

CONFIDENTIAL

INTERIM REPORT

of

THE HIGHER EDUCATION ADVISORY COUNCIL

under the chairmanship of

TAN SRI MOHAMED SUFFIAN BIN HASHIM
Chief Justice, High Court, Malaya

Kuala Lumpur,
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LIST OF OBSERVATIONS BY AND RECOMMENDATIONS FROM
THE HIGHER EDUCATION ADVISORY COUNCIL

(To be read in the light of fuller
explanation given in the paragraphs cited)

Introduction (Chapter 1)

This report is a general one, and of an impressionistic nature, which should be regarded as a preliminary to a detailed and comprehensive long-range report to be submitted in due course by the Council under its new chairman. (Paragraph 11)

2. The Council should not only investigate what is being done by universities today, but should also determine what could be done by them to meet long-term as well as short-term needs of the country for highly trained manpower. The Council should then present a detailed, comprehensive long-range report with recommendations. (Paragraph 9)

3. University development cannot be considered in isolation. There must be integrated planning of universities and sub-university institutions. (Paragraph 5)

Constitutional and legal position of Universities (Chapter 2)

4. University education is a federal responsibility (paragraph 12), but the Malaysian Government agreed in 1963 to give special consideration to the requirements of Sabah and Sarawak. (Paragraph 13)

The Growth of Higher Education in the Country (Chapter 3)

5. The number of full-time university students has increased tremendously. (Paragraph 16)

6. The steady growth in national and individual prosperity has given rise to greater demand for higher education. (Paragraph 19)

7. The annual recurrent expenditure on universities has risen from \$6.3 million in 1959 to over \$70 million in 1973. Capital expenditure for the period 1971 - 1975 will be over \$110 million. (Paragraph 21)

8. The total number of institutions with university status has increased from one to five. (Paragraph 21)

Pattern of Higher Education in Malaysia (Chapter 4)

9. The structure of first-degree courses presents a varied pattern. (Paragraph 63).
10. The end of the Second Malaysia Plan period 1971-1975 will see the establishment of a centre for Postgraduate Studies and Research at the University of Malaya. (Paragraph 85)
11. Universities should consult each other in the creation of new degree courses and in the provision of more varied facilities for postgraduate studies. (Paragraph 86)
12. Universities should complement each other in the provision of new courses and attempt to secure a measure of uniformity in the duration of the courses. (Paragraph 86)
13. There should be regular meetings of Vice-Chancellors and of Registrars. (Paragraph 86)
14. Serious consideration should be given to a system of credits, so that students may transfer from university to university. (Paragraph 86)

School of Library and Archival Science (Chapter 5)

15. We have already reported to the Minister of Education our recommendations on local training of librarians, which recommendations are summarised in this Chapter 5, but when we submitted our report we had not considered the question of granting university status to the Institute of Technology MARA. (Paragraph 87 and 100)
16. Two types of librarians are required, namely, professional or postgraduate librarians who are persons with a degree in a non-library subject who subsequently take a Diploma in Library Science and second-level librarians who are persons with no degree of any kind but have taken simply a Diploma in Library Science. Some librarians require professional or postgraduate librarians, while others require only second-level librarians. (Paragraph 94)
17. The bulk of the demand for librarians will be for second-level librarians who can be produced locally. (Paragraph 95)

18. A postgraduate school in Library Science should be established in one of the universities, preferably at the University of Malaya.

(Paragraph 99(a))

19. The School of Library Science should also offer a course in Archival Science. (Paragraph 99(b))

20. We do not recommend the establishment of courses for a first-degree in librarianship. (Paragraph 99(c))

21. Only the Institute of Technology MARA should provide diploma courses for second-level librarians. The Institute of Technology MARA should admit a reasonable proportion of non-bumiputra students to the course. (Paragraph 99(d))

22. The University of Malaya should provide facilities to enable experienced Institute of Technology MARA diploma-holders to qualify to the same level as professional postgraduate librarians. (Paragraph 99(d))

School of Housing, Building, and Planning at the University of Science Malaysia (Chapter 6)

23. The boom in the building industry is likely to continue into the Third Plan and despite the increase in output from the institutions of higher education, the public as well as the private sectors would still be short of professional manpower in the fields of architecture, civil and structural engineering, quantity surveying and telecommunication etc.

(Paragraph 107)

24. We recommend the establishment of the Second Stage of the School of Housing Building and Planning at the University of Science, Malaysia.

(Paragraph 110)

Manpower (Chapter 7)

25. More effective and co-ordinated means of assessing higher level manpower needs are urgently required. (Paragraph 115)

26. It is difficult to evaluate effectively the plans of expansion of universities and higher educational institutions without more up-to-date data on higher manpower needs. (Paragraph 116)

27. The latest Manpower Survey conducted by the Economic Planning Unit was to be completed by August 1973. Unless the results of the survey are made available within a reasonable period, further studies of plans and policies for higher education for the country as a whole would be hampered. (Paragraphs 119 and 120)

Finance (Chapter 8)

28. A large amount of money has been spent, is being spent and will continue to be spent on university education, and necessarily so if Malaysia is to progress, for education is the key to economic, social and political progress. (Paragraph 128)

29. Within the foreseeable future we may expect Government to continue to shoulder the burden of university education. However, we see no objection to the establishment of private universities provided they conform strictly to government regulations and policies. (Paragraph 129)

30. In our view, where the taxpayer pays for a university it is not unreasonable to expect him through his representatives in Parliament and Cabinet to have some say, not in the day-to-day running but certainly in the objectives and policy of that university, for public money should be spent for the benefit of the nation at large. (Paragraph 130)

Closing the Gap Between Regions (Chapter 9)

31. Universities which are important growth points for economic prosperity should be dispersed all over the country. (Paragraph 136)

32. We support the decision to move the National University to Bangi and the National Institute of Technology to Johor Baru. (Paragraph 136)

33. Universities should not all crowd into the Federal Capital; on the contrary only one or two at the most may be in the capital, and the rest should be elsewhere, so that university education is brought to the people. (Paragraph 137)

34. Universities should not be allowed to develop into parochial universities and each of them should take in students from all over the country. Every university should be fostering the growth of national unity and a Malaysian nation. (Paragraph 142)

45. The Institute of Technology MARA should not be allowed to offer courses in arts and the humanities. (Paragraph 174)

46. Nothing should be done to hinder or delay the Government policy of producing graduates in the ratio 60% Science and 40% Arts. (Paragraph 174)

47. When the Institute of Technology MARA enjoys university status it should open its doors to non-bumiputra students, at first in small numbers; but the position should be reviewed from time to time. (Paragraph 174)

Language Policy (Chapter 12)

48. Correct emphasis should be given to the learning of the English Language. (Paragraph 185)

49. Foreign academic staff should be welcomed for the knowledge they bring. (Paragraph 185)

50. Local staff should be given a stipulated period during which they must learn Bahasa Malaysia, unless they are too old. (Paragraph 185)

General (Chapter 13)

51. Universities should not produce more graduates than are required. (Paragraph 188)

52. Universities should concentrate their resources on producing graduates relevant to the country's needs. (Paragraph 189)

53. We support the Government's long-term objective of changing the present heavy emphasis on arts subjects so that in due course science subjects will constitute 60% of university courses. (Paragraph 190)

54. But universities should not become simply technical institutes training out graduates with mechanical minds. (Paragraph 191)

55. Immediate consideration should be given to an assessment of the present availability of, the future requirements for, and the longer term planning needed for intermediary manpower, with particular emphasis upon establishing the relation of intermediary education to higher education in the future structure of the human resources of the country. (Paragraph 194)

CHAPTER 1

INTRODUCTION

We were appointed by the Hon'ble the Minister of Education late in 1972 "to advise the Minister of Education on the development of existing universities and on the arrangements and development of new universities and on such other matters as may be referred to it by the Minister". A list of our members and staff is given in Annexure 1.

