance and status to the general stream education and training.

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Making Lifelong Learning a Reality
Seoul, 24-26 June 2003

**Lifelong learning
in Malaysia**

by

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List of Abbreviations

ADTEC	Advanced Technical Training Centre
CBE/L	Competency-Based Education /Learning
CIAST	Centre for Instructors' Advanced and Skills Training
DA	Demonstrator Application
EC	Commission of the European Communities
ESC	Economic and Social Committee of the EC
FMM	Federation of Malaysian Manufacturers
HRDF	Human Resources Development Fund
HRDL	Human Resource Development Ltd
HSC	Higher School Certificate
ICT	Information and Communications Technology
ILO	International Labour Organisation
ITI	Industrial Training Institute
KUittho	University College Tun Hussein Onn
MAPCO	Malaysian Association for Private Colleges
MED	Ministry of Entrepreneur Development
MES	Ministry of Education and Science, Sweden
MCE	Malaysia Certificate of Education
MDT	Malaysian Diploma in Teaching
MOE	Ministry of Education, Malaysia
MOHR	Ministry of Human Resources
MSC	Multimedia Super Corridor
MYS	Ministry of Youth and Sports
MyGfL	Malaysia Grid for Learning
OPP3	Outline Perspective Plan
NAB	National Accreditation Board
NAPIEI	National Association of Private and Independent Education Institutions
NITA	National Information Technology Agenda
NITC	National Information Technology Council
NOSS	National Occupational Skill Standards
NUTP	National Union of Teaching Profession
NVP	National Vision Policy
NVTC	National Vocational Training Council
OECD	Organisation for Economic Cooperation and Development
PCERQ	Permanent Committee on Evaluation and Recognition of Qualifications
PTPTN	National Board for Higher Education Fund
QAD	Quality Assurance Division
SKM	<i>Sijil Kemahiran Malaysia</i> (Malaysian Skill Certificate)
SDF	Skills Development Fund
TSP	Time Sector Privatisation
TVET	technical and vocational education and training
UNITAR	Tun Abdul Razak University Razak
7MP	Seventh Malaysia Plan
8MP	Eighth Malaysia Plan
9MP	Ninth Malaysia Plan

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Introduction

Malaysia is a Federation consisting of 11 Malay states, Sabah, Sarawak and a Federal Territory (DOI, 2001). Peninsular Malaysia achieved her independence on 31st. August, 1957. Sabah and Sarawak joined the Federation on August, 1963. Malaysia is governed as a parliamentary democracy with a constitutional monarch ruling the nation.

The population of Malaysia in 2000 was 23.27 million (Malaysia, 2001b) (cf. Table 1) and is expected to increase to 26.04 million in 2005. Geographically, about 84.9 per cent live in Peninsular Malaysia, 8.4 per cent in Sarawak, and 6.7 per cent in Sabah (DOI, 2001).

The people comprise of Malays, Chinese, Indians, Ibans, Kadazans, Bidayuh and other races. The Malays and the other indigenous groups like Ibans, Kadazans and Bidayuh comprised 66.1 per cent of the total population, Chinese 25.3 per cent and Indians 7.4 per cent in the year 2000 (Malaysia, 2001a).

Malay is the regional and national language while English is widely spoken. Islam is the official state religion, as contained in the country's Constitution but there is complete freedom of worship.

Table 1 Malaysia: Basic Data

	1995	1997	2000	2005
Population, million	19.16	20.1	23.27	26.04 [#]
Per capita income, Ringgit	RM10,068	RM12,107*	RM13,359	RM17,779 [#]
Real GDP Growth, %	8.2	8.7*	8.6	7.7 [#]
Unemployment, %	2.8	2.5*	3.1	2.7 [#]

Note: * Prior to the economic crisis;

estimated or target of 8MP

Sources: Malaysia (1996a) Seventh Malaysia Plan; MOF (1995; 1997; 1998 and 1999) Economic Reports 1995/96; 1997/98; 1998/99; and 1999/2000; Malaysia (2001a) Eighth Malaysia Plan; Malaysia (2001b) OPP3.

1. The Significance of Lifelong Learning in Malaysia

Since a unique feature of Malaysia is its cultural heterogeneity, the primary goal of educational and training policy has been to foster national unity and personal/moral development, therefore the mainstream schooling sector has received the most emphasis compared to the other sectors (Aziz, 1985; Tzannatos and Johnes, 1997). Nevertheless, there has been an increasing awareness, perhaps some consensus in Malaysia today that lifelong learning will need to be at the centre stage now and in the future (this will be discussed in the next section), and that it should play a major role as a integral part of the national education and training system with equal importance and status to the general stream education and training.

There are two main reasons why lifelong learning is becoming very important to Malaysia. These can be attributed to:

- a) the pressures of globalisation and rapid technological changes; and
- b) Malaysia's changing demography.

1.1 Globalisation And Rapid Technological Changes

Developments globally seem to have elevated the importance of lifelong learning, making them central to the discourse of education and training in Malaysia. Increased globalisation and interdependency of national economies, helped by the worldwide removal of trade barriers and the lowering of transportation costs, have created a more homogenised international system of processes and transactions and a global structure of economic competition (Korsgaard, 1997). These new social and economic arrangements have inevitably affected Malaysia. Manufacturing and the services sector are the major contributors to growth of the Malaysian economy. As a result, Malaysia is moving towards a more knowledge-intensive economy, focusing less on the manufacture of labour-intensive mass products, and instead, emphasizing more on the production of high-quality products and services requiring knowledge inputs (Malaysia, 2001a; Malaysia, 2001b). These are one of the main thrust of the 8th Malaysia Plan (8MP) and the Outline Perspective Plan (OPP3). Organisations are encouraged to innovate their products, services and processes to remain competitive. Production methods are also gradually being propelled toward qualitative shifts with low skilled or semi-skilled workers on the assembly line, being displaced with multiskilled workers producing a more diversified range of products with shorter product life cycles and through higher automation and better technology. The National IT Agenda (NITA), the Multimedia Super Corridor (MSC), the emphasis on Science and Technology, and the intensification of R & D, are some of the efforts towards increasing technology intensity and knowledge capabilities in Malaysia.

The developments above have generated an obvious demand for implementation of lifelong learning. Since productivity and skill intensity are positively related (World Bank, 1996), for the knowledge economy to be realized, the skill intensity for the different economic sectors has to increase drastically. More funding for education and training, new attitudes and values, new teaching methods, and new forms of control are also required. A statement to this effect is spelled out in the OPP3 document :

“A system of lifelong learning will be promoted to ensure that workers can continuously upgrade their skills and knowledge in order to remain relevant in the environment of rapidly changing technology and work processes as well as to nurture a learning society.”

(OPP3, Malaysia, 2001b, p. 134)

1.2 Changing demography

Demography also plays a major part in the political and social arena, not least in education and training policies. The population of Malaysia is estimated to reach 26.04 million people by the year 2005. 7.74 million (33 per cent) of this would comprise those below 15 years, 0.9 million (4 per cent) would be 65 years and above, while there would be 14.62 million (63 per cent) people in the working age group of 15-64 years old. The population is expected to increase to 28.9 million in 2010 and the working age group (15-64) is expected to increase to 65.7 per cent of this (Malaysia, 2001b). The median age of the population in 2000 was 23.9 years and will increase to 26.7 years for the year 2010, indicating that Malaysia continues to have a young population age structure. The growth in the working age population also implies the need to create more employment and training opportunities for this group.

About 48.9 percent or 11.4 million of the total population in 2000 were female. Although 48 percent of women are in the working age group of 15-64 years, they account for one-third of the labour force. The intake of females in public universities expanded from 50 percent in 1995 to 55 percent in 2000 and account for 65 percent of the total students enrolled in the arts and humanities courses (Malaysia, 2001a). The challenge would be to encourage more females to enrol in the technical and professional courses which will be needed in the future.

