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TOWARDS ACHIEVING VISION 2020

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SUPPORT FACILITIES AND THE DEVELOPMENT OF QUALITY WORKFORCE

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1. INTRODUCTION

1.1 The development of quality workforce is closely linked with economic development in that it is a necessary prerequisite not only in achieving and maintaining economic development but also in promoting sustained overall goals of development. It is also closely related to Human Resource Development (HRD) in that HRD provides the basis for its development.

1.2 In the context of this paper, quality workforce will be viewed in the light of the nation's declared goal of achieving the status of a fully developed nation by the year 2020. It relates to the new demands on and the kinds and qualities of the workforce needed with the transformation of the nation from an agricultural economy to an industrialised one, an economy in which science and technology becomes an integral component of socio-economic planning. By **quality workforce**, it is meant a workforce which in the words of the Prime Minister:

> *...is productive and disciplined, ...forward looking and equipped for their changing tasks, ...devoted to know-how and knowledge upgrading and self improvement,...*
>
> *...skilful, talented, creative...have high standards with regard to their management abilities, language competencies, achievement motivation, attitude towards excellence and to their entrepreneurial spirit....*

1.3 This paper will also view support facilities provided by the government and the private sector in the field of HRD, highlighting present and future programmes and changes in the field of education and training especially geared towards producing the kinds and qualities of a labour force cognizant with the needs and requirements of an industrialised society.

1.4 Apart from discussing the existing cooperation between the government and the private sector in HRD, the paper also calls for a more robust participation on the part of the private sector in sharing the larger burden of training the human resources of the country.

2. EDUCATION AND THE DEVELOPMENT OF QUALITY WORKFORCE

2.1 Quality workforce is a function of various interacting forces in which education, training and utilisation of human potentials play a dominant role. Of particular importance is the fact that education is an important means by which the element "quality" is derived. Education and schools interplay in inculcating desirable qualities towards bringing about change. Thus, schools are indispensable for its educating effect.

2.2 Evidence shows that cognitive abilities are enhanced by schooling; in other words schooling means higher cognitive achievement in general. Numeracy and literacy are key elements

which lead to improvement of productivity at work. Literacy appears to encourage adaptability and willingness to innovate. These are critical factors leading to the development of quality workforce. Numeracy and literacy can be achieved through investment in both primary and secondary schooling. In the non-cognitive domain, evidence indicates the effect of schooling on attitudes, values and behaviour. In general, the effect of schooling has been found to be cumulative and continuous, and even very small amount of schooling have positive effects cognitively and affectively.

2.3 In Malaysia, although the government does not make schooling compulsory, it recognizes that education is a human right. It also realises that education promotes individual creativity and improves participation in social and economic roles in society. It is precisely due to this that education is a priority for the Government. This priority is reflected in the fact that education forms a sizeable portion of the national budget. For 1990, this amounted to 19% of the national allocation and 6% of the GNP.

3. SUPPORT FACILITIES AND THE DEVELOPMENT OF QUALITY WORKFORCE

3.1 Many training institutions which undertake HRD are available in Malaysia - both in the public and private sectors. The role of these two sectors in the development of quality workforce should be complementary. While the Ministry of Education is entrusted with the power to approve the establishment of private institutions, it also ensures that the establishment of public training institutions are in line with the overall goal of attaining the desired goal and objectives of HRD. Towards these goal and objectives, the government in general and the Ministry of Education in particular endeavour to provide the essential environment suitable for the development of quality workforce. These environmental elements can be delineated into software and hardware facilities.

3.2 HARDWARE AND SOFTWARE FACILITIES

Schools

3.2.1 Over the years, the nation has witnessed the strengthening of both primary and secondary education. This has come about through significant investments in the education infrastructure namely primary and secondary schools. This has given rise to significant improvements in gross enrolment ratios at all levels. For 1990, gross enrolment ratios for primary, lower secondary and upper secondary levels stood at 99.8%, 83% and 49% respectively. Currently, 9 years of basic education are provided for. With the introduction of the Penilaian Menengah Rendah (PMR) in place of the Sijil Rendah Pelajaran (SRP) in 1993, it is expected that this will be extended to 11 years i.e. from year 1 through to Form 5. Towards this end secondary education has been made more accessible in rural and remote areas. To date 1,371 secondary schools have been established nationwide. Of these 40% are located in the urban centres while 60% are found in the rural areas.