2. In the course of our work we have visited every university where we were briefed by the Vice Chancellor and in the case of the National Institute of Technology by the Rector and held discussions with members of the staff present. We have also visited the Institute of Technology Mara at Shah Alam, the Tunku Abdul Rahman College, Kuala Lumpur, and the Ungku Omar Polytechnic, Ipoh. In addition, we also visited Kuching and Kota Kinabalu where we were briefed by each of the State Governments concerned.

3. A list of these visits is given in Annexure 2.

4. A list of our meetings is given in Annexure 3.

5. The Institute of Technology Mara, the Tunku Abdul Rahman College and the Polytechnic are not universities as they have no power to confer degrees, but nevertheless we visited them because we are of the opinion that university development cannot be considered in isolation, for university is the apex of the educational pyramid, and the size and strength of the apex can only be determined by what is below. It seems to us that at our present stage of development planners of university must have regard to sub-university institutions, for there must be integrated planning of the two.

6. In addition to these formal visits, individual members have held informal discussions with interested members of the university community and of the public in various places on many occasions, none of which has been recorded but from which members have invariably learned something of value.

7. The Council was specifically asked to consider the question of providing local facilities for training librarians and archivists, and when considering this matter it held several meetings with the relevant interested parties, after which a report was submitted to the Minister (a summary is given in chapter 5).

8. The Council was also specifically asked to report on the construction industry with a view to (a) determining shortages in the various professions involved in an industry that plays such an important part in the implementation of the country's economic plans and (b) making recommendations. For this purpose the Council felt that the best way of studying this problem was to get representatives of the professions concerned to sit round the same table with experts from university and other educational institutions and with experts from both the public and private sectors, to make an in-depth study to identify problems and suggest solutions, and accordingly a seminar was organised, held at the University of Malaya on 29th and 30th September, 1973. (This seminar and its recommendations are referred to in Chapter 6).

9. As a result of our visits to various institutions and places and discussions with various experts within and outside university and government, we are convinced that ideally the Council should not only investigate what is being done by universities today but should also determine what could be done by them to meet long-term as well as short-term needs of the country for highly trained manpower. The Council might then present a detailed, comprehensive long-range report with recommendations valid probably for the next ten to fifteen years.

10. Unfortunately we are unable to write such an ambitious report within the time available. In any event our term of appointment was due to expire at the end of last year (1973) and before then it was known that the Chairman as well as one or two other members were, because of other pressing commitments, anxious not to be reappointed. At our last meeting during the

year 1973 (in Kota Kinabalu) some members felt that the present Council had done some useful work, and that it would be desirable to have the terms of office of its members extended to enable them to write and submit a report - even if only in general terms - before the new Council is appointed. This was subsequently put to the Minister who agreed to extend the life of the Council for this purpose.

11. It is therefore to be noted that this report will be rather general and of an impressionistic nature, and should be regarded as a preliminary to the comprehensive report that will in due course be presented by the Council, under its new chairman.

CHAPTER 2

CONSTITUTIONAL AND LEGAL POSITION OF UNIVERSITIES

12. At the outset it is desirable to remind ourselves that university education is a federal responsibility; and therefore only the Federal Government may establish and finance universities.

13. However during the negotiations for the formation of Malaysia it was agreed by the Federal Government representatives on the Inter-Governmental Committee 'that when expansion of higher education facilities was being considered by the Malaysian Government the requirements of the Borneo States should be given special consideration and the desirability of locating some of the institutions in the Borneo States should be borne in mind'. (para 17 of I.G.C. Report).

14. The Universities and University Colleges Act, (Act 30) passed in 1971 regulates the establishment, maintenance and administration of universities and university colleges, and by section 3 provides that the Minister of Education is responsible for the general direction of higher education in Malaysia. The Act also provides that no university or university college may be established except in accordance with the Act (section 5), that a university or university college is to be established by an Incorporation Order signed by His Majesty the Yang Dipertuan Agung (section 6), that a university or university college may have branch campuses (section 12) and that no higher educational institution and no person may issue a degree or diploma purporting to be one issued by a university or university college unless in accordance with the Act (section 24).

15. We shall next describe briefly the growth of higher education in the country.

CHAPTER 3

THE GROWTH OF HIGHER EDUCATION IN THE COUNTRY

16. In this chapter we will trace the development of higher education in Malaysia and it will be seen that in the last 15 years the number of full-time university students has increased tremendously.

17. At the outset it should be observed that all universities in this country were established by Government, not by the private sector; that the earliest were started modestly as training schools to produce skilled manpower specifically for Government's needs; and that all universities have been and will continue to be dependent almost entirely on public funds.

18. The years after independence (31st August, 1957) have been marked by successive phases in which the opportunity for education has been increased, first at primary, then at secondary and finally at university level. First came the Education Act of 1961 which paved the way for free universal primary education. Then came the abolition of the Malaysian Secondary School Entrance examination which raised the school leaving age to fifteen. There followed a great upsurge in the demand for secondary education.

19. The improved opportunities for secondary schooling are largely responsible for the enormous growth in senior forms recently, as shown in Table 3.1. The enrolment at upper and post secondary level more than doubled during the last eight years or so.

Table 3.1

Upper and Post Secondary Enrolments in Assisted Secondary Schools 1965 - 1973

Year	Form IV	Annual %	Form V	Annual %	Form VI Lower	Annual %	Form VI Upper	Annual %
1965	22,241	-	18,513	-	2,190	-	1,765	-
1966	30,733	+38	22,892	+24	2,843	+30	2,128	+21
1967	32,531	+ 6	31,491	+38	3,820	+34	2,807	+32
1968	41,046	+26	33,308	+ 6	4,129	+ 8	3,758	+34
1969	43,854	+ 7	41,104	+23	4,562	+10	4,202	+12
1970	40,433	- 8	44,492	+ 8	5,871	+29	4,769	+13
1971	48,936	+21	42,938	- 3	6,196	+ 5	5,381	+13
1972	54,152	+11	49,980	+16	6,344	+ 2	6,126	+14
1973	61,014	+13	54,275	+ 9	7,569	+19	6,158	0

The increase at upper sixth form classes is over 350% during this period. The steady growth in national and individual prosperity has given rise to greater demand for higher education.