In 2000, only fourteen percent of the labour force in Malaysia possess tertiary education qualifications and this will have to be significantly increased in order to meet the needs of a knowledge-based economy. In this sense, lifelong learning can play a key role in the struggle for equality of opportunity, in remedying school failure and in contributing to cultural, economic and social development in Malaysia. It may also allow for individual development to the highest qualification levels. Within the national education and training policies, the role it can play in the learning and qualification pathways, as well as in the professional and continuing education and training sector has generally been recognised. It may also be regarded as an instrument in the diversification of the educational and training system, and the democratisation of access to qualifications.

Hence from the above developments, lifelong learning and continuous education and training will be an important feature in the Malaysian education and training scene.

2. Lifelong Learning Concepts and Policy

The debate on the concept of lifelong learning has moved from one that focuses on employability and economic concerns to a broader definition that includes all phases and forms of learning from pre-school to post-retirement as well as the whole spectrum of formal, non-formal and informal learning. The consensus is that the four broad objectives of learning should include active citizenship, personal fulfilment, social inclusion as well as employment-related aspects (Commission of the European Communities, EC, 2000). Thus, lifelong learning is defined by the Commission as “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competencies within a personal, civic, social and/or employment-related perspective.”

Similarly, the Organization for Economic Co-operation and Development (OECD, 1996) defines lifelong learning as “all purposeful learning activity from the cradle to the grave, that aims to improve knowledge and competencies for all individuals who wish to participate in learning activities.”

Going by the above definitions the several policy statements, strategies, initiatives as well as investment in education, training and human resource development are indicators of public sector commitment in developing lifelong learning as a culture in Malaysia. Indeed this is continuously being pursued under the various five-year national development plans.

However, it is in the Third Outline Perspective Plan (OPP3), 2001 - 2010 and the Eighth Malaysia Plan (8MP), 2001 - 2005 that actual references are made to lifelong learning. Of strategic significance (and this is an important milestone in the development of lifelong learning in Malaysia) is the fact that the policy statements and references to lifelong learning in the 8MP are made in the context of developing Malaysia into a knowledge-based economy as well as to create a learning society:

“During the Plan period the principal thrust of Human Resource Development will be the creation of a strong human resource base to support the development of a knowledge-based economy and enhance productivity and competitiveness.”

(8MP, Malaysia, 2001a, p. 15)

Taking the concept of lifelong learning to include all learning activities which include formal, non-formal and informal learning activities (Commission of the European Commission, EC, 2000) it is largely formal learning and to a much lesser extent, non-formal learning that can be described as the core of lifelong learning programs and activities in the Malaysian context. This is to be expected. Traditionally and up to now, the public sector is the major provider for education, training and human resource development.

It is also apparent that, presently, the concept of lifelong learning in Malaysia is clearly linked to productivity and employability as expressed in:

“Lifelong learning will become increasingly important in the knowledge-based economy where knowledge and skills need to be continuously updated and upgraded. New skills and expertise will be required to improve employability and productivity.”

(OPP3, Malaysia, 2001b, p. 162)

Little or no value is attached to informal learning, learning for personal development or active citizenship.

In line with the above, the Plan and the OPP3 taken together establishes the following strategies and actions:

- The Government will initiate efforts to promote and implement programs for lifelong learning especially for those without a strong basic education so that they will have the opportunity to continue their education as well as learn at their own pace outside school or in the workplace
- Affordable accessibility to training courses and education through the internet or other ICT related media will be provided. In addition, more IT kiosks & cyber centres will be set up, especially in rural areas.
- Educational Institutions will be required to introduce flexible learning approaches in terms of course durations, entry requirements and mode of teaching as well as ensure affordability

- Establishment of community colleges, open universities and distance education will provide another avenue for Malaysians to pursue tertiary education and upgrade their skills and qualifications
- Community Colleges will provide opportunities for those who left the school system to join the labour market to further their education and training
- Financial Institutions will be encouraged to provide soft loans to working adults to continue their education
- Employers will be encouraged to promote lifelong learning through training and retraining to equip workers with new skills and knowledge so as to keep up with technological developments
- Web based learning can be an effective means for lifelong learning and provide the environment for self-paced learning
- Firms and industries will be encouraged to provide incentives to their employees to relearn and continuously upgrade their skills
- Support services in the form of public libraries, especially mobile libraries will be increased. Communities in residential areas will be encouraged to pool resources to set up and maintain libraries within their localities. In addition, private companies will be encouraged to adopt and contribute to these community libraries

In summary, it is clear that the government has made a strong commitment towards lifelong learning by the specific references made in the 8MP and OPP3 documents. The notion of lifelong learning as enunciated is closely associated with productivity and employability. Although specific strategies have been prescribed, its implementation will be followed through by the respective Ministries/Agencies.

3. Learning Pathways and Qualifications

This section presents an overview of the Malaysian Education System and the pathways leading to the possible qualifications attainable as one progresses through the system.

3.1 Formal School System

The formal school system in Malaysia has a 6-3-2-2 pattern (*Figure 1*). This structure represents the primary, lower secondary, upper secondary and Form 6 levels respectively. At the end of two years of upper secondary education all students sit for the Malaysia Certificate of Education (MCE) Examination beyond which students can seek employment, proceed for pre-university education at matriculation colleges (1 year) or to Form 6 (2 years). At the end of Form 6, students sit for the Higher School Certificate (HSC) which is the main qualification needed for

entry into universities. Other options include proceeding to other forms of tertiary education at community colleges, polytechnics, or other training institutions and universities.

3.2 Upper Secondary Technical and Vocational Education

The formal technical and vocational education system under the Ministry of Education starts at the upper secondary level, which consists of secondary technical and secondary vocational schools. These schools offer courses in three streams: a) technical education stream; b) vocational education stream; and c) skills training stream. The technical and vocational streams offer a course structure that covers the same core subjects as in other upper secondary academic schools. In addition to these core subjects, the vocational stream student selects a package of vocational subjects in accordance with the vocational course chosen. In the technical stream, the subject offerings are more science and mathematics based while technical subjects offered are less practical in nature. In the skills training stream, more emphasis is given to practical work to develop competency in trade skills as required by related industries.

3.3 Post Secondary Technical and Vocational Education and Training

At the post secondary level the training activities at both technician/sub-professional and craft levels are carried out mainly by the Ministry of Education, Ministry of Human Resources, Ministry of Youth and Sports, Ministry of Entrepreneur Development and others. In addition, the State Governments and industry are also involved in training. *Table 2* presents an overview of the institutions and qualifications provided.

3.4 Teacher Education

Teacher Education Colleges provide another pathway for students leaving the secondary school system. The colleges offer the Malaysian Diploma in Teaching (MDT) which is the initial training qualification required to those who wish to enter the teaching profession. The training part culminating in this Diploma forms the pre-service part of teacher education.

Upon appointment as trained teachers, further training is considered as in-service training. In-service education and training include attending short courses for professional development and pursuing first, second and third degree courses, depending on the needs of the individual teacher.

3.5 Public Tertiary Education

Currently (2002), there are 12 public universities and 6 university colleges which offer courses at the diploma, degree and post-graduate levels. Entry to diploma courses is based on the MCE while the entry to degree courses is based on the HSC.

