

**EDUCATION FOR DEVELOPMENT:
THE MALAYSIAN EXPERIENCE**

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PART I

EDUCATION, TRAINING, AND ECONOMIC DEVELOPMENT

INTRODUCTION

Programs for the development of human resources through the direction of more resource to health, education, and other basic needs of the poor have been used as an instrument of policy to reduce poverty. Expenditures on the development of human resources in emerging industrialized country not only reduce poverty but also promote growth of the economy.

Empirical evidence points to the fact that human resources development contributes directly to output growth, and indirectly enhances the growth of the manufacturing sectors which then forms the base for continued stable growth of the economy.

As explicitly stated in all the Malaysian Plans including the recently released Mid-term Review of the Seventh Malaysia Plan, the objective of human resource development is to increase the productivity and efficiency in the utilization of labour in order to remain competitive and be able to face the challenges associated with a rapidly changing global environment. Given the available data, it appears that manpower development did not satisfy the demand for labour and invariably has created a situation of structural mismatch resulting in unemployed graduates.

OVERVIEW OF THE ECONOMY

Since independence in 1957, Malaysia has experienced fairly high growth and socio-economic development and undergone enormous structural transformation.

Between 1956 and 1970, the Gross Domestic Product (GDP) grew at the rate of 6 per cent per annum. The 1970s witnessed rapid growth of the Malaysian economy largely assisted by a broad based strengthening of commodity prices. Real GDP grew at the rate of 7.8 per cent per annum during 1971-80, reaching its height at 8.7 per cent. The GDP, however, began to decline in the 1980s. Its growth was recorded at 5.6 per cent per annum between 1981 and 1985 and in 1986, at only 0.5 per cent. Still in 1986, Malaysia's GDP increased at a higher rate than her counterparts in the ASEAN region with the exception of Singapore (see Table 1 and 2).

The rate of growth in per capita income Gross National Product (GNP) is another indicator of Malaysia's sound economic growth. In 1977, for example, Malaysian GNP per capita was US930, approximately 2.1 times that of the Philippines, 2.2 times that of Thailand, and 3.1 times that of Indonesia. The GNP per capita for Malaysia grew by about 2.2 times between 1977 and 1985, whilst that of Thailand was 1.9 times, and that of the Philippines was 1.3 times.

After 1986, Malaysia maintained a consistently sound record of high GDP and GNP growth. The main impetus came from strong manufactured exports and brisk expansion of the industrial sector. Private investment expanded rapidly in the industrial sectors, particularly in the manufacturing and construction, petroleum exploration and production, and in the export-oriented industries located in the Free Trade Zone (FTZs). This growth momentum continued in the 1990s as the economy firmed up further with private investments and exports remaining buoyant.

Compared to an average growth rate of 6.7 per cent during the 1971-1990 period, the Malaysian economy grew by an average of 7 per cent per annum during the decade of the Second Outline Perspective Plan (OPP2), covering the period 1991-2000. This growth is associated with the public policy known as the New Development Policy (NDP). NDP succeeded the New Economic Policy (NEP), which lasted 20 years now classified under the First Outline Perspective Plan (OPP1) covering the period 1971-1990.

However, the current cloud of currency and market crises have shrouded Malaysia's almost impeccable record of fast and high growth. But then she is not the exception;

Table 1 Malaysia Structure of Production (Average Annual Growth Rate)

	1971-75	1976-80	1981-85	1986-90	1991-95
Agriculture, forestry, fishing	4.8	3.9	3.4	2.6	2.0
Mining and Quarrying	0.4	8.9	6.0	3.1	2.9
Manufacturing	11.6	13.5	4.9	6.4	13.3
Construction	6.6	12.6	8.1	5.6	13.3
Wholesale and Retail Trade	6.3	8.2	7.0	6.3	10.6
Finance	7.2	8.0	7.2	6.8	10.7
Government Services	10.1	9.0	9.8	4.0	6.7
Real GDP	7.1	8.6	5.8	5.0	8.7

Table 2 Malaysia—Sectoral Contribution to GDP (percentage)

	1980	1985	1990	1995
Agriculture, forestry, and fishing	22.8	20.8	18.7	13.6
Mining and quarrying	10.1	10.5	9.8	7.4
Manufacturing	19.6	19.7	26.9	33.1
Construction	4.1	4.8	3.6	4.4
Other Sectors	41.6	44.2	41.0	41.0

her neighbours and other Asian countries now labeled the "wounded Asian tigers", share the same gloomy outlook as they battle to maintain their dignity and revise their projected growth rates in alignment with the harsh realities of an impending recession, following bouts of continuing uncertainties in restoring investor confidence and in turning around foreign fund investments.