20. The steady enrolment growth in university level education can be seen in Table 3.2 below:-

Table 3.2
Full-Time Students in Universities*
1959 - 1973

Year	Enrolment	Annual % increase
1959	323	-
1960	654	+ 102
1961	1,010	+ 54
1962	1,341	+ 33
1963	1,736	+ 29
1964	2,225	+ 28
1965	2,835	+ 27
1966	3,603	+ 27
1967	4,560	+ 27
1968	5,566	+ 22
1969	6,672	+ 20
1970	8,217	+ 23
1971	9,841	+ 20
1972	10,966	+ 11
1973	11,810	+ 9

Source: E.P.R.D. : Educational Statistics in Malaysia (page 69)

* Does not include diploma, off campus and advanced degree students, but includes post-graduate students in Education and Public Administration at the University of Malaya.

21. Facilities relating to higher education have been expanding rapidly in recent years. Annual recurrent expenditure has risen from \$6.3 million in 1959 to over \$70 million in 1973. Capital expenditure for the period 1971 - 1975 will be over \$110 million. Over the period the total number of institutions with university status has increased from one to five.

22. The five institutions and the years when they were established are shown in Table 3.3.

Table 3.3

Universities & years established

No.	Universities	Year Established
* 1	University of Malaya	1961
2	University of Science Malaysia	1969
3	National University of Malaysia	1970
4	The Agricultural University, Malaysia	1971
5	The National Institute of Technology	1972

* As K.L. Division of the University of Malaya 1959

23. This expansion however has not been accompanied by any lowering of standards of entrants but rather the reverse; this is because of the increase in the number of qualified entrants which allows universities to be more selective. For example in 1973 out of a total of 9,860 applicants with minimum entrance qualifications less than half were given places in the universities. (See Table 3.4)

Table 3.4

Number Seeking Admission and the Number Offered Places in Universities

Year	No. of Applicants	No. Offered Places
1970	5,324	3,561
1971	6,392	4,167
1972	8,251	4,145
1973	9,860	4,072

Source: Higher Education Division, Ministry of Education.

Historical Development

24. Historically the development of higher education in Malaysia may be considered in four stages. (i) Higher Education in Malaysia and Singapore before 1957. (ii) The University of Malaya established in 1961. (iii) Universities founded as completely new institutions since 1969 and (iv) the former Technical and Agricultural Colleges which acquired university status in 1971 and 1972 respectively.

Stage (i) - Higher Education in Malaysia before 1957

25. Higher education in Malaysia began modestly with the establishment of the Straits Settlements and Federated Malay States Government Medical School in July 1905 in Singapore. The School offered courses in Medicine and from 1929 Dentistry. In 1912 its name was changed to King Edward VII Medical School. In 1921 substantial academic expansion took place and the Medical School was renamed the King Edward VII College of Medicine.

26. The second institution was Raffles College also established in Singapore, in 1928, to commemorate the centenary of the founding of Singapore. The School provided courses in English, History, Mathematics, Physics, Chemistry, Education, Economics and Geography.

27. These colleges developed side by side until 1949 when they were amalgamated to become the former University of Malaya at Singapore with three faculties (Arts, Science, Medicine and Dentistry) and with full degree-granting status. The amalgamation followed the recommendation of the Carr-Saunders Commission on Higher Education. It was later decided that by 1956 the University should open a branch in Kuala Lumpur.

Stage (ii) - The University of Malaya

28. In 1957 the year of independence, a Commission under the chairmanship of Sir Robert Aitken, Vice-Chancellor of the University of Birmingham, was appointed by the Government of the Federation and of Singapore, to make recommendations in the light of the experience and rapid expansion of the last years, and to draw up a plan for the development of a university in Kuala Lumpur.

29. Following the Commission's Report and the recommendation of a Joint Constitutional Committee appointed by the two Governments, legislation was passed in November 1958 providing for the continuance of the University of Malaya as a single university and the establishment of two autonomous divisions of equal status, one in each territory. The legislation came into effect on 15th January, 1959. Under these arrangements the University of Malaya in Kuala Lumpur and the University of Malaya in Singapore each had a Principal,

a Divisional Council and a Divisional Senate, while the University of Malaya as a whole was administered by the Vice-Chancellor and a Central Council. Medicine and Law were taught in Singapore. Engineering was transferred to Kuala Lumpur. Arts and Science were taught in both divisions, but subjects such as Malay, Indian and Chinese Studies and Geology were made available for the first time in Kuala Lumpur. On the other hand, Philosophy, Social Studies and Chinese Language and Literature were available only in Singapore. The School of Education remained in Singapore.

30. In 1960 the Federation of Malaya decided that the Kuala Lumpur Division should become the University of Malaya. The Singapore Government also decided that the Division in Singapore should become the University of Singapore. Steps were taken in 1961 to establish these two separate Universities and the necessary legislation was passed in October 1961 in the Parliament of the Federation and in December 1961 in the Legislative Assembly of the State of Singapore. The University of Malaya Act came into effect on 1st January, 1962 thereby establishing the present University of Malaya in Kuala Lumpur, while the University of Malaya in Singapore was renamed The University of Singapore.

31. The development of the University of Malaya in Kuala Lumpur has been rapid since 1959. Student numbers rose from 323 in 1959 to 1,341 in 1962 and continued to rise to 2,835 in 1965, 4,560 in 1967 and 8,519 in 1973.

32. The Arts Faculty Building, the Library, and the First Residential College were completed in 1959. The teaching of Arts, Engineering and Science began in 1959. A degree course in Agriculture was instituted in 1960. The Faculty of Medicine and the School of Education were established in 1963. This was followed by the establishment of the Faculty of Economics and Administration in 1964, the Language Centre in 1971 and the Faculties of Dentistry and of Law early in 1972. The University Hospital with 750 beds was completed and commissioned in 1967.

33. Table 3.5 shows the enrolment growth in different faculties of the University.

Table 3.5

Student Numbers by Faculties:
University of Malaya 1959 - 1973

Faculties	1959	1962	1965	1967	1970	1971	1972	1973
Agriculture	-	74	154	202	324	383	417	322
Arts	163	723	1,496	2,132	3,265	3,578	3,443	3,002
Econ. & Adm.	-	-	-	417	1,360	1,470	1,479	1,478
Dentistry	-	-	-	-	-	-	32	62
Engineering	129	226	281	327	392	500	598	689
Science	31	318	568	878	1,362	1,436	1,467	1,548
Law	-	-	-	-	-	-	51	103
Medicine	-	-	186	389	631	654	658	649
Education	-	-	150	215	443	524	603	598
Accountancy	-	-	-	-	-	-	-	68
Total	323	1,341	2,835	4,560	7,777	8,545	8,748	8,519

Source: University of Malaya: Perangkaan Mahasiswa

34. For the University of Malaya the years beyond 1973 will be a period of consolidation. The enrolment will be kept at a maximum of 8,600 (including postgraduate students) and any further development will be in the direction of postgraduate studies and advanced research. The Faculty of Agriculture at the University will be closed down after 1975 and its facilities transferred to the University of Agriculture. The University hopes to establish by 1975 a centre for postgraduate studies and research. The Centre would be developed around the three areas of Science, Engineering and Agriculture for the production of highly trained manpower for research, teaching and to fill the senior posts in industry. A modest beginning however has already been made in the field of advanced studies. Table 3.6 shows the student enrolment for the advanced level of studies in the various faculties in the University for the year 1973.