Figure 1 – PATHWAYS IN THE MALAYSIAN EDUCATION SYSTEM

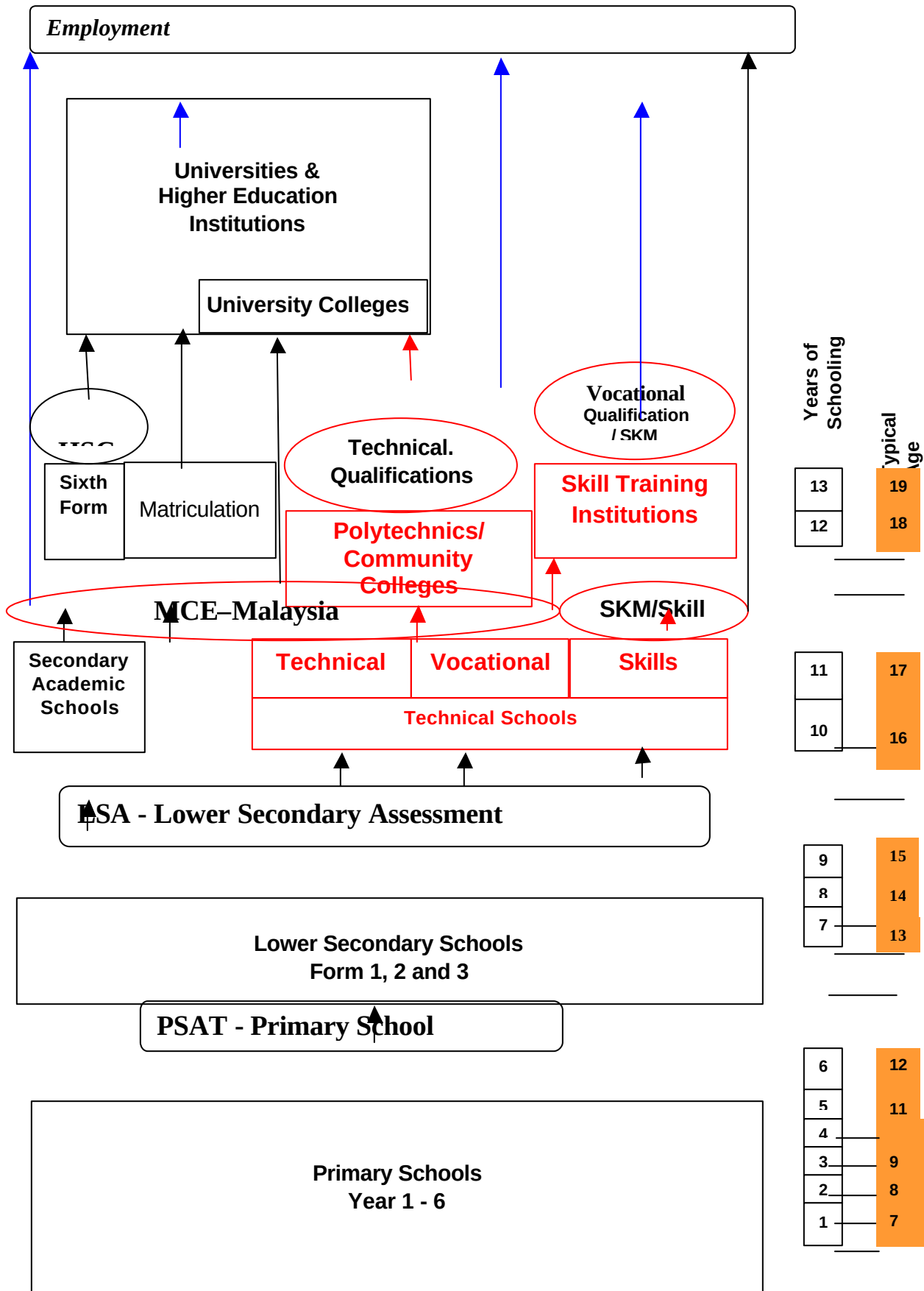


Table 2 Post-Secondary Provision: Ministries, Institutions and Qualifications Provided

Ministry/Agency	Institutions	Courses/Qualifications
Ministry of Education (MOE)	Secondary Technical/Vocational Schools	Malaysian Certificate of Education (MCE)
	Technical Teachers Training College	Technical Teachers Teaching Diploma (3 yrs)
	Polytechnics	Full-time Technician Certificate (2 yrs) / Diploma (3 yrs) except Marine Engineering Diploma (4 years)
	Community Colleges	Certificate (2 yrs) / Diploma (3 yrs)
Ministry of Human Resources (MOHR)	Industrial Training Institutes (ITI)	Basic trade skills (1-1.5 yrs leading to SKM Level 1 or 2 Certification. Short Courses
	Advanced Technology Training Centre (ADTEC)	Diploma in Technology (2-3 yrs)
	Japan Malaysia Training Inst.	Diploma in Technology (2-3 yrs)
	Centre for Instructor and Advanced Skill Training (CIAST)	a) 3 yr instructor training diploma b) Short Courses
	All Institutions registered with National Vocational Training Council (NVTC)	National Occupational Skills Standards – Malaysia Skill Certificate (SKM) Levels 1-3
Ministry of Youth & Sports (MYS)	National Youth Training Institute	Skill Certificate (SKM) Levels 1-3 (18 – 24 months)
	National Youth Advanced Skill Training Institute	Skill Certificate (SKM) Level 3 Diploma
Ministry of Entrepreneur Development (MED)	Mara Skill Training Institutes	Skill Certificate (SKM) Levels 1-3 (18 months)
	Mara Activity Centres	Trade Certificate (6-12 months)
	Mara Business Institute	Certificate, Diploma, Advanced Diploma
	German Malaysia Institute	Diploma (3 years)
	British Malaysia Institute	Higher National Diploma (HND)
	Malaysia France Institute	Diploma (3 years)
Ministry of Agriculture	Agriculture Institutes	Certificate in Agriculture (3 yrs)
Ministry of Health	Various Colleges and institutions	Certificate (2 yrs) and Diploma (4 yrs) in various health related occupations
Federation of Malaysian Manufacturers (FMM)	FMM Institute	Certificates and Diploma (2 -3 yrs) in various fields Short Courses
States	State Skill Development Centres	Certificates and Diploma in various fields Short Courses

3.6 Private Education

Private Education has expanded rapidly since the Private Higher Education Institutions Act of 1996 provided for the establishment of private universities, university colleges, and branch campuses of foreign universities. Currently (2002), there are 8 private universities and 4 branch campuses of foreign universities offering amongst others, twinning, credit transfer, advanced standing, external degree, and distance learning programs.

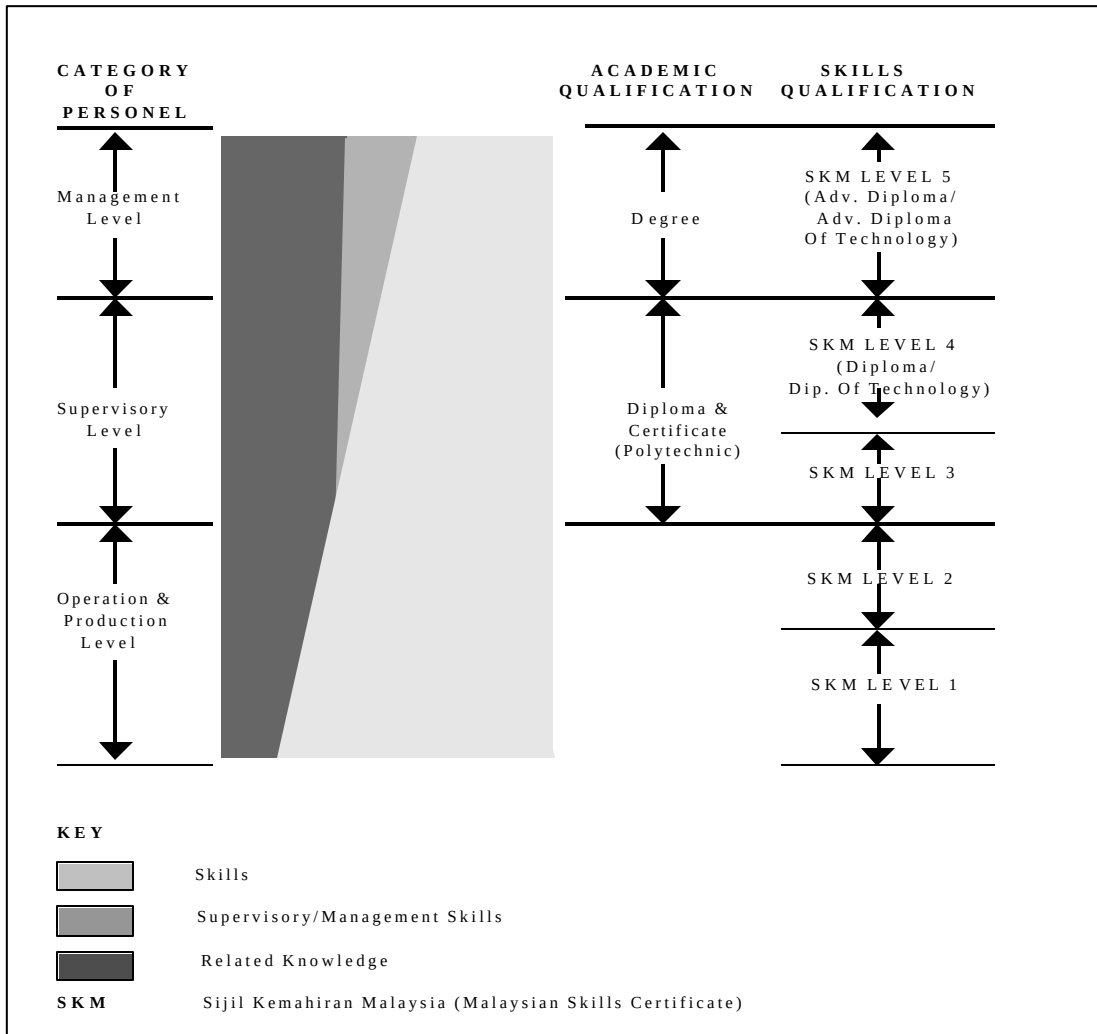
3.7 *Malaysian Skill Certification System and Pathways*