3.2.2 Primary and secondary education have undergone tremendous changes in the past few years, particularly in their curricula. At the primary level, quality will be enhanced through the consolidation of the KBSR. Towards this end, remedial instruction and enrichment programmes will be strengthened. The KBSM has been implemented in stages at the secondary level beginning in 1989. By 1993, it would have been fully implemented up to Form 5. This curriculum has been designed to bring about greater development in individual potential encompassing the intellectual, spiritual, emotional and physical realms so as to produce well-balanced and harmonious individuals. This move towards a more holistic

education is reflected in the following excerpt from the National Philosophy of Education:

> *Education in Malaysia is an on-going effort towards further developing the potential of individuals in a holistic and integrated manner....*

Its ultimate aim is to produce individuals:

> *who are responsible and who are capable of achieving a high level of personal well-being as well as able to contribute to the harmony and prosperity of the society and nation.*

3.2.3 Since the promulgation of the New Economic Policy (NEP), Science and Technology has been featured prominently in the school curriculum with the science stream of study being expanded to allow greater access to the study of science. Science is taught with the aim of providing students with the necessary scientific knowledge and skills and developing in them a scientific way of thinking. It is believed that this will enable students to understand and appreciate science and its application in everyday life, to be able to successfully undertake problem-solving activities as well as make responsible decisions for the general well-being of man.

3.2.4 The school curriculum has also moved towards greater relevance to the world of work. This began initially with the introduction of pre-vocational subjects such as Industrial Arts, Home Science, Agricultural Science and Commerce. Under the KBSM the subject 'Living Skills' which offers a combination of these pre-vocational subjects has been made compulsory at Lower Secondary level. Towards greater relevance between school and the world of work, other avenues can be exploited. These include:

i) motivating students to learn and teachers to teach by emphasising relationships between the curriculum and the needs of today's workplace;

ii) increasing educational productivity on the part of both students and the teachers by applying approaches from the private sector in the education system;

iii) actively encouraging students to acquire personally meaningful work values.

3.2.5 Vocational education has also experienced development in recent years. Prior to 1987, vocational education was aimed at providing students with a curriculum which was vocationally biased, so that they could seek employment as semi-skilled workers in the industrial, agricultural or commercial sectors. The current curriculum of vocational schools has been revised so as to provide students with either a skills training programme, or a programme which provides a balance between both skills training and academic education. The latter programme allows students opportunities for both employment as well as further education. Under the Sixth Malaysia Plan (SMP), facilities for vocational education will be expanded to enable increases in enrolment from about 25,160 in 1990 to about 46,980 in 1995. Enrolment in 1995 is projected to be about 8% of the total upper secondary enrolment. This increase will be made possible with the construction of 8 new vocational schools and the addition of annexes to regular secondary schools.

Institutions of Higher Learning and Other Training Institutions

3.2.6 Tertiary education must also progress parallel to developments in secondary education as well as national developments. Particularly important is the necessity to take cognizance of the need to generate educated, skilled and quality manpower to cope with the rapid industrialisation currently prevailing in the country.

3.2.7 Presently, there are 7 universities in the country providing the necessary "hardware" and "software" for academic and professional-based courses. These universities cater to those who intend to pursue diploma and degree level courses. In addition to this, there are 6 polytechnics providing courses at Diploma and Certificate levels in engineering and business studies. These cater towards the provision of middle level skilled manpower.