Table 3.6

Advanced Students - University of Malaya 1973/1974

Faculties	Enrolment
Arts	97
Economics	17
Education	108
Agriculture	47
Engineering	8
Science	110
Medicine	6
Law	5
Total	398

Source: University of Malaya: Perangkaan Mahasiswa 1973/1974

35. Under the Second Malaysia Plan (1971 - 1975) the University of Malaya will receive \$11.05 million, which will be spent mainly on the establishment of the Graduate Study Centre, an Electron Microscope Centre and a sports complex and other student facilities.

Stage (iii) - Universities founded as completely new Institutions since 1969

36. On 26th September, 1962, the Government of the Federation of Malaya decided that a Higher Education Planning Committee should be established under the chairmanship of the Minister of Education 'to review the arrangements in the Federation of Malaya for Higher Education and to make recommendations for the development and improvement of such education in the light of the foreseeable future and financial resources of the country'. The task of the Committee was an extension of the work of the 1956 Education Committee, and the 1960 Education Review Committee which had not directed their attention to tertiary education.

37. Among other things the Committee in its Report which was published in 1967 recommended that:-

- (i) the Technical College should convert into a College of Technology and enjoy a status comparable to that of a University and courses

leading to professional qualifications in Architecture, Surveying, Town and Country Planning as well as Engineering should be made available;

- (ii) the Faculty of Agriculture should be expanded rapidly;
- (iii) a University College should be established in Penang and be ready to admit students in 1970;
- (iv) in addition to courses in the medium of English, more Arts and Science courses, including courses in Technology, in the medium of the National Language, should be expended at both university and College levels as soon as practicable;
- (v) facilities should also be made available for the training of high level manpower in the following fields, (i) Accountancy, (ii) Library and Archival Science, (iii) Veterinary Science, (iv) Forestry, (v) Fisheries and (vi) Journalism.

(a) UNIVERSITY OF SCIENCE, MALAYSIA

38. The first new university to be established was the University of Science Malaysia* at Penang, in 1969. The University offers courses in Natural Sciences, Social Sciences, and Humanities, Education, Pharmaceutical Sciences, and will eventually offer courses in Applied Sciences, Building Science and Technology. In place of departments and faculties, the University offers courses through a number of broadly-based Schools of Studies. Within each School, the policy is to combine subjects and to organise courses in such a manner that a degree of traditional specialization in a chosen subject is possible, whilst at the same time the student is required to become acquainted with other related fields of study.

* originally named the University of Penang.

39. In the second year of its existence, the University established the School of Comparative Social Sciences and the School of Humanities. The university also provides undergraduate training for specialist teachers of science in secondary schools. Thus, a programme of study which sought to integrate Science with Education was developed with courses in Education being provided through the Centre for Educational Studies, established during the same time.

40. The thrust of the University into the fields of science and technology was further emphasised with the establishment of the School of Pharmaceutical Sciences in the third academic session 1971/72, and of the School of Applied Sciences and the School of Housing, Building and Planning in the academic session 1972/73. Table 3.7 shows the enrolment in the various faculties for the years 1970-1973.

Table 3.7

Student Numbers by Faculties:
University of Science Malaysia 1970-1973

FACULTIES	E N R O L M E N T			
	A C T U A L			
	1970	1971	1972	1973
Natural Science	19	23	17	261
Science	109	272	229	-
Science with Education	21	114	252	389
Pharmaceutical Science	-	-	20	54
Applied Science	-	-	-	32
Housing Building and Planning	-	-	-	56
Social Science	79	211	333	389
Humanities	43	144	270	306
Humanities with Education	-	-	-	56
TOTAL	271	764	1,121	1,543
<u>Off Campus</u>				
Social Science	-	32	107	172
Humanities	-	43	116	176
Physics	-	-	-	24
TOTAL	-	75	223	372

Source: University of Science Malaysia

41. The University also organizes Off-Campus Academic Programmes to provide opportunities to working adults to pursue part-time university education leading to a degree. Established in June 1971, the programme is the first of its kind in Malaysia. It seeks to remove the inequality of opportunities that exists between working men and women on the one hand and full-time university undergraduates on the other. This programme will facilitate the acquirement of a university degree by many Malaysians who for some reason or other had not had the opportunity to do so.

42. During the first year of operation, courses from the Schools of Humanities and Comparative Social Sciences were offered with an initial enrolment of 89 students. Today, when this Programme is in its third year of operation, the student population has increased rapidly to a total of 372 students. For the first time too, the School of Physics and Mathematics of the University has offered its courses in the programme, as from June 1973.

43. The University was first housed at the Malayan Teachers' Training College, and is now at the former British Army barracks at Minden. A master site plan to develop Minden Barracks into a University Campus is ready. Total cost of the project is expected to be in the region of \$62.5 million. Work on the project is well under way and is expected to be completed by 1978.

44. The period beyond 1975 will be one of consolidation as well as expansion. The University is planning new courses in response to the needs of the country. The University plans to open the following schools:-

- (i) The School of Nursing
- (ii) The School of Military Science
- (iii) The School of Insurance Studies
- (iv) The School of Computational Science

45. The University is also planning courses leading to awards in:-

- (i) Diploma in Criminology
- (ii) Diploma in Fisheries
- (iii) Diploma in Industrial Management

(b) NATIONAL UNIVERSITY, MALAYSIA

46. Following the recommendation of the Higher Educational Planning Committee Report of 1967 the National University Malaysia was established in 1970 incorporating the Muslim College, the earliest institution of higher Islamic Education in Malaysia. The University aims at providing a liberal and balanced education. It has five Faculties: Arts, Science, Islamic Studies, Medicine and Institute of Malay Language, Literature and Culture. The medium of instruction is Bahasa Malaysia, but English is a compulsory second language. All students in the Faculties of Arts and Islamic Studies are required to take a course in General Science in the first and second years. Students in the Faculty of Science must take one unit of course offered by the Faculty of Arts in the first and second years.

47. Students in the Faculty of Islamic Studies are also required to take two units of courses offered by the Faculty of Arts in the first year and three units in the second and third years.

48. The University is now temporarily housed at the Malayan Teachers' Training College at Kuala Lumpur. The University will eventually move to a new site at Bangi approximately twenty miles from Kuala Lumpur. The total cost of the project at Bangi, according to the Master Plan, is expected to be in the region of \$121 million and the project will be completed in 1995.

49. The enrolment of the University during the last four years is shown in the table below:

Table 3.8

Student Numbers by Faculties:
National University of Malaysia
1971 - 1973

FACULTIES	A C T U A L			
	1970	1971	1972	1973
Arts	112	357	611	847
Science	25	86	189	268
Islamic Studies	32	89	196	275
Medicine	-	-	-	44
Institute of Malay Language, Literature and Culture	-	-	-	47
Total	169	532	996	1,481

50. The University plans to open a Faculty of Economics and Management in 1974 and a Faculty of Education in 1975. It is also considering the establishment of a Department of Anthropology, Psychology and Sociology, and a Department of Communications.

51. Arts and Islamic Studies students are required in their first and second years to take a course in General Science.

52. Beginning in 1974 all students will be required to take a course in Kenegaraan (statehood) which involves a study of Malaysian affairs, comparative religion, some science and history, to instil in graduates understanding of and love for the nation.