The National Vocational Training Council (NVTC) administers the National Skills Framework in Malaysia. In 1992, a major reform was the adoption of a 5-level Skills Qualification Framework (see *Figure 2*) to replace the former 3-tiered (Basic, Intermediate and Advanced) skill certification system. The accreditation approach in National Skills Certification was introduced in place of the skill testing system. The Competency-Based Education Learning (CBE/L) principles are used in developing the National Occupational Skill Standards (NOSS) for a variety of occupations. Based on outcomes or job competencies the system is flexible enough to award not only the SKM (Malaysian Skill Certificates), but also “Statements of Achievement” which can be accumulated for full certification.

The National Skills Certification System provides for an alternative, and an equally attractive career development path – one that promotes lifelong learning and upward mobility for the skilled workforce in the country (NVTC, 1997). The framework together with the NOSS is deemed necessary to promote a learning culture through continuous skill upgrading which is more conducive for personal motivation of skill workers, thus leading to the overall upgrading of competencies amongst the country’s skilled workforce (Syed Muhamad, 2002). Currently, NVTC is developing competency standards for higher-level skills and for new trades that are emerging. To date, there are 511 NOSS covering 39 major occupations in industry, ICT, technical and service related fields. Currently, level four of this skills certification system under the NVTC is recognised as being equivalent to the Diploma level under the Ministry of Education.

It is significant to note that the National Skills Framework embodies the concept of lifelong learning. A skills certificate will be awarded to a candidate upon successful completion at a certain level. This certificate is a prerequisite for admission of the candidate into a higher level and so forth. The successful candidate can choose to enter the job market upon completion and continue the training into the next higher level of certification later. Alternatively the person can choose to continue the training upon completion and find employment later. There is also provision for recognition of prior achievement which allows for flexibility in obtaining new qualifications.

FIGURE 2: QUALIFICATION FRAMEWORK FOR NATIONAL SKILL CERTIFICATION IN MALAYSIA



4. Participation in Education and Training

Table 3 shows the student participation rate in government and government assisted institutions from 1970 – 2000. The high participation rate in primary education (96.80% in 2000) indicates that Malaysia has achieved near universal primary education thereby providing the basic foundation towards lifelong learning. Although the participation rates for the post-secondary and university cohorts have increased over the years, these are relatively low at 16.2% and 8.1% in the context of achieving the transformation towards a knowledge-society.

Table 3
Student Participation Rate in Government and Government Assisted Institutions
1970 - 2000

<i>Education Level</i>	1970	1980	%+/-	1990	%+/-	2000	%+/-
Primary (6+ - 11+)							
Age Cohort	1 611 004	2 146 114	33.2	2 451 800	14.2	3 004 200	22.5
Enrolment	1 421 469	2 008 973	41.3	2 447 206	21.8	2 907 123	18.8
Participation Rate	88.20%	93.60%	5.4	99.80%	6.20%	96.80%	-3.0
Lower Secondary (12+ - 14+)							
Age Cohort	724 913	1 013 260	39.8	1 135 300	12.0	1 474 200	29.9
Enrolment	378 535	809 386	113.8	942 801	16.50	1 253 029	32.9
Participation Rate	52.2%	79.9%	27.7	83.0%	3.10	85.0%	2.0
Upper Secondary (15+ - 16+)							
Age Cohort	445 538	648 924	45.6	735 500	13.3	960 900	30.6
Enrolment	89 435	247 239	176.4	361 411	46.2	697 717	93.1
Participation Rate	20.1%	38.1%	18.0	49.1%	11.0	72.6%	23.5
Post Secondary (17+ - 18+)							
Age Cohort*	601 121	624 281	3.9	732 100	17.3	938 000	28.1
Enrolment	18 802	58 501	211.1	138 302	136.4	152 365	10.2
Participation Rate	3.1%	9.4%	6.3	18.9%	9.5%	16.2%	2.7
University (19+ - 24+)							
Age Cohort**	1 420 687	1 624 274	14.3	2 028 100	24.9	2 626 900	29.5
Enrolment	8633	26 410	205.9	58 286	120.7	211 584	263.0
Participation Rate	0.6%	1.6%	1.0	2.9%	1.3	8.1%	5.2

* Total Age Cohort 17+ - 19+ for year 1970.

** Total Age Cohort 17+ - 24+ for year 1970.

Source: Educational Statistics Malaysia 1970, 1980-1985, 1990, and 2000.

Table 4 shows the enrolment of the 17+ to 23+ year cohort for the post-secondary and university levels (defined as tertiary education by the MOE). Tertiary education in Malaysia includes education at community colleges, polytechnics, public and private training institutions, public and private universities. Based on the total cohort of 3,012,012, the participation rate in tertiary education is 25% which is relatively low when compared to developed countries.

Table 4 Year 2000 Enrolment of 17+ to 23+ Year Cohort in Tertiary Education

Education Level/Program	Enrolment
Form 6	47998
Matriculation	25689
MARA Colleges	2411
Training Institutions	31589
Polytechnics	44775
Teacher Training Colleges	23188
Tungku Abdul Rahman College (TAR)	15166
Universities	
Certificate/Diploma	60766
First Degree	170794
Post-Graduate Diploma	3229
Private Higher Education Institutes (PHEI)	
Colleges	183937
Universities	25652
Students Studying Abroad	
Sponsored	5809
Non-sponsored (estimate)	112000
Grand Total	753003

Source: Table 4.7 (modified), MOE (2001). Educational Development 2001-2010.

Using the 18-21 age cohort as the basis, the *Organization for Economic Cooperation and Development (OECD)* 1996, cites the participation rate in non-degree level education for Malaysia as 11 percent compared with 26 percent in USA and 12 percent in UK. Degree level participation for the same cohort is 5 percent for Malaysia, 41 percent for USA, and 39 percent for UK.

It was reported that in 1997, the number of 17 year olds equalled 432,000 (MOE, 2001). Out of this total, 317,000 set for the secondary school leaving examinations (MCE) and 219,000 (51%) passed the examinations. However, the existing educational and skill training institutions could only accommodate approximately 81,030 (37%) of those who passed. This means that about 63% of the 17 year old cohort in 1997 entered the job market without any training or skills.

The impediments to lifelong learning, would therefore, include the lack of access and capacity to cater for the training needs of school leavers. The government has responded to this challenge by according capacity expansion a high priority. For example during the 8MP, the Ministry of Education has been entrusted with building 193 Community Colleges and five polytechnics which when completed will provide more than double the present educational and training capacity.

The strategy to increase the provision of tertiary education especially the post-secondary sector calls for the establishment of a large number of institutions. The rapid expansion will test the capabilities of the ministries and agencies involved especially with regards to quality of courses and availability of academic staff. Thus, the challenge would be to expand the mission of these institutions to include the needs of not only school leavers but also adults, workers, and other members of the community in line with the broad definition of lifelong learning. Lifelong learning provision should be incorporated into the design of these institutions.