In terms of contribution of the real GDP, the Malaysian manufacturing sector became the leading sector in 1987 with a contribution of 22.4 per cent. Since then manufacturing sector remains the mainstay of the economy contributing as much as 35 per cent in recent years. The share of manufacturing in the GDP is projected to increase to about 37 per cent by the year 2000, making Malaysia an industrial-oriented economy, increasingly dependent on manufacturing exports for the growth of income and employment in the country. Manufacturing exports are projected to account for about 81 per cent of total exports by the year 2000, while the share agriculture exports will decline to 6 per cent.

In terms of contribution to growth and employment creation, the Malaysian manufacturing sector is comparable to the Newly Industrialized Countries (NICS) such as South Korea. In the case of South Korea, its manufacturing sector became the leading sector in 1973. South Korea was a semi-industrialized country in 1973. The main reason attributed to South Korea's success story is that South Korea policy makers recognized very early in the 1960s that in the absence of natural resources, trade in manufacturing goods should form the development strategy and in the process geared the already established education system to satisfy the manpower needs of the economy and in particular the manufacturing sector.

Table 3 shows sectoral employment pattern in Malaysia. The composition sectoral employment changed significantly as the economy grew with the manufacturing sector absorbing much of the increase in the labour force. The manufacturing sector became the leading sector in terms of employment creation in 1993 replacing agriculture sector.

Table 3 Malaysia—Employment by Sector ('000)

Sector	1970	1980	1990	1995
Agricultural, Forestry, Fishing	1,714.0 (50.0)	1,910.9 (39.7)	1,738.0 (26.0)	1,428.7 (18.0)
Mining, Quarrying	88.6 (2.6)	80.0 (1.7)	37.0 (0.6)	40.7 (0.5)
Manufacturing	386.5 (11.4)	775.1 (5.6)	1,333.0 (19.9)	2,051.6 (25.9)
Construction	136.7 (4.0)	267.8 (5.5)	424.0 (6.3)	659.4 (8.3)
Other sectors	1,070.1 (32.0)	1,803.1 (37.4)	3,154.0 (47.2)	3,735.0 (47.2)

EDUCATION AND MANPOWER DEVELOPMENT

Some of the richest countries in the world such as Sweden, Switzerland, Germany, and now Japan have very limited natural resources. Some developing countries such as Singapore, Taiwan, and South Korea that do not have natural resources also made tremendous progress. All these countries have no natural resources to rely upon and, therefore, have to develop human resources in order to achieve high income growths.

PART II

EDUCATION AND TRAINING POLICIES

A. BACKGROUND

Since gaining its independence from the British Colonial Administration on August 31, 1957, Malaysia has put serious efforts to develop her own country in all sectors. Education is the key factor Malaysia to become a developed country.

Areas: 329,749 sq. km; slightly larger than New Mexico

Capital: Kuala Lumpur (1.6 million)

Population: 21.2 million

Workforce: 8.4 million:

Manufacturing:	26%
Agriculture:	16%
Local trade and tourism:	16%
Government:	10%
Construction:	8%
Finance:	5%
Transportation and communications:	5%
Utility:	0.8%
Mining and petroleum:	0.5%
Others:	2.7%

B. SOME NATIONAL POLICIES AND DIRECTIONS

There are some national policies that have affected and will continue to affect education and training practices in Malaysia. Nine of them are as follows:

1. *The New Economic Policy (NEP):*

It contains two-pronged objectives of eradication of poverty and the restructuring of society to reduce the identification of race with economic functions.

2. *The National Development Policy:*

It aims to attain a well balanced social and economic development for the nation.

3. *The National Education Policy:*

It focuses on the need for all students to receive an integrated education.