53. The object of the Faculty of Medicine is to produce not only doctors but doctors who are community-oriented.

Stage (iv) - The Former Technical and Agricultural Colleges

(a) NATIONAL INSTITUTE OF TECHNOLOGY

54. This institute began modestly as the Public Works Department School established in October 1925. The school was taken over by the education department as a Federal Institution in January 1931. It provided facilities for the training of technical apprentices for the Public Works Department, the Malayan Railways, and later for the Survey Department. In 1933 as a result of the Coales, Watson and Worley Report, the school for the first time took non-government and fee-paying private students. After the war in 1946 the school was reopened and it was subsequently called the Technical College. A new building for the College begun in 1951 was formally opened on 1st March, 1955.

55. On 14th March, 1972 the College was raised to university status and named the Institute Teknologi Kebangsaan (National Institute of Technology). It does not provide courses in Arts, though students are required to take an elementary course in Islamic studies or in ethics.

56. The medium of instruction is mainly Bahasa Malaysia. It provides the degree and diploma courses shown in Table 3.9.

Table 3.9

Courses at the National Institute of Technology

Faculty	Courses provided	
	Diploma level	Degree level
Engineering	Civil Electrical (Power) Electrical (Communication) Mechanical	Civil Electrical Mechanical
Architecture	Architecture Town & Country Planning	Architecture Town & Country Planning Quantity Surveying
Surveying	Land Surveying	Land Surveying Valuation

57. The enrolment growth of the Institute at diploma and degree level is shown in the Table below:-

Table 3.10

Student Numbers: National Institute of Technology
1959 - 1973

	1959	1962	1965	1967	1970	1971	1972	%	1973	%
Diploma	314	509	682	752	692	753	1,135	93	1,246	85
Degree	-	-	-	-	-	-	91	7	221	15

Source: Educational Statistics of Malaysia (1938 - 1967) - (page 73)
by Educational Planning & Research Division.

(b) THE UNIVERSITY OF AGRICULTURE

58. The School of Agriculture was opened in May 1931 by the Department of Agriculture for the training of Agricultural Assistants employed by Government.

59. On 3rd June, 1947 the School was renamed the College of Agriculture, Serdang.

60. In 1971 the University of Agriculture was established by the amalgamation of the College of Agriculture and the Faculty of Agriculture of the University of Malaya, and sited at the Agricultural College, Serdang, providing both diploma and degree level courses. The University now provides the following courses at Degree level: (i) Forestry, (ii) Agriculture and (iii) Veterinary Medicine and Animal Science. At Diploma level the University provides courses in Agriculture, Home Economics and Basic Science.

Table 3.11

Student Numbers: University of Agriculture, Malaysia
1959 - 1973

	1959	1962	1965	1967	1970	1971	1972	1973	%
Diploma	75	82	113	437	585	819	1,091	1,485	83
Degree	-	-	-	-	-	-	-	114	17

Source: Educational Statistics of Malaysia (1938 - 1967) - (page 71)
by Educational Planning & Research Division.

61. This University as its name implies concentrates on producing graduates most needed by agriculture, the biggest industry in the country and eschews Arts courses.

CHAPTER 4

PATTERN OF HIGHER EDUCATION IN MALAYSIA

62. This chapter is concerned with the structure of degree courses in our universities. It will deal first with the broad structure of first-degree and postgraduate courses; and finally it will note some academic developments.

First-Degree Courses

63. The structure of first-degree courses presents such a varied pattern that it is not possible to describe them in terms of a few categories. There is variation not only between universities but also between faculties. Both honours and pass degree courses in the humanities, social sciences and natural sciences may be either of three or four years duration, while in medicine, dentistry and veterinary science five to six years are required. An exception to the normal three year period is in the National University where a student on completion of the three-year course is awarded a pass degree, and then if selected continues for another year to obtain his honours. In the other universities, it is also not possible to distinguish between courses leading to honours degrees and those leading to pass degrees. In some honours courses pass degrees may be awarded to those who in the final examination fail to reach an honours standard.

64. The next major division between courses rests on the number of subjects a student is required to study. A subject that may be regarded as one subject by a university may be regarded as two by another. A one-subject honours course does not mean that the student is engaged exclusively in the study of the subject. Courses with one main subject in fact normally touch on related fields.

65. First-degree courses in fields of science, medicine, and engineering may be preceded by the student spending a preliminary year

taking a course in basic sciences and other related subjects. This course is primarily meant for students from rural areas where facilities for the teaching of science and mathematics are limited.

66. The courses available, the degrees awarded, and the length of courses in the four universities and the National Institute of Technology are shown in the table below.

Table 4.1
Types of University First-Degree Courses

Stream	University	Faculties/ Schools	Duration of Course	Degree to be awarded	Medium of Instruction
Arts	National University of Malaysia	Faculty of Arts	3 years 4 years	B.A. B.A.(Hons.)) Malay with) English as) compulsory) subject.)) Malay and) Arabic with) English as) compulsory) subject.
		Faculty of Economics & Management	3 years 4 years	B.Ec. B.Ec.(Hons.)	
		Faculty of Islamic	3 years 4 years	B.Isl.,Studies B.Isl.,Studies (Hons.)	
		Institute of Malay Language, Literature & Culture	3 years 4 years	B.Litt. B.Litt.(Hons.)	
Arts	University of Malaya	Faculty of Arts	3 years	B.A./B.A.(Hons.)) Bahasa) Malaysia &) English) (a)
		Faculty of Law	4 years	L.L.B.,(Hons.)	
		Faculty of Economics & Adminis- tration	3 years	B.Ec./ B.Ec.(Hons.)	
	University of Agriculture Malaysia	Faculty of Resource Economics & Agri- business	4 years	B.Sc.Agric.) Bahasa) Malaysia &) English)

- a) Most Faculties require English-medium students to do a Bahasa Malaysia unit/ language course and Malay-medium students to do an English unit/language course.
- b) Commencing from the 1974/75 session, subject to availability of staff, first year courses in this Faculty will be given only in Bahasa Malaysia. This Faculty also requires English-medium students to do Bahasa Malaysia and Bahasa Malaysia-medium students to do English.

Stream	University	Faculties/ Schools	Duration of Course	Degree to be awarded	Medium of Instruction
	University of Science Malaysia	School of Humanities	3 years	B.A./B.A.(Hons.)	)Some courses)are taught)in English)Bahasa)Malaysia is)a compulsory)subject
4 years (c)			B.A. with Educ./ B.A.(Hons.) with Educ.		
		School of Comparative Social Sciences	3 years	B.Soc.Sc. B.Soc.Sc. (Hons.)	
		School of Housing, Building & Planning (d)	4 years	B.Sc.Tech./ B.Sc.Tech. (Hons.)	
Science	National University Malaysia	Faculty of Medicine	6 years	M.B.B.S.	) Bahasa) Malaysia with) English as a) compulsory) subject
		Faculty of Science	3 years 4 years	B.Sc. B.Sc.(Hons.))
	University of Malaya	Faculty of Dentistry	4 years	B.D.S.)
		Faculty of Engineering	4 years (e)	B.E.(Hons.)	) Bahasa) Malaysia) & English) (a)
		Faculty of Medicine	6 years (f)	M.B.B.S.)
		Faculty of Science	3 years (f) 4 years	B.Sc. B.Sc.(Hons.))
	University of Agriculture Malaysia	Faculty of Agriculture	4 years	B.Agr.Sc.)
		Faculty of Forestry	4 years	B.Sc. (Forestry)	) Bahasa) Malaysia) & English
		Faculty of Veterinary Medicine & Animal Science	5 years)

*) Students who have opted to do the Education course can, if they so wish, give up this course and get into the 3-year Humanities/Natural Science course at the end of the First Year.