5. Financing of Lifelong Learning

The importance attached to education and training is reflected in the generous budget allocations in successive national development plans. Under the 8MP, for example, the allocation for training and development increased to RM22.7 from RM20.2 billion in the 7MP. This represents 20.6 percent of the total development allocation of the Plan. Annually, the provision has also been increasing steadily over the years (cf. Table 5). For example, the percentage of total educational expenditure against total federal expenditure was 16.30 per cent in 1991, but has increased to 20.43 per cent in 2001.

The establishment of the Human Resource Development Fund (HRDF) and the Skills Development Fund (SDF) provides opportunities for school leavers, and workers for training and retraining.

5.1 *Human Resource Development Fund (HRDF)*

The Human Resources Development Fund (HRDF) administered by the Human Resource Development Limited (HRDL) operates through levy contributions from registered companies. The HRDF through its various training schemes facilitates the training and retraining of the workforce in the private sector.

For the year ending 2000, 7,135 employers registered with the HRDF, 5,236 were from the manufacturing sector and 1,899 from the services sector. Within the manufacturing sector, the electronics industry with 939 (17.93%) had the highest number of employers registered with the fund. The hotel industry with 697 (36.70%) employers registered the highest number of employers within the services sector.

In the year 2000, approved training places and financial assistance for retraining and skills upgrading registered a significant increase compared to the previous year. The number of approved training places increased by 21.8% to 301,790 compared to 247,673 training places in 1999. Financial assistance approved in 2000 increased by 7.67% to RM113.7 million compared

to RM105.6 million approved in 1999 (HRDF Annual Report, 2000). From 1993 – 2002, the cumulative number of training places approved totalled 3.3 million with financial assistance amounting to RM1.2 billion being disbursed.

The apprenticeship scheme under the HRDL benefits school leavers. Under this scheme, employers are required to train school leavers in specific skill areas agreed by employers and approved by the HRDL. Course fees are financed by the HRDF. The sponsoring company is required to pay the trainee between RM 300 – RM500 per month. This amount plus insurance and other expenses can be reimbursed from the Fund.

The total intake for the year 2000 increased by 17.8%, that is 747 compared to 634 in 1999. Currently, there are 7 such schemes in operation and more will be introduced. Upon completion of training apprentices are awarded the Malaysian Skill Certificate (Level 1or 2) as well as an apprenticeship certificate. An added advantage of this scheme is that apprentices will be employed by the sponsors upon completion of the training.

TABLE 5
ESTIMATED EDUCATIONAL EXPENDITURE BY PURPOSE AND AGAINST TOTAL
GOVERNMENT EXPENDITURE AND GROSS NATIONAL PRODUCT (GNP), 1991-2001

<i>Year</i>	<i>Total educational expenditure</i>	<i>Total federal expenditure</i>	<i>GNP at Market Price</i>	<i>Percentage of total educational expenditure against total federal expenditure</i>	<i>Percentage of educational expenditure against GNP at market price</i>
1991	6 269 962 850	38 473 900 000	123 232 000 000	16.30	5.09
1992	7 959 762 010	45 556 757 660	140 547 000 000	17.47	5.66
1993	8 525 411 610	44 144 837 530	159 043 000 000	19.31	5.36
1994	8 954 979 220	47 135 086 560	178 090 000 000	19.00	5.03
1995	9 734 107 320	48 797 932 300	202 389 000 000	19.95	4.81
1996	10 846 486 650	55 467 290 400	227 368 000 000	19.55	4.77
1997	12 031 102 900	59 982 209 600	262 193 000 000	20.06	4.59
1998	12 510 391 200	64 124 392 000	269 137 000 000	19.51	4.65
1999	13 462 340 030	65 095 213 400	280 932 000 000	20.68	4.79
2000	14 079 737 820	78 025 291 600	295 843 000 000	18.05	4.76
2001	18 601 959 600	91 046 791 410	326 071 000 000	20.43	5.70

Source: Economic Report 2000/2001
Federal Expenditure 2001

5.2 Skills Development Fund (SDF)

The SDF was established in 2001, to provide loans for individuals intending to pursue full-time as well as part-time technical and vocational courses in public and private training institutions. However, loans are available only for courses accredited by the NVTC. For the year 2001, it is reported that an amount of RM150 million in financing has been approved for 20,596 trainees (Syed Muhamad, 2002).

6. Challenges In Implementing the National Skills Framework

Since the introduction of the National Skills Framework in Malaysia in 1992, it has faced several challenges. This section discusses some of these challenges in implementing the National Skills Framework.

6.1 Image and Public Perception of Technical and Vocational Education and Training

One of the major challenges in implementing the National Skills Framework in Malaysia is how to overcome the low image and public perception accorded to technical and vocational education. The majority of young people and their parents have aspirations for higher education and “white collar jobs” and seem to regard vocational education and training as being a less attractive alternative reserved mainly for low academic achievers and for students from lower income families. Another reason for the lack of interest in vocational training is that the courses are not well promoted. Vocational training is not seen as an attractive alternative even though highly skilled workers are in demand and can command high salaries. The challenge then would be to change the mindset of many segments of Malaysian society that do not have a high regard for low and mid-level skilled occupations. One suggestion would be to introduce career exploration at a very early age preferably starting in primary school.

Moreover, most vocational training institutions under the various Ministries provide courses leading to certification at skill levels 1 and 2 only, which are often associated with low income. Together with the lack of articulation arrangements, skill training becomes a less attractive option in the minds of school leavers and their parents. Although it is possible for higher level skill qualifications to be accepted (Levels 3 & 4) as entry into universities, and there do exist pathways to skill holders to enter local colleges such as the German, French, and British Malaysia Institutes, it could be fair to summarize that articulation arrangements are not that well formalized and well defined for skill qualifications in contrast to other public and private institutions which offer a wide range of courses with attractive articulation arrangements and options for further study.

In this regard, the recently established Skills Development Fund which provides funding for school leavers to pursue skilled-based careers will to some extent attract more school leavers to pursue a skills-based career. The Skills Development Fund also provides financial assistance for those already at work to acquire new skills and qualifications as well as those who undergo training on a part-time basis. There is no doubt that the fund has raised the demand for learning, as evident by the fact that the number of application in 2001 equalled 23,000, which is 53 percent more than the target (Syed Muhamad, 2002).

6.2 Enhancing the NOSS System

Although the 5-level National Skills Framework in Malaysia has been implemented since 1992 and has developed standards for a large number of occupations, concerns have been raised as to whether the system can address the phenomena of the increasing complexity at the workplace and the accelerated pace of technological change (Loose & Abdul Hakim Juri, 2002). The authors question the “longevity” of the skills developed by the competency based approach and instead advocate the experienced-based learning approach which is more appropriate for training workers for the knowledge-based economy. The experience-based education and training approach which is predominantly work-process oriented is in line with the government’s call to forge a new approach to training and retraining as stated in the OPP3 (p. 164).

“To enhance further the quality of skills training, the development of National Occupational Skills Standards (NOSS), which is based on job or occupations will be restructured towards work processes that are in line with the changing needs of employers.”

Spoettl (2000) in his study of the Malaysian Manufacturing Sector raises the concern that the many occupational areas developed have resulted in the horizontal and vertical splitting of courses. Additionally, the distribution of occupations on 5 levels results in dilution of the contents. The result is that the focus is on obtaining the required certificates rather than on a content-oriented approach emphasizing the development of the required competencies. For example, the author contends that the already high number of 397 occupations with 11 occupations just for metal machining technology is only feasible with a tayloristic division of labour rarely found on the production level of the surveyed enterprises of the study. Thus, in certifying workers especially for the manufacturing industry, the focus should be on work processes. Otherwise, as Spoettl points out there is a danger that the NVTC will increasingly implement job oriented occupational profiles that are of no relevance for the industry whose focus is on work processes.