4. *The Look East Policy:*

Its objective is to promote the industrialization and modernization of Malaysia through learning, particularly with regard to labor ethics, social consciousness, disciplines, and managerial skills from Japan and South Korea.

5. *The Vision 2020:*

It outlines nine central strategic challenges which the country will face in its quests to become a developed nation by the year 2020.

6. *The National Education Philosophy:*

It calls for developing the potential of individuals in a holistic and integrated manner, so as to produce a *good man* who is also a good Malaysian citizen.

7. *The Malaysian Incorporated Policy:*

It calls for developing partnerships and collaborations between public sector and private sector, especially in the area of economic development. Under the concept of Malaysia Incorporated, the government and the private sector work hand-in-hand in promoting national growth. Such private sector involvement has led to an increase in industry-university linkages, with both parties collaborating among themselves and with the government as nation building.

8. *The National Information Technology Agenda:*

It was formulated to provide an integrated approach to transform Malaysia into a knowledge-based society.

9. *The National Agricultural Policy:*

It focuses on the modernization of the agricultural sector to become a high value-added producer of food and industrial raw materials.

The overriding concern in this country is the development of a truly integrated and united Malaysian nation in consonance with the tenets of Rukunegara (the Malaysian National Ideology), the objectives of the New Economic Policy, the aims of the National Development Policy, and the goals of the Malaysia's Vision 2020.

C. EDUCATION PROGRAMS

1. BASIC INFORMATION

- Malaysia provides 11 years of free schooling. About 20.4% of the annual National Budget is allocated for education.
- Although schooling is not compulsory, over 99% of all six-year-olds are enrolled in schools, and more than 92% of all students go on to the secondary school level.
- The literacy rate in Malaysia is about 93%--- one of the highest in the world.
- The primary and secondary education is highly structured, with a curriculum which enables the sound acquisition of fundamental knowledge and skills.
- Currently, there are 11 public universities, 5 private universities, 3 foreign university campuses, and more than 560 private colleges in Malaysia.

2. THE LEGAL FRAMEWORK

Since 1995, the Ministry of Education has successfully pushed through six pieces of legislation to position Malaysia as a regional education hub:

- **The Education Act 1996**
 - The conception of the National Educational System. At the primary and secondary levels, public and private educational institutions will be required to use the national curriculum.

- **The National Council on Higher Education Institutions Act 1996**
 - The establishment of the National Council on Higher Education

- **The Private Higher Educational Institutional Act 1996**
 - Provide for the establishment, registration, management, and control of the quality of education provided by private higher educational institutions.

- **The National Accreditation Board Act 1996**
 - Establishment of the National Accreditation Board which formulates policies on the quality of courses and the accreditation of certificates, diplomas, and degrees awarded by private higher education institutions.

- **The Universities and University Colleges (Amendment) Act 1996**
 - Enable public institutions of higher learning to be corporatized.

- **The National Higher Education Loan Fund Act 1997**
 - Establishment of a fund called National Higher Education Loan Fund.

With the legal framework almost complete, the education system in Malaysia is set for a *quantum leap* which will bring sweeping changes to the institutes of learning, enable them:

- To offer a wider range of courses.
- To offer different options and approaches to learning
- To implement better management styles
- To use new methods of teaching

- As the private sector is more active in the establishment of pre-school centers in urban areas, the public sector agencies provide pre-school education opportunities to rural and urban poor children.
- Within the broad guidelines set by the Ministry of Education, a high degree of flexibility prevails in terms of teaching approaches and medium of instruction.

(b) Primary School:

- Primary school begins at six years of age, and may be completed within five to seven years:
 - (a) Number of schools: 7,084
 - (b) Number of students: 2,870,667
- Two assessment examinations at years three and six are used to evaluate students performance. Outstanding students at year three can opt to go straight into year five.
- Measures aimed at increasing participation of rural and poor children and retaining them in the education system included the provision of financial assistance and textbooks-on-loan as well as health and nutrition programs.
- Efforts are taken to provide access to education for disabled children and those with learning difficulties. Currently, there are 283 schools in the country which are equipped with teaching staff and facilities to help integrate children with learning difficulties within the general school system. Further, there are 31 special schools for children who need more intensive care.
- In order to improve the academic performance of slow and low achievers, the Government implement remedial education, particularly in the rural areas.