) This course is open to H.S.C. Arts/Science stream candidates. Students who have successfully completed the first stage of education in this School leading to B.Sc.(Technology)/B.Sc.(Technology)(Hons.) can apply to follow courses in the second stage leading to M.Sc.(Architecture)/M.Sc.(Building Technology) over a year, or to M.Sc.(Planning) over two years.

Stream	University	Faculties/ Schools	Duration of Course	Degree to be awarded	Medium of Instruction
Science	University of Science Malaysia	Schools of Biological Sciences Chemical Sciences, and Physics & Mathe- matics	3 years	B.Sc./ B.Sc.(Hons.)	) Some courses) are taught) in English.) Bahasa) Malaysia is) a compulsory) subject.)
		Natural Science with (c) Education in above Schools	4 years	B.Sc. with Educ./ B.Sc.(Hons.) with Educ.))))))
		School of Applied Sciences (h)	4 years (g)	B.Sc.(Applied)/ B.Sc.(Applied) (Hons.)	) ) ) Some courses) are taught) in English.
		School of Pharmaceut- ical Sciences (f)	4 years (g)	B.Pharm.Sc. (Hons.)	) Bahasa) Malaysia) is a) compulsory) subject.)
		School of Housing, Building & Planning (d)	4 years	B.Sc.Tech/ B.Sc.Tech. (Hons.))))))

(e) The Engineering Course offers specialisation from the second year in Chemical Engineering and from the third year in Civil, Mechanical and Electrical Engineering. Candidates may be considered and offered admission to the Pre-Engineering course if they are not offered admission to the Engineering course. This is a one-year course which prepares students for the Engineering course proper.

(f) There is provision to admit suitable candidates direct to the second year of these courses.

(g) Inclusive of the one year of basic foundation in the Natural Sciences.

(h) Candidates are not admitted directly to these Schools but are selected from those who have successfully completed their First Year courses in the Natural Sciences.

67. During recent years many changes in first-degree courses have been made not only in response to the rapid expansion of scientific and technical knowledge, and to a demand for more trained scientists and technologists but also in response to the rapid changing social and political needs of the country. As a result of diversification within universities there are now more opportunities for studying certain subjects which were not available in the country a few years ago. The University of Malaya has introduced courses in dentistry and law. University of Science Malaysia has introduced courses in Housing, Building and Planning, Pharmaceutical Science, Applied Sciences and Social Sciences. The National University has introduced new honours and pass degree courses in Islamic Studies. The National Institute of Technology has introduced new degree courses in Town & Country Planning, Quantity Surveying, Land Surveying & Valuation. The University of Agriculture has instituted degree and diploma courses in Forestry, and Veterinary Medicine & Animal Science during session 1972/1973.

68. Fewer new subjects have been introduced in the humanities and social studies programmes. Some new subjects have been introduced in the University of Science Malaysia. They are courses in Urban Studies, Problems of Peasants, and Race Relations in the field of Social Studies, and Communication, Journalism and Fine Arts in humanities. The National University has introduced a new academic programme in the Study of Malay Language, Literature & Culture. In the University of Malaya though no major changes have been made in the field of humanities, some changes have been made which really amounted to a re-orientation of disciplines. Some of the reported changes have taken more account of local conditions and recent developments in Asia and other developing countries elsewhere. In general the main changes in the Arts Faculty have been an increase in the range of subjects available.

69. In the field of science the influx of new knowledge has led to a new approach in teaching the subjects in the University of Science Malaysia. As stated in Chapter 3, the University offers courses through a number of broadly-based schools. Within each school the policy is to combine subjects and to organise courses in such a manner that a degree of traditional

specialization in a chosen subject is possible, while at the same time the student is required to become acquainted with other related fields of study.

70. Another major change is the greater use of Bahasa Malaysia as the medium of instruction in all the institutions. In the National University and in the National Institute of Technology most courses are given in Bahasa Malaysia, while English is a compulsory second language in both institutions.

Postgraduate Studies

71. This section deals with full-time postgraduate studies. The faculties which offer postgraduate programmes in the University of Malaya are as follows:-

<u>Faculties</u>	<u>Degree/Diplomas Awarded</u>
Agriculture	Master of Agricultural Science
Arts	Master of Arts Doctor of Literature
Economics & Administration	Master of Economics Diploma in Public Administration (one year course)
Education	Diploma in Education (one year course) Master of Education - two years
Engineering	Master of Engineering Science
Medicine	Master of Surgery Doctor of Medicine Master of Pathology Master of Psychological Medicine Master of Public Health
Science	Master of Science Doctor of Science
Law	Master of Laws Doctor of Laws

72. Studies in all the faculties of the University of Malaya may also lead to the higher degree of Doctor of Philosophy (Ph.D.)

73. All schools of the University of Science Malaysia offer opportunities leading to Masters and Ph.D degrees by instruction, research and examination.

74. The National University offers Masters & Doctorate degrees in Arts, Science and Islamic Studies, Economics and Management and also in Malay Language, Literature and Culture.

75. Generally, work for higher degree involves independent research and submissions of dissertations or theses.

76. The total number of students doing postgraduate studies is shown in the table below:-

Table 4.2

Students undertaking full-time postgraduate studies
1973/1974

<u>University of Malaya</u>	<u>Diploma</u>	<u>Master & Doctorate</u>
Arts		97
Economics & Administration	24	17
Education	598	108
Agriculture		47
Engineering		8
Science		110
Medicine		6
Accountancy	68	-
Law		5
Sub-total	690	398
<u>University of Science</u>		
Science		12
Applied Science		2
Housing, Building and Planning		9
Arts		30
Sub-total		53
<u>National University</u>		
Malay Language, Literature and Culture		3
Arts		7
Science		1
Economics and Management		1
Sub-total		12
Total	690	463

Off-Campus Education

77. Off-campus education available only at the University of Science provides university education leading to a degree to adults over the age of 23 years who are in full-time employment. Courses are offered at three levels

of academic study with each level corresponding to the requirements for each of the three full-time years of study. Off-campus students, however, are required to take two years to complete each of the first two levels and a total of five to six years to complete all courses required for a degree. The University offers off-campus courses in the field of Humanities, Social Sciences, Pure Sciences and Mathematics.

Senior Fellowship Scheme

78. Under this scheme men and women who have retired after at least 15 to 20 years of active professional life are invited by the University of Science to set down in writing their experiences and knowledge which the University will publish for the use of undergraduates and the general public. Senior Fellows receive a monthly honorarium and are provided with the necessary office and supporting facilities to carry out their work. They are also required to participate in tutorial classes and seminar groups relevant to their projects.

SOME ACADEMIC DEVELOPMENTS

79. While the main emphasis in university development generally during the last few years was on the expansion of student numbers to meet the target set by the Second Malaysia Plan, there were also important developments in particular fields of study which we were made aware of during our visits and which we feel should be placed on record. They are, briefly as follows.