Another related concern relates to the contention that the work processes of today and the future require more than the set of competencies identified for a particular occupation as noted by Foyster (2002) that “... an SKM (occupational skills) level is only broadly indicative of the nature of an education or training course. A course consists of far more than just the occupational skills that are amongst the outputs from the course”. There is a need to include generic skills such as teamwork, communication, problem solving and information technology on top of the competencies identified for an occupation. To address this issue, the Human Resource Ministry is taking steps to introduce training in critical enabling skills apart from the specific skills of the chosen trades of trainees (Syed Muhamad, 2002).

6.3 Supply of Quality Teachers and Instructors

In the light of the rapid expansion of the technical vocational system, ensuring a supply of qualified and experienced technical and vocational teachers will be a formidable challenge. Currently, the main supply of technical vocational teachers come from the University College Tun Hussein Onn, (KUittho) and the Centre for Instructor and Advanced Skill Training (CIAST). Although KUittho, formerly the Staff Training Centre for Polytechnics, has been accorded

university status, it remains as a sole provider of lecturers for polytechnics. As such, the polytechnic system is assured of a steady supply of lecturers and instructors.

On the other hand, the same cannot be said for the other skill training institutions, many of whom have difficulty in recruiting and retaining staff. CIIAST established to provide instructors for training institutes offers a one year course leading to vocational teacher certification and other skill upgrading courses. With its limited maximum capacity of 200, its impact in meeting the current and future needs of training institutions is insignificant. Consequently, there is an urgent need to address this issue and one suggestion would be to review the role of CIIAST or to establish a new teacher training centre dedicated mainly for skills training.

The requirement of formal academic qualifications as a pre-requisite for appointment to teaching positions means that most teaching staff recruited directly after they graduate from universities and colleges lack industrial work experience which is essential to assure quality especially in skill training. Although there are provisions to recruit staff from industry this practice is not widespread as the remuneration based on formal qualifications is unattractive.

As early as 1991, the Cabinet Committee on Training in addressed the issue of attracting and retraining quality trainers and instructors for the technical vocational education system in Malaysia. The Committee proposed a review of schemes of service of trainers/instructors in public training institutions to provide for competitive salaries, better promotion and career prospects, greater opportunities for training and more flexibility in the schemes of service. The need to utilize private sector/industry expertise in public institutions and provisions for instructors in public training institutions to gain industrial exposure was also highlighted.

To date, various measures have been implemented by the government. Teachers with technical and vocational qualifications are now categorized as critical and are paid an allowance of five percent on top of their salaries as compared to their academic counterparts. Technical and vocational teachers have better opportunities for in-service training and are mostly sent abroad for skill upgrading training. Additionally, an industrial attachment program with full pay has been implemented for polytechnic lecturers and this scheme should be implemented for staff in other training institutions. This program will also enhance industry institution relationships and provide opportunities for teachers to update their skills and knowledge.

6.4 *Development of Quality Teaching Learning and Training Materials*

Yet another impediment to the implementation of the skill system is the lack of quality teaching and learning materials. Although NOSS are occupational standards and can form the basis for developing teaching and learning materials, the actual task of developing the materials are left to the individual providers and instructors. Obviously this results in varying approaches between different providers. Therefore it makes sense to standardize the development of these materials especially in the light of the move towards alternative delivery of programs utilizing distance education as well as internet technologies. A centralized national effort to coordinate the development of such materials would ensure consistent quality and result not only in raising the quality of the teaching and learning process but also in substantial savings in development costs.

6.5 Acceptance of NOSS by Private Providers

Another area of concern is that the acceptability and usage of the NOSS system by private institutions. NOSS is not extensively used by the private training institutions. Additionally, the skill certificates issued are not that well accepted by industry. Most of the private institutions offer courses in the information technology and business areas leading to overseas qualifications. The lack of suitable teaching and learning materials as well as the better understood overseas certificates with well established articulation arrangements leading to higher qualifications has been cited as being the main reasons for the lack of acceptance of NOSS (Deetya, 1998). The widely held perception that “overseas qualifications are better” is another factor impeding the widespread acceptance of NOSS implementation.

As such, the promotion of the NOSS system should be given the highest priority. As mentioned earlier the Skill Development Fund has to some extent improved the acceptability of the NOSS system and should encourage more private institutions to offer courses leading to NOSS certification. Syed Muhamad (2002) for example reports that the number of accredited providers have increased from the 474 in the year 2000 to 795 in 2001.

It should be noted that the challenges and concerns discussed above have already been acknowledged and currently being addressed by the government which involves implementing the *Dual System Approach* as modelled from the German system to enhance the efficiency and effectiveness of training. In this project, there are components that will address issues such as the revision of NOSS and development of occupational profiles; development of quality curricula and instructional materials; pre-service and in-service technical teacher and instructor training; cooperation and networking of the various partners in training; as well as dealing with the social values, esteem for work and image for TVET through the creation, enhancement and intensification of the dual system culture. It is believed that such efforts will enhance the TVET system in Malaysia in the near future.

6.6 Towards A National Qualification Framework

Although the current academic pathways allows for vertical movement between different levels and paths of education, there is still much that can be done to make it more seamless. Currently, universities recognise prior learning of entrants on a case by case basis. Exemptions for a few courses and credit transfer are being practiced but these are limited forms of articulation. A smooth transition that allow qualifications to be articulated is still not widespread. To overcome this barrier to lifelong learning, more effort is needed, for example in the area of curriculum to allow for a gradual and natural progression from one level to another higher level.

In contrast, the skill framework provides upward mobility towards higher level skill certification. Therefore, the lifelong learning initiative would be better promoted if linkages are created between the academic and the skills pathways. Currently, those with Certificates 1 and 2 are only able to enter diploma programs at the skill training institutes and not the diploma programs at the polytechnics.

The development of a national qualification framework is one strategy towards solving the problem of matching different qualification awarded by different education and training providers. A national qualification framework is in the interest of enterprises and workers as it facilitates lifelong learning, helps enterprises and employment agencies match skill demand with supply, and guides individuals in their choice of training and career (UNESCO and ILO, 2002). Malaysia does not have a formal qualification framework as yet but the National Accreditation Board (NAB)* and the Quality Assurance Division (QAD)* have currently initiated discussions and held a series of workshops to develop the framework. QAD is developing both the discipline standards and nomenclature of degree level qualifications while NAB is documenting the existing information on existing qualifications awarded by various institutions in public and private sectors as well as the professional and vocational bodies.

An Inter-Ministerial Council comprising all Ministries and agencies involved in training leading to qualifications should be formed to develop the framework while a Qualifications Framework Agency/Unit and Board should be established to promote and monitor the implementation of the framework (Habsah, 2002). Lifelong learning in Malaysia will be given a tremendous boost with the development of the qualifications framework and support the contention that “Every person should have the opportunity to have his or her experience and skills gained through society or through formal and non-formal training assessed, recognised and certified” (UNESCO and ILO, 2002).

For lifelong learning to work, governments must promote partnerships at all levels, national, regional and local and ensure effective coordination and coherence in policy between ministries (EC, 2001). In Malaysia, the training provision at the post-secondary level is provided by a number of Ministries. The very diverse, pluralistic and lifetime duration of lifelong learning requires coordination among many policy sectors, involving both macroeconomic and structural policies (Syed Muhamad, 2002). Therefore, the need will be for all stakeholders to work together not only to develop a framework acceptable to all but also to promote and facilitate its implementation.

7. National IT Agenda and Lifelong Learning

The Government places high priority on the development of Information and Communications Technology (ICT) and the utilization of E-Learning. The measures put in place include the development of the National IT Agenda in 1996, and the establishment of the National Information Technology Council (NITC) which is chaired by the Prime Minister. E-Learning is identified as one of the five Strategic Thrust Areas which focuses on cultivating a lifelong learning culture. The objectives and implementing agencies for the projects/programs under this strategic thrust area are shown in *Table 6*. An E-Learning Working Group has been set up to oversee the development of the thrust area, headed by the Ministry of Education.

* Note: The National Accreditation Board was established in 1996 to ensure minimum standards and accredit programs and courses offered by private colleges and universities while the QAD was established in 2001 as a national agency to manage and supervise the quality assurance system for Public Higher Education Institutions.