The above legislation has facilitated a more market-centered education system. The corporatization of public institutions of higher learning will provide them with greater autonomy to manage and operate their institutions in a more dynamic and proactive manner, as well as being responsive to changing needs and requirements.

3. ADDITIONAL STRUCTURES

- **The Higher Education Council (MPTN)** was established in 1996 with members from both the public and private sectors to ensure greater coordination in planning and development of tertiary education. The Council provides directions as well as plan and coordinates the development of all public and private institutions of higher learning.
- The Department of Higher Education and the Department of Private Education were established in the Ministry of Education. These two departments will provide the necessary support to the Higher Education Council.

4. THE NATIONAL EDUCATIONAL SYSTEM

The Education Act 1996 strengthen the concept of a national system of education by including all levels and types of education and bringing within its ambit, pre-school, post-secondary, and special education. At the primary and secondary levels, public and private education institutions are required to use the national curriculum.

(a) Pre-School:

- Kindergartens have been set up throughout the country by both government and non-government agencies and the private sector:
 - (a) Public kindergarten: 1,076
 - (b) Private pre-schools: 2,161

(c) Secondary School:

- The secondary school curriculum includes a wide range of subjects from the arts and sciences as well as vocational and technical subjects:
 - (a) Number of secondary schools: 1,538
 - (b) Number of students: 1,794,515
- Following the Lower Secondary Assessment Examination (PMR) at Form Three, students move into more specialized fields of study at the upper secondary level.
- Fully residential science schools have been set up which offer a stimulating environment for outstanding students who choose to specialize in the sciences.

(d) Secondary Technical Education:

- Continued efforts were taken to expand the supply of skilled manpower through increased intake into the secondary technical (STS) and vocational schools (SVS). The majority of students from STS continued their studies in various institutions of higher learning, while SVS school leavers were mainly absorbed into the job market.
 - (a) Number of students in STS: 13,500
 - (b) Number of students in SVS: 82,700
- In view of the need to increase more science and technical manpower, Government launches a massive effort to convert all SVS to STS.
- By the year 2000, all STSs are expected to have a total enrolment of 89,440 students.

5. UNIVERSITY EDUCATION

- Focus: Meeting the challenges of globalization and coping with market demands.
- Emphasis: Emphasis on Science and Technology to create a wide base of knowledge workers competent and adept to function in an economy that is moving into the new and emerging technology areas; advanced manufacturing, automated manufacturing, electronics, biotechnology, and information technology.
- Strategy: The demand for university places has outstripped availability within the national university system. The following strategies are used to meet the market demands:
 - (a) Foreign universities are being encouraged to set up offshore branches in Malaysia.
 - (b) The corporate sector has been invited to establish private universities. Today the national petroleum, telephone and energy companies have set up their own universities offering a wide range of courses in science, technology, and management.
- Future: Today there are 11 national universities and a number of private universities. Presently, these cater for about 16.6% of those within the tertiary education age group. The national target is to achieve a substantial increase in the present stock of graduates to around 40% by the year 2000. One of the strategies used to achieve this objective is the establishing of the borderless universities (*Open University*) where students will have greater flexibility in terms of admissions and placements. This will help to optimize educational resources in the country.

6. TEACHER EDUCATION

The teacher education program was aimed at producing trained teachers for the primary and secondary levels. Emphasis was given to producing quality teachers who were innovative, dedicated, committed, and strongly motivated.

- Beginning in 1994, computer courses were made compulsory to all trainees in teacher training colleges.
- For secondary schools, the emphasis was to produce more graduate teachers so that only graduate teachers teach at the secondary level. Towards this end, a total of 20 teacher training colleges was given the responsibility to conduct the Post-Graduate Teacher Training Program leading to the award of a Diploma in Education. Another seven colleges offered twinning programs with local universities to enable serving teachers to obtain degree qualifications.
- The Master Teacher concept was introduced in 1995, with the aim of acknowledging and rewarding outstanding teachers who had contributed significantly to improve school performance.
- In-service courses for education personnel, especially in the area of school management were conducted by the Institut Aminuddin Baki.