Agriculture

80. The intake of students for undergraduate teaching in agricultural science has been discontinued at the University of Malaya with effect from the 1973 session, and resources will be concentrated in the University of Agriculture. The University of Agriculture will offer two-tier courses - both diploma and degree courses. The University of Agriculture started with three faculties - the faculties of Agriculture, Veterinary Medicine and Forestry. Courses in the last two fields have been made available for the first time in the country.

Engineering

81. Two institutions are offering degree courses in Engineering. They are the University of Malaya and the National Institute of Technology. The total

intake in 1970 for Engineering degree courses was only 140, and in 1975 the projected intake will exceed 500. Besides the traditional branches, namely civil, mechanical, and electrical engineering, courses at degree and diploma level are also available in Architecture and Town and Country Planning.

Science

82. The teaching of science and technology had been emphasized with the establishment of the University of Science Malaysia, as described in Chapter 3.

Pharmacy

83. For the first time beginning in 1972 courses in Pharmaceutical science have been made available in the country. The course is of four years' duration and leads to a Bachelor's Degree. Special emphasis is in the study of Pharmaceutical Chemistry and Technology, and Physiological Basis of Drug action.

Applied Science

84. Courses in applied science were made available at the University of Science Malaysia from 1973/1974. The courses are designed to produce technologists to meet the nation's manpower needs in the industrial sector. The fields of study will be Polymer Science and Technology, Metallurgy, Electronics, Instrumentation, Textile Chemistry and Technology, Food Science and Technology and Fuel Technology.

Postgraduate School of Studies

85. The end of the Second Malaysia Plan period (1971 - 1975) will also see the establishment of a centre for Postgraduate studies and Research at the University of Malaya. The centre will be developed around the three areas of science, engineering and agriculture for the production of highly trained manpower needed for research, teaching, and to fill the senior posts in industry. It is felt that such a multi-disciplinary centre for postgraduate education with emphasis on cross-sectional research and following a policy of inter-institutional collaboration, will play an important part in the economic development of the country.

A Common Policy

16. Both in the creation of new degree courses and in the provision of more varied facilities for postgraduate studies, we recommend that universities should consult each other. It is also desirable that universities should complement each other in the provision of new courses and that there should be some attempt to secure a measure of uniformity in the duration of the courses. We therefore feel that regular meetings of Vice Chancellors and Registrars would go a long way in solving the problem. We also urge universities to give serious consideration to a system of credits so that students may transfer from university to university.

CHAPTER 5

SCHOOL OF LIBRARY & ARCHIVAL SCIENCE

7. We were invited by the Minister of Education to make a study of the number of qualified librarians and archivists likely to be required in the foreseeable future, and to make recommendations regarding their education and training within the country. We have already submitted our report and recommendations of which this is a summary.

8. We held six meetings and received a very substantial body of evidence, both written and oral. We relied heavily on Hedwig Annuar's "Blueprint for Public Library Development in Malaysia".

9. We also took note of the Government's interest in the development of library services in Malaysia to cater for the educational, social, cultural and the economic needs of the country. We believe that the establishment of a public libraries system would greatly assist the Government's effort in spreading literacy and education as widely as possible in the country.

10. We feel that the following are some of the important factors that would have to be taken into consideration in estimating the demands likely to be made by libraries of all levels:-

- (i) the number of librarians existing at present, and the rate of expansion of libraries;
- (ii) the wastage rate among librarians; and
- (iii) the generally accepted standards concerning the number of professional staff needed in libraries.

11. In considering how many librarians and archivists are required, we were hampered by several factors. First, as there was no proper study or survey of the country's manpower requirements we could not verify the accuracy of the projections presented to us. Secondly, the actual planning for a public library service in Malaysia had only just started and the data concerning staffing position and requirements in public libraries were still not available.

12. However, the Library Association of Malaysia, on the basis of certain assumptions had projected the demand for librarians and archivists for the years

up to 1980. One drawback of the projections were that they did not give a breakdown of the demand for librarians by levels.

93. According to the Library Association of Malaysia there were at present some 74 qualified librarians and 6 archivists in the country, and by 1980, 615 additional librarians and 124 archivists would be needed. This would average to about 62 librarians and 12 archivists needed each year. The Library Association then made a number of assumptions regarding the likely future rate of expansion. We wish to draw attention to the fact that many of the assumptions were necessarily speculative. In particular rates of developments are likely to be considerably affected by variations in the general economic situation. In the case of public libraries, for example, we did not have certain knowledge of the rate at which the public authorities will develop the services and increase their professional staff. We therefore felt that the projections were rather on the high side.

94. We also felt that in determining the training needs of librarians it was also necessary to look at the different kinds of libraries and the type of level of librarians appropriate to each. This the Library Association had not done. Our views are as follows:-

(a) National Library:

This institution requires professional (or postgraduate)* librarians and second level librarians. The second-level posts do not normally call for deep knowledge of any

* Professional or postgraduate librarians are persons with a degree in a non-library subject (such as law, history etc.) who subsequently take a diploma in library science. They are rather like graduate teachers who have a degree in history, geography etc. and who subsequently take a diploma in education. (They are not like postgraduate lawyers and historians who take a first degree in law or history and subsequently take a second degree in law or history). Second-level librarians on the other hand are persons who have no degree of any kind but have taken simply a diploma in library science.

particular subject. The essential thing here is to have a good general education with training at diploma level in librarianship i.e. the Institute of Technology Mara type of graduate.

(b) University Libraries:

We agree that librarians working in university libraries should all be postgraduate librarians as they have to give advice and guidance to university students, research workers and teachers.

(c) Research Libraries:

Libraries of research institutes such as the Institute of Medical Research, Rubber Research Institute, Malaysia Agricultural Research and Development Institute, Standards Institution of Malaysia and National Institute for Scientific and Industrial Research should in our view also be staffed mainly by postgraduate librarians. This would also apply to Parliament's library and some High Court libraries.

(d) Libraries in Teacher Training Institutions and other Colleges:

Librarians in teacher training colleges etc., are also much involved in the teaching of Library use, and it is important that they should be closely aware of the needs and problems of teachers. Preferably therefore, in addition to being qualified librarians, occupants of senior posts should themselves be graduates or qualified teachers.

(e) School Libraries:

The great majority of school libraries, or almost all of them, are staffed by teachers. It is therefore felt that the proposed School of Librarianship

and Archives could also provide courses whereby qualified teachers in charge of libraries could obtain a second qualification suited to their needs. At present this course is provided by the Specialist Teachers Training Institute.

(f) Public Libraries in Malaysia:

The work which librarians are required to undertake in public libraries in Malaysia varies considerably both in its nature and in the level of education and professional knowledge necessary for its performance. In general in the smaller towns where there would be only lending libraries, it may consist very largely of dealing with enquiries about books, often of a fairly simple kind. The demands made, however, would vary considerably according to the nature of population served, and it is generally true that they increase with the size and comprehensiveness of the service provided. The extent to which the community is made aware of the potentialities of its public library depends to a very large extent on the calibre of its librarians and their ability to inspire confidence in the services which they provide. It is therefore felt that these libraries could be managed by second-level librarians except the senior posts in the State capitals which should be filled by graduates with postgraduate qualifications in library science. This would only be a handful.