Table 6 E-Learning Programs/Projects

Working Groups	Programme / Project	Objective	Agency/ Organization
E-LEARNING	Formulate and implement Computer Modelling / Simulation Courses to build local expertise	Develop local expertise in multimedia design capabilities for creating economic value	Ministry of Education / Multimedia University / Public Universities
	Expand Mobile Internet Units project to rural and sub-urban areas	Support NITA vision on ICT diffusion and acculturation	Malaysian Institute of Microelectronic Systems (MIMOS), Ministry of Education
	Formulate programme to reorientate Schools to be ICT Learning Community Centres (Pilot Project)	Promote the school as the hub of community learning	Ministry of Education, Ministry of Local Government, Ministry of National Unity and Community Development
	Formulate and publicise Guidelines / Standards for E-Learning	Provide framework for private and community sectors to initiate projects	Ministry of Education
	Establish TV Channels for ICT Education and E-Learning	Provide learning opportunities to the population at large	Ministry of Education / Ministry of Information / Ministry of Energy, Communications and Multimedia (MECM) / Economic Planning Unit
	Establish a National Grid of Learning (Web site of Internet Learning)	Establish a network of web sites dedicated to the provision of learning experiences	Ministry of Education / Economic Planning Unit
	Implement ICT Literacy Training and Certification of Teachers (Educate the Educators for 21st Century)	To produce teachers that are ICT literate and competent by international standards	Ministry of Education, Private Sector (NAPIEL, MAPCO), Community Sector (NUTP)
	Initiate Indigenous Content Development project	Create local content software and courseware to meet needs of Malaysians	Ministry of Education / Private / Community Sectors / Ministry of Trade and Industries / Universities / Dewan Bahasa
	Reengineer National Education System	Realign system through development of innovative learning modes to meet needs of knowledge society and economy	Minister of Education / Economic Planning Unit

Source: National Information Technology Website (<http://www.nitc.org.my/index.shtml>)

7.1 Malaysian Grid for Learning (MyGfL)

The National Information Technology Council (NITC) and the Ministry of Education are currently developing the MyGfL. Under this initiative a platform would be developed to enable Malaysians to gain access to online learning. One of the main objectives of this project is to develop quality educational content/resources for e-learning and lifelong learning to be accessed by schools, colleges, universities, public libraries and community centres.

The establishment of the Malaysia Grid for Learning (MyGfL) will make on-line learning readily available and easily accessible by Malaysians nationwide, especially those in rural and remote areas. It will provide the needed platform and infrastructure for the culture of lifelong learning to transpire into all walks of society. This project will not only empower those socially- and economically-disadvantaged citizens, but also those who find social obligations (e.g. housewives or those with family responsibilities), distance and work commitments as barriers to participation in lifelong learning.

7.2 *Cyber and Multimedia E-Libraries*

Lifelong learning may depend to some extent, though not entirely, on resource-based learning. Nevertheless, not all physical libraries are easily accessible to learners in remote areas. Hence, e-libraries can play a key role in providing access to a range of appropriate learning materials, resources and delivering support for lifelong learners in isolated areas. Through the National Library e-library scheme, 60 *cyber knowledge village libraries* and 13 more E-Learning Multimedia Libraries will be built in remote rural areas during the 8MP. These projects will enable the geographically isolated communities in the population under threat of marginalisation by the ICT revolution to be directly involved in lifelong learning.

7.3 *Social Digital Inclusion*

NITC has identified senior citizens, youth, women, people with different abilities, and geographically isolated communities as being under threat of marginalisation by the ICT revolution. The NITC's Social Digital Inclusion Program aims to bridge the digital divide for these groups which account for almost half the country's population.

One such group is the female-headed households whereby the incidence of poverty has increased from 15.1 percent in 1997 to 16.1 percent in 1999. ICT is viewed as an enabler to engender main-streaming and the eradication of poverty among females. In order to address these issues, the NITC is presently forming collaborations with government, private and community organizations to build a centralized body to leverage on existing initiatives. New programs will also be identified to address the gaps in these initiatives. Through this centralized agency, the NITC hopes to amalgamate an improved, better-coordinated, concerted effort from the organizations.

7.4 *SJ 2005 SMART Community Project*

The SJ2005 project envisions growing and evolving a community in Subang Jaya township near Kuala Lumpur into a Smart and knowledge-based community. Using a tri-sectoral participation model between the Government sector, private entities and communities, the project aims to evaluate and study the social, education, political, economic and technological impact of ICT on communities. Besides E-Community, E-Business, and E-Public services, E-Learning has been identified as one of the focus areas of implementation and will create a computing environment in all institutions to encourage community learning.

7.5 Demonstrator Application Grant Scheme (DAGS)

In order to realize the objectives as set out by the NITC, a key initiative to fund ICT-enabled projects was set-up in 1998 called DAGS administered by the Ministry of Science, Technology and Environment. DAGS in its first phase (7MP) was highly successful in introducing ICT to communities and creating awareness. Several of its projects have been acknowledged as best practices and won international awards. DAGS in phase 2 (8MP) has doubled its funding to RM 100 million. Its projects are now focused on the enhancement of the quality of life through digital inclusion, active and meaningful participation, the utilization of knowledge obtained with the help of ICT and focused transformation. A significant feature of DAGS scheme is the development of the demonstration applications through an integrated approach. For e.g. its TIGeR project (Technology, Industry or Individual, and Government for eRevolution) may involve the community, the industries as well as the public sector in working and coordinating the project, that is, tri-sectoral approach in implementation.

8. Lifelong Learning and the Education System

The policies and strategies as enunciated in the OPP3 and the RM8 with regards to lifelong learning are currently being implemented by the MOE. Examples of these are the smart school project which began during the 7MP; the establishment of 148 community colleges by the year 2005 (8MP), and another 45 by 2010 (9MP); the setting-up of 5 new polytechnics and the establishment of 4 new Technical University Colleges during 8MP; the promotion of e-learning, open, distance and flexible learning at various levels (MOE, 2001). In addition, the MOE is also proposing to restructure the national education system.

These strategies are consistent with Malaysia's aim to become a knowledge society in a competitive global environment (Malaysia 2001a; Malaysia, 2001b). These are closely associated with improving employability and increasing productivity, which may match concepts of lifelong education rather than lifelong learning as argued by Medel-Anonuevo *et al* (2001). The main thrust of educational development will be to increase access, improve equity, raise quality and improve the overall management of education and training in the country (MOE, 2001). As such, these strategies conform to the broader concept of lifelong learning for social, political and cultural development (UNESCO, 1972). Current lifelong learning initiatives by the MOE are described below.

8.1 Restructuring the National Education System

The proposed introduction of the P-12 schooling structure (MOE, 2001) is a timely move by the MOE to restructure and align the national education system with lifelong learning imperatives. Together with the newly legislated compulsory education for primary schooling in Malaysia, this strategy is aimed at widening access, increasing participation and retention rate, while reducing wastage of young people in the schooling age. The proposed structure will have a 6-4-2 pattern and will institutionalise pre-school education in-line with the education system of most countries. When implemented, students will complete at least 12 years of schooling and will then enter universities. Additionally, alternative pathways to universities through the polytechnics, community colleges, and other private colleges will be expanded. The new structure will help

achieve the MOE's target of having 40% of the 17+ - 23+ age cohort in tertiary education by 2010.

8.2 *Smart Schools*

The Smart School is one of the seven flagship applications of the Multimedia Super Corridor. Smart Schools will be the schools of the future and will reinvent the way education is provided and presents an innovation in teaching and learning in this country.

The smart school concept is more than just utilizing technology in the schools and goes beyond providing schools with computer labs. It involves moving away from the traditional teacher-centred culture of schools towards more student-centred. The main goals are to democratise education, increase participation of stakeholders, provide all-round development of the individual and provide opportunities to enhance individual strengths and abilities. Thus the strategy focuses on the centrality of the learner and prepares young students for learning empowerment after schooling age. Currently the project is being implemented in 90 schools.