7. QUALITY AND STANDARDS

- Quality of higher education will be a major agenda in the new millennium. Institutions of higher education should be of high quality in all their endeavours. They must deliver programs of the right quality and to customer satisfaction.
- Malaysia's tertiary institutions are being continually strengthened in terms of both teaching/learning standards and courses/programs:

- The National Accreditation Board under the Education Ministry sets broad guidelines for public and private higher education institutions. The Board ensures that higher academic standards, quality, and control are maintained.
- Strategic alliances between Malaysian universities and selected overseas universities known for their special areas of expertise have “internationalized” the character and curriculum of local institutions.

D. TRAINING PROGRAMS

1. Skill Training:

Skill training programs are directed at producing adequate supply of skilled workers, particularly to meet the needs of the expanding industrial and manufacturing sector.

- There has been an increase in the number of **vocational and technical schools**, **polytechnics**, and **industrial training institutions** to prepare youths for employment in various industrial trades. Most of the training institutions are run by government agencies, although a number of private institutions supplement the government’s efforts to produce the skilled workers needed by industry:
 - (a) The Ministry of Human Resource currently runs **9 Industrial Training Institutes (ITIs)** and the **Center for Instructors and Advanced Skill Training (CIAST)**. The it is offer industrial skill training programs at basic, intermediate, and advanced levels of pre-employment or job entry level.
 - (b) Majlis Amanah Rakyat operates **11 special skills training institutes (IKM)**. IKM offers skill training programs at basic, intermediate, and advanced levels.
 - (c) The Ministry of Education is responsible for the running of **78 technical schools** as well as **8 polytechnics**.
 - (d) The Ministry of Youth and Sport is responsible for the running of **6 Youth**

Skill Training Center and Youth Advanced Skill Training Centers.

- To take advantage of advanced technology in developed countries, **Advanced Skill Training Institutes and Advanced Technology Centers (ADTEC)** were established with the cooperation of Germany, France, and Japan.
 - (a) The **Germany-Malaysian Institute (GMI)** was established in 1992. It offers advanced skill training, particularly in production technology and industrial electronic. It handles about 450 trainees for year.
 - (b) The **Malaysian-France Institute** was established in 1995. It offers courses at advanced level in areas such as maintenance of automated mechanical system and machine, electrical equipment installation and welding technology. It trains about 600 students per year.
 - (c) The **Japan-Malaysia Technical Institute (JMIT)** was established in 1998.

2. Management Training:

- Training programs for public sector personnel focus on the upgrading of managerial capability, improving efficiency, and increasing productivity of the public service
 - (a) **The National Institute of Public Administration (INTAN):**
 - The main provider of training for public service personnel
 - Trains about 120,000 personnel per year
 - (b) **The Institute of Diplomacy and Foreign Relations:**
 - Improve diplomatic skills among the diplomatic and foreign relations practitioners.

(c) The British Malaysia Industry and Trade Association Program (BMITA):

- Selected government officials are exposed to corporate management in the private sector through training programs and attachments with foreign firms abroad.

(d) The Institut Kerja Raya Malaysia (IKRAM):

- Training for engineering professionals and technicians.
- Trains about 22,000 personnel from the Public Works Department per year.

(e) The National Evaluation Institute (INSPEN):

- Training for evaluation personnel of the Evaluation Department.

- The training of management personnel is also provided by a number of agencies like the **National Productivity Corporation**, the **Malaysian Institute of Management**, and the **Malaysian Institute of Personnel Managers**.

E. KEY SUCCESS FACTORS OF EDUCATION AND TRAINING POLICIES

- Ability to supply educated manpower a few years after Independence. The Malayanization policy was a success. Expatriates positions were filled by Malaysians by 1960s.
- Manpower required for economic development programs was supplied adequately by the Third Malaysia Five Year Plan.
- Manpower planning and manpower development took center stage in the Five Year Development Plans giving forth many new education and training policies.

- Teachers and academic staff required for schools, colleges, and universities were adequately supplied through various policies formulated and programs carried out.
- Young population was given ample opportunity to study through a deliberate policy of allocating more than 20% of national budget for education.
- Industrialization and agricultural modernization succeeded because of proper planned output of high-talent manpower, technicians, and skills personnel.
- Ability to coordinate the planning and development of vocational and industrial training activities. In this context, the National Vocational Training Council (NVTC) was established under the Ministry of Human Resource to coordinate the planning and development of a comprehensive system of vocational and industrial activities and programs of all public sector training agencies.
- The **education fund** and the **skill training loan fund** were established to improve accessibility to education and training.