3.2.8 Apart from this, there are a number of semi-government institutions involved in the training of middle and high level professionals to complement outputs from government institutions. Among the prominent ones are the MARA Institute of Technology and Tunku Abdul Rahman College. In 1989, these two institutions together provided approximately 10,000 places for school leavers in a wide range of courses in pure and applied arts and science.

3.2.9 During the SMP period, 5 new polytechnics will be built and the existing ones expanded. With this it is expected that intake into tertiary level courses will increase substantially. The intake into certificate, diploma and degree level courses will increase by 38% from about 28,000 in 1990 to about 38,700 in 1995. The largest intake will be in the applied arts, sciences, engineering and medical courses. Priority will be given to the expansion of courses in new engineering fields, such as systems engineering and process engineering.

3.2.10 To meet present and future needs, Teacher Training Colleges will be upgraded with the provision of better training facilities. In line with the overall aim to enhance the provision of quality education, several steps will be taken. These include:

i) the tightening of selection criteria to ensure a better intake of trainees;

ii) increasing intake towards a reduction in teacher-class ratio for a more effective implementation of the KBSR and KBSM;

iii) upgrading competencies of teacher trainers. Under the SMP five new Teacher Training Colleges will be built, one of which will specialise in training vocational and technical subject teachers.

3.2.11 In cognizance of the need to strengthen and enhance the delivery system towards achieving HRD goals, staff development programmes of the Ministry of Education have taken on greater prominence. A particularly important aspect is the importance accorded to continuing teacher education. Whilst 'continuing teacher education' in itself is not a new area, the Ministry of Education has attempted innovative ways in carrying this out. For example, its training arm, the Aminuddin Baki Institute (IAB), organizes courses under an 'Outreach Programme'. Under this programme selected personnel undergo courses in specific areas at the Institute. These personnel in turn, return to their areas of work and conduct courses for other personnel. Apart from producing a multiplier effect in the area of knowledge and skills dissemination it has also helped to cut costs involved in training. The same concept has been applied to schools, where senior

teachers conduct "in-house seminars" for staff of their own schools, after having attended courses organized either at Ministry or State level. This method was especially used during the implementation of the new curriculum, when it was not possible to conduct courses simultaneously for large groups of teachers, as it would have had heavy financial implications and also caused major disruptions to school schedules.

3.2.12 Other training institutions also play a prominent role in producing suitably qualified manpower. These include skill-training institutions run by certain Ministries which provide training for school leavers at the skilled and semi-skilled levels. During the Fifth Malaysia Plan period about 111,000 trainees completed their training of which 58% were in engineering trades. The other major training programmes include building trades, printing trades, commerce, agriculture, home science and skill upgrading courses. In addition, the Ministry of Health and the Ministry of Defence conduct their own training programmes to meet the needs of their own Ministries.

3.2.13 The private sector also participates in the national HRD process through offering courses which are geared towards market demand. These courses are usually professional in nature and include twinning and credit transfer programmes with established foreign universities in the U.S, Britain, Canada and Australia. Currently, these are mainly concentrated in the Klang valley but it is envisaged that there will be a better distribution to other growth centres in the not too distant future. The Ministry of Education recognises the importance of private sector participation in this area. This is particularly important in the light of invaluable savings in foreign exchange.

4. PUBLIC AND PRIVATE PARTICIPATION IN HRD

4.1 Beneficial relationships between public and private sector for HRD can best be developed by taking advantage of the unique skills and knowledge that each can offer. Towards this end, the roles of public and private sector involvement in HRD must be complementary. HRD undertaken by the public sector is broad-based and geared towards the attainment of social objectives besides satisfying situational needs. On the other hand, HRD in the private sector is more task-oriented and geared towards the acquisition of competencies which meet specific goals and objectives.

4.2 To strengthen existing cooperation between the two sectors, effective communication and on-going dialogue between both sectors is crucial. Joint consultative committees covering appropriate Ministries and departments have been created to provide channels for such communication. Such channels, it is hoped, would lead to the effective pooling of ideas and experience between the two sectors. In addition, it is anticipated that greater participation of the private sector in the decision-making process, would serve to increase its commitment to national programmes, plans and priorities.