Additionally, smart schools are envisioned function as centres of learning for the community. Classes and public activities can be conducted after school hours e.g., computer classes, sports, playgroup for young kids, and community meetings. These schools will contribute towards the nations lifelong learning agenda.

9. *School-wide Initiatives*

9.1 *School- to- Work Program*

This program is specially designed to ensure a smooth transition from school to the world of work for upper secondary students with a low academic inclination. Its primary goal is to assist low achievers in upper secondary levels to acquire related workplace training and skills. The School-to-Work Program consists of three components: school-based component, workplace-component, and connecting activities. The former contains special topics in both core subjects and electives that students must learn while the latter consists of applied knowledge, generic skills, and specific workplace skills that students must acquire. Since its inception in 1998, approximately 3,000 students have participated in this program. Currently, this program is being evaluated and will be expanded if necessary.

9.2 *Vocational Subjects in Academic Schools*

In a move to provide more options in vocational areas, the MOE has introduced vocational subjects in academic schools. The objective of this program is to provide relevant skills to upper secondary students (Form 4 and 5), especially those low achievers so as to enable them to get jobs, start their own businesses or further their studies in the relevant fields. This is an effort by the MOE to provide new basic skills for all in a lifelong learning perspective. This program will focus on creativity and problem solving provided through a variety of learning activities. A total of 22 subjects grouped into five clusters that is manufacturing, construction, computer technology, home economics, and agro-technology are offered. Eight subjects have been offered in 104 academic schools beginning of year 2002 on a pilot basis. Assessment of these subjects will be school-based and will also include practical tests.

This program when fully implemented will provide students at the upper secondary level with a wider range of options than currently available. Students especially low achievers and contextual learners, will have a choice of subjects complementing the academic subjects which will provide skills and knowledge necessary for work as well as the opportunity for further studies at the Community Colleges, thus providing yet another higher education pathway for students.

10. Tertiary Level Initiatives

10.1 Community Colleges

The implementation of 193 Community Colleges (one in each parliamentary district) ushered in a new era in post-secondary TVET. It is a form of 'outreach' effort in lifelong learning (MES, 2001) which emphasizes active recruitment of individuals who would otherwise be unable to take part in any form of learning because of limited opportunities. As at August 2002, 17 colleges are in operation.

Community colleges will implement the lifelong learning concept by providing educational and training opportunities for all individuals to achieve their maximum potential. As such, the community colleges will be flexible and responsive institutions focusing on the needs of the local parliamentary district and will provide a variety of formal and non-formal technical vocational education courses, training programs and services. These will include skills training, worker retraining, customized courses, bridging courses, counselling, consultancy and other industry related services. When fully operational, comprehensive community colleges will provide opportunities not only to individuals but also the local community, industry and other agencies in order to collaboratively develop the district.

The new community college system will provide for greater access, wider participation and open up options in education and training delivery in Malaysia in order to provide, support and promote the activity and the process of learning and development throughout life (lifelong learning).

10.2 Polytechnics

As well as providing a ready and popular pathway for school-leavers to pursue technical education and training, polytechnics in Malaysia is a platform for the provision of continuing education and training. Apart from its mainstream programs which has undergone constant capacity expansion, polytechnics are tackling the national accessibility and equity provision issues through non-traditional programs and provisions. To this end, initiatives have included the provision of industrial scholarships for teaching staff, the provision of part-time courses, and collaboration initiatives with the local industries such as the time-sector privatisation (TSP) scheme.

In response to the need for polytechnic lecturers to constantly upgrade their skills and knowledge and also be aware of technological changes in industry, the *Industrial Attachment* program was started in 1999. The uniqueness of this program is that lecturers are given full pay study leave and an allowance for their 12-week attachment. This program while enhancing industry

polytechnic relationships will provide an opportunity for lecturers to continuously upgrade their knowledge and skills.

To provide more opportunities for workers to upgrade their qualifications, polytechnics started offering *part-time courses* in year 2000. Upon graduating from the program, student-workers, depending on their courses of study, will be conferred credentials equivalent to a certificate or a diploma earned by full time students. The program duration for the certificate and diploma courses is from two to five years and from one and a half to three years, respectively. Under this program, participants follow the same curriculum as the full-time students except that classes and workshops are held during the weekends.

Time Sector Privatisation (TSP) is a collaborative program that permits both the private and public sector to make use of the training facilities available at the polytechnics. Through the TSP program, polytechnics provides skill training and upgrading of the local private and public sector by conducting training for them. The TSP program is implemented after normal teaching-learning hours and during semester breaks. Through TSP, institutions can optimise the usage of their facilities while generating substantial revenues, thus helping to offset expenses to purchase training materials and maintenance of machinery in their workshops. In addition, TSP assist institutions to strengthen their linkages with local industries resulting in active participation in the curriculum review process.

11. Higher Education Initiatives

To increase access, improve the participation rate and provide alternative pathways in a lifelong learning perspective (ESC, 2001) at tertiary level, the higher education sector has established technical university colleges, begun distance education through the open university, modular certification of courses, and are developing credit transfer systems from polytechnics, community colleges to universities.

11.1 Establishment of Technical University Colleges

Technical University Colleges provide higher technical education emphasizing practice-oriented learning training. The technical universities offer industry-based courses which emphasizes the “hands-on” approach. They also provide pathways for polytechnic graduates to upgrade their qualifications. Currently, 4 such institutions have been established.

11.2 Distance Education and the Open University

Begun in 1971 at the Universiti Sains Malaysia, distance learning is one of the strategies towards the democratisation of higher education. By 1991, six more universities introduced distance education programs. Working adults can pursue tertiary education at undergraduate and postgraduate levels while remaining in full-time employment. Courses at various levels are offered on a part-time basis.

A milestone in the development of distance education was the establishment of Malaysia’s first Open University (UNITEM), a consortium of 11 public universities which began operations in

2001. UNITEM is currently offering degree programs for teachers in a joint effort with the Teacher Education Division of the Ministry of Education. Various other courses are offered by the university.

11.3 Work Study Programs

Public and private institutions in Malaysia are also currently offering programs for working professionals. These programs include Bachelor of Business Administration, Bachelor of Economics, Bachelor of Accounting and others. Post-graduate programs are also being offered as part-time programs by universities as well as private training providers who have joint programs with prestigious foreign universities.

11.4 Tun Abdul Razak University (UNITAR)

UNITAR the region's first virtual university was established in 1997 and enrolled its first batch of 162 students in 1998. Course delivery is through the pervasive use of e-learning technology such as the Internet, web-based or CD-based courseware and facilitator-based tutorials or academic meetings. Currently, 11 academic programmes in the field of Business Administration, Information Technology, Humanities and Social Sciences are offered. UNITAR has registered about 7500 students at 7 study centres in Malaysia, and 1 in Cambodia.

Conclusion

Until now, formal learning has dominated policy thinking, shaping the ways in which education and training are provided and colouring people's understanding of what counts as learning (Commission of the European Communities, 2000). Although elements of lifelong learning are evident in Malaysia, there seems to be a broad consensus that the collective mindset towards learning must be changed if the vision of creating a learning society is to be realized. Another compounding factor is the very notion of lifelong learning itself. There must be consensus as to what constitutes lifelong learning in Malaysia before any real progress can be made in changing the mindsets and creating a culture of learning.

This paper presents an overview of the lifelong learning policies, education and training pathways, initiatives and practices in Malaysia. Government policies and measures towards this end are enunciated in its five year development plans as well as in its ten year outline perspective plans. The Government through its various agencies has directly or indirectly encouraged and promote lifelong learning. There are many different players providing different and sometimes similar initiatives and forms of lifelong learning to the various stakeholders. These may not lead to optimum allocation of resources. The challenges facing the implementation of lifelong learning in Malaysia include the need for developing a Malaysian qualifications framework, changing mindsets to create a learning society and better coordination and collaboration between ministries/agencies and other stakeholders. Lifelong learning needs to be aggressively promoted and the concept to be shared widely so that the lifelong learning agenda can be successfully implemented in Malaysia.

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