(a) Fund for Training of Workers:

1. Apart from pre-employment training which largely targeted for school leavers, the Government also gives equal priority to upgrading and widening the skills and knowledge-base of the existing workforce. In this direction, the Government established the Human Resources Development Council in 1993.
2. The Council manages the **Human Resources Development Fund (HRDF)**. HRDF is basically a levy-grant system whereby employers in the manufacturing sector and nine industries in the service sector are required to contribute 1% of total payroll to the HRDF.
3. HRDF encourages direct private sector participation in skills development programs. It facilitates private companies in carrying out training for their employees.

4. Since its inception, the Council has approved a sum of RM583.6 million to retrain over 2.1 million workers, mainly in technical, craft, and computer related skill areas.
5. To resolve the shortage of trained workers for specific industries, apprenticeship schemes were developed and implemented by the Human Resources Development Council (HRDC). A RM15 million **Apprenticeship Fund** was established by the Council to pay the tuition fees of apprentices sponsored by the employers in HRDC-Initiated Apprenticeship Schemes. To date, apprenticeship schemes that have been implemented are the Mechatronic Scheme, the Hotel Industry Apprenticeship Scheme, and the Industrial Machining Apprenticeship Scheme.

(b) *Fund for Education Programs:*

1. The **National Higher Education Loan Fund Board** was established to manage the National Higher Education Fund:
 - (a) Granting of educational loans to higher education students
 - (b) Granting of financial assistance to higher education students.
 2. Currently, RM1.5 billion is allocated to the National Higher Education Fund.
 3. Currently, RM500 million is allocated to the Skill Training Loan Fund.
- The government takes very strong initiatives to link directly to employers in an attempt to provide job opportunities that not only complement the skills building of youth but also benefit the business community. Until 10 years ago, youth employment and training policies and programs have focused mainly on the “supply side” of the job training equation—preparing program participants for the world of work. As a result, the “demand—or employer—

side has often been overlooked. Today, a number of programs are attempting to fight *the supply trend* by developing “demand side policies that have some effective procedures and operations.” By establishing links with local industries and organizations, the government has identified which areas and occupations are most in need of skilled workers and is therefore able to design programs aimed directly at these employers’ needs.

F. THE IMPACT OF GLOBALIZATION AND THE INFORMATION TECHNOLOGY ERA ON EDUCATION

The impact of globalization has created a need to restructure or reengineer higher education, the need to keep on updating education programs, and to be more active in developing networks, international activities, and exchange programs. The shift of focus to an industrial-oriented economy (*manufacturing and services*) requires that Malaysia sharpens her competitive edge to compete in the world economy. In a world of global competition, a developing country like Malaysia cannot compete on cost alone, but must concentrate on high value-added goods and services and the component of production that cannot easily be transferred, namely the skills of workforce and the tacit knowledge possessed by the employees. Malaysia and other newly industrialized economies must address the emergence of the knowledge-economy.

Education in Malaysia plays a crucial role not only in providing training to meet manpower needs but also in promoting a science and technology culture and in spearheading Research and Development in the process of creating a modern industrial economy. To make this shift, the education culture must be transformed from one that is memory-based to one that is informed, thinking, creative, and caring through leading-edge technology. It is against this background that:

1. The Smart School has been made one of the seven flagship applications in the Multimedia Super Corridor (MSC) project. The government aims to capitalize on the presence of leading-edge technologies and rapid development of the MSC’s

infrastructure to jump-start deployment of enabling technology in schools.

2. The government encourages the private sector to set up educational institutions to supplement the government's effort to further generate a larger pool of semi-professional and professional knowledge workers with degrees, diplomas, and certificates.

3. The setting up of E-universities (multimedia or virtual university; open university) and the on-line mode of delivery for some of the courses offered in higher education. E-universities open up exciting possibilities in higher education in terms of opportunities for studies, flexibility of time and innovations in presentation and dissemination of knowledge.