4.3 The recent establishment of the National Advisory Council for Technical and Vocational Education is an illustration of this cooperation. This council comprises representatives from the Ministry of Education, government-run Technical and Vocational Institutes and also the industry. The Council studies and advises on several macro aspects related to technical and vocational education. These include manpower needs, the suitability of the curriculum of Polytechnics and Vocational/Technical schools for industrial needs, employment prospects and trends in the labour market. Private sector involvement here plays an important role in gearing training efforts towards actual labour market situations.

4.4 Another avenue of cooperation between public and private sectors is the cross-posting of staff between public institutions and selective private companies wherever and whenever possible. While this has already been initiated, further strengthening is necessary for greater benefits to both parties. In this respect, managers and professionals from the private sector, with their varied and vast practical know-how could disseminate their ideas and share invaluable expertise by giving lectures in institutions of higher learning.

4.5 Private involvement in HRD in the form of grants to institutions of higher learning and scholarships to students has been ongoing, and it is hoped that will take on greater significance in the future.

4.6 The Ministry of Education is currently exploring other areas for private sector involvement such as the specialisation of vocational schools according to industry location. This will provide the advantage of industrial exposure to students as well as facilitate practical training and attachment programmes with the industries.

5. GOVERNMENT SUPPORT

5.1 Education is an economically and socially productive investment. In Malaysia, education is provided primarily by the government as it is a federal concern.

5.2 The Federal Government expenditure on education and training is spread among a number of Ministries with a major share being allocated for the Ministry of Education. Over the years, the educational expenditure as against total government expenditure and Gross National Product has been increasing in real terms, with significant variations as indicated in Table 1 below.

5.3 The allocation for the period of the SMP constitutes 15.4% of the total public development allocation, representing an increase of 46% over the Fifth Plan.

Table 1
Expenditure on Education, 1986-1989

Year	Percentage of total educational expenditure against total Government expenditure	Percentage of education expenditure against GNP at market price
1981	13.43	5.57
1984	14.14	5.29
1986	16.30	7.63
1988	17.41	6.01
1989	17.53	5.56

5.4 The trend of educational expenditure in recent years, particularly the 1980's is geared towards improving the quality of education, as against expenditure in the 1960's and 1970's which was towards improving access to education. Changes in the trend of educational expenditure in recent years indicate a consciousness on the part of the government to produce quality workforce in cognizance with the aim of the country to achieve the status of a fully developed nation. This is illustrated by the increasing allocation for technical and vocational education especially during the period of the SMP. Emphasis has also been given towards the improvement of the curriculum, planning, evaluation and research. Expenditure in providing schools with educational technology and media has also been increased to improve the quality of teaching and learning in schools.

5.5 To cater for increased enrolment and the emphasis on quality improvement in schools, 52% of the total development allocation of $8,501 million for the period of the SMP has been allocated for the expansion and improvement of facilities at both the primary and secondary levels of education. This includes the expansion and improvement of facilities for vocational education and the training of teachers. At the tertiary level, the allocation of $2,591 million will be for the expansion and improvement of facilities as well as sponsorship for students at all levels of education including applied arts and science, engineering, technology and medicine.

5.6 Under the training programs (industrial, commercial and management and non-formal education and training), the Government has provided a sum of $610 million for the expansion and improvement of formal industrial training and non-formal skill training facilities.

6. CONCLUSION

6.1 Human resource development is undoubtedly linked to national development. The challenges of Vision 2020 demands that Malaysians be able to rise to meet those challenges. The development of a 'quality workforce' thus becomes a priority. The task of creating such a workforce cannot depend solely on government efforts. There is a need for a more effective involvement of the private sector to complement as well as augment the government's efforts in this area.

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QUESTIONS AND ANSWERS

Question: Education is something that all of us must have. Parents send their children to school just because all others are doing so. How is your Ministry looking at it as an acceptance problem?

Answer: I would say that acceptance of education is the means to improve the future of the children. Of course, we still find children going to school because it is normal especially in areas where the basic information system or the environment does not control them. This is where the Ministry encourages the participation of social education where parents who are farmers are invited, at least, to be active once in 6 months during the School Sports Day, etc. The important thing in acceptance here is the teachers' role in convincing the parents of the necessity of sending their children to school. A substantial percentage of these children do not sit for exams because by the time they are 10 or 11, they opt out to help their parents. This should be seen as a failure but however, it is not a very big issue today in terms of acceptance of education in Malaysia.

Comment: Datuk's paper this morning gave me the impression that our education system is well and good but in the presentation yesterday, discipline problems were highlighted. Other points raised included the obsolete methods of teaching and the fact that students are given too much to study. Can Y.B. comment?

Reply: I wasn't around the day before. Is this under the open book method? Was this the method described? I would like to know.

Comment: It is more, the point raised was that the methods used are still in the 19th century. What is the basis of comparison between the standard in the 19th century and now?

Reply: I do not understand because the question here probably is in the context of where and how. When I give you a picture of our education system, it is the infrastructure, and the foundation of that system. The training of teachers now includes 20th century computerisation and the use of OHP, slides, etc. In Sarawak, there are about 6 Pusat Kegiatan Guru and we are going to have one in every district in the country under the World Bank Programme. These centres would be equipped with facilities like printing, slide projection, overhead projector, etc. The methods used now evolve around this equipment too. It's definitely more than chalk and talk. If the open book method is still practised more than 10% anywhere, I would like to know where it's being done. Possibly you can help me.

Question: Are the support facilities that you've just mentioned adequate enough to meet all our manpower requirement especially in preparation for the year 2020 which is quality workforce. I feel that the hardware and software facilities are not fairly distributed. Just now you said most of the good ones are concentrated in the Klang Valley. Please comment. Secondly, what is the role of the Ministry in terms of coordinating as well as monitoring, and to some extent, control the privately-run institutions especially in relation to HRD? If you can please elaborate a little bit on the action taken by the consumer Ministry recently on the 12 institutions that are now being suspended or whatever. Lastly, can you comment on the effectiveness of the National Advisory Council for Technical and Vocational Education, and the joint Consultative Committees? How much of the

recommendations are being taken up with follow-up action especially on implementation of the recommendation given? Thank you.

Answer: The first question, the distribution of these facilities, is being done by the private sector. The Business Programme has been run because of the demand by the general population for things like business studies, diploma in business studies, computer science, economics and secretarial courses. It has gone further into twinning. This is where it became very prominent in our HRD programme with the foreign universities coming in, setting up programmes off-campus, etc. The twinning concept was actually started earlier by the goverment. ITM is controlling the programme. The private sector comes in where we allow them to come in with programmes. The only control we have is recommending courses which are in line with the requirements of the nation like management. The goverment only gives permission for the setting up of a school building if it is acceptable in the environment. We have to review the Education Act of 1961 where nobody thought of running a college but only a school. With the new Education Act, there would be more precise rules in working with the private sector. It would be under the Business Licence and the Domestic Trade Industry. So education, in terms of curriculum is actually on what is valid in terms of demand.

The twinning programme is only allowed when the Ministry of Education agrees, according to the Cabinet, the type of degree needed, and our manpower planning, etc. Actually, our school, as quoted by Mohd. Talib, run and start advertising for degrees that are not in accordance with what they applied before. So action would be taken by the Ministry of Domestic Trade.

Two of the companies, Shell and Matsushita started to look into our vocational education programme as they needed special skills. For instance, Shell needed special skills that are only limited to the oil industry whereas Matsushita came in because there was a need for engineering in air-conditioning. Before the national Advisory Council came in, there were refrigeration courses which does not give forward looking development in planning. This council is chaired by the Ministry of Education, members from Science and Technology, Ministry of Human Resources and other agencies, manpower planning as well as from the industries.