(g) Ministerial and Departmental Libraries:

These libraries are at present largely managed by experienced clerks who have had no training in library science. The future staffing needs of this group are difficult to determine, but it can be

safely assumed that this group can be managed by second-level librarians with the assistance of heads of Departments who would be highly qualified professional men in their own fields, and that the number of second-level librarians required will increase steadily over the years.

It is therefore our opinion that librarians in general reference libraries, Ministerial & Departmental libraries and in school libraries need to be men with postgraduate qualifications. It is therefore felt that only a small portion of the 615 additional librarians said by the Library Association of Malaysia to be required by 1980 would be postgraduate librarians. With the expansion of facilities for higher education, however, there would be a greater demand for librarians with postgraduate qualifications in the libraries of these institutions. It is our opinion that though the demand for librarians with postgraduate qualifications would be very small, they would be crucial to the development of these institutions and the demand will have to be satisfied either by the production of the graduates locally or by training them in overseas institutions. The bulk of the demand for 615 additional librarians would be for second-level librarians which could be produced locally.

The principal ways in which professional qualification may now be obtained are:-

- (i) one-year full-time course taken at a university after the completion of a University degree course of the traditional kind;
- (ii) a first-degree course in librarianship;
- (iii) a three-year diploma course provided at the Institute of Technology MARA.

The proposals that were put for our consideration were:-

- (i) to establish a postgraduate school of librarianship and archives;
- (ii) to upgrade the present three-year diploma course at the Institute of Technology MARA to first-degree level;

that Institute of Technology MARA should continue their diploma-level course in librarianship.

5. The Higher Education Planning Committee of 1967 in its report on the subject states that:-

(i) Archival Science

"Malaysia has a rapidly developing National Archives which plays an active role in stimulating historical research and national interest in its priceless treasures. The primary need of the country is to obtain an effective control and preservation of all records and archives which are public property. To achieve this it is essential to have trained archivists to service both National and State Archives as well as to assist private organisations with their own archives." (paragraph 214)

(ii) Library Science

On the subject of Library Science, the Higher Education Planning Committee states that:-

"With the rapid expansion of education in this country at secondary level it is essential that provision of libraries in all schools and other educational institutions should be considered as an integral part of educational facilities. It has been estimated that 87 librarians are required by schools in West Malaysia alone over the next twenty years. In addition, it is expected that the Government and private organisations will also need librarians. The Committee, therefore, recommends the introduction of a course in library science at college level to cater for both public and private sectors." (paragraph 202)

"No public libraries in Malaysia are being maintained by Government. The only libraries available for public use are a few private subscription libraries and those that are maintained by non-governmental bodies. The importance of well established public libraries cannot be over-emphasised.

With the expansion of higher educational facilities as proposed in this Report, there will be a greater need for libraries and so a well-planned development of library facilities in the country can no longer be deferred". (paragraph 225)

"The development of an efficient library service, however, will depend on the availability of an adequate number of professionally qualified librarians in the country. There is at present a shortage of qualified librarians and if the development of library facilities in the country were to be carried out the present number of qualified librarians should be increased. The Committee accordingly recommends that in addition to the provision of an adequate and efficient library service throughout the country, facilities should be provided for the training of professional librarians at university level." (paragraph 226)

We reaffirm the findings and recommendations of the Higher Education Planning Committee and give below our own findings and recommendations:-

(a) Postgraduate Diploma in Library Science

A full-time one-year course in librarianship, leading to a university diploma, for those with a first degree, has been part of the educational scene in developed countries for quite a while and it is by this process that some of the best librarians have entered the profession in this country. However, it is becoming evident that a Master's degree by examination after one year's study is becoming an accepted pattern of study in a number of universities particularly in the United Kingdom and United States of America in all disciplines. This pattern is now beginning to show itself in postgraduate library studies so that in future it is conceivable that the number of courses leading to a Master's Degree will prove more attractive to students than those leading to a postgraduate diploma.

But, however, for the time being, we are convinced that the one-year postgraduate diploma course will play and continue to play an important part in Malaysia and we recommend the establishment of a postgraduate school in Library Science in one of the Universities preferably at the University of Malaya which is in the process of establishing a Graduate School of Studies.

(b) Postgraduate Diploma in Archival Science

It is recommended that the School of Library Science should also offer a course in archival science. The archives part of the school should be at postgraduate level and the entrant should have a first degree, who, on successful completion of the course, will be awarded a diploma.

(c) First-Degree in Library Science

With regard to the question of upgrading the course at Institute of Technology MARA to first-degree level, we see serious objections. It has been stated that such courses have been unsuccessful in countries like the United States of America and Australia. First degree-level courses are however available in Britain. One university in the United Kingdom, the National University of Wales at Aberystwyth, provides such a course. In our opinion the main problem probably faced by institutions that offer first-degree in librarianship are that courses which constitute an intellectual discipline of degree standard may lack the professional content which a vocational course might reasonably be expected to include; while on the other hand a course with adequate professional content may lack the intellectual content of other degree courses. There is also the problem of achieving a synthesis between

traditional professional and academic studies. On deciding to establish a first-degree level course in librarianship due regard should be given to this implication. The development of first-degree courses in library science also raised the question of the probable attitude of employers to recruits who have obtained their qualification in this subject. We therefore do not recommend the establishment of first-degrees in librarianship.

(d) Diploma in Library Science

The Institute of Technology MARA are to be congratulated for taking the initiative in establishing diploma courses for second-level librarians. It is our considered opinion that the demand for second-level librarians will increase with the development of library services. Therefore we recommend that the Institute of Technology MARA continue with the production of second-level librarians.

At present the qualification for entry into this course at the Institute Technology MARA is the same as that for entry into university. Students however prefer to enter university, therefore the Institute of Technology MARA only get students who cannot enter university. Students who enter the Institute of Technology MARA for this course have to do three years, the same period as the normal university arts degree course.

In order to attract better students to this course further consideration will have to be given to the possible reduction of the length of the course. If the length of the course is reduced say to two years the Institute of Technology MARA might attract better students.

We recommend that only the Institute of Technology MARA should provide this diploma course for second-level librarians,

so that there is no duplication and no dispersal of scarce resources. Government should make every effort to ensure the success of this Institute of Technology MARA course.

As the Institute of Technology MARA will be the only institution providing this course we recommend that it accept a reasonable proportion of non-bumiputra students to the course.

We recommend that the University of Malaya provide facilities to enable Institute of Technology MARA diploma-holders who have had experience of working in major libraries and distinguished themselves as librarians, to qualify to the same level as professional postgraduate librarians.

It should be explained that when we submitted our report on the School of Library & Archival Science to the Minister we had not considered the question of granting university status to the Institute of Technology MARA.

CHAPTER 6

SCHOOL OF HOUSING, BUILDING AND PLANNING
AT THE UNIVERSITY OF SCIENCE MALAYSIA

11. We were informed by the Minister of Education that the University of Science Malaysia had established a School of Housing, Building and Planning. The course offered by the school is in two stages. The first programme which is multi-disciplinary in character lasts four years and produces first-degree graduates suited to undertake the role of development officers and project managers. The second stage is of two years' duration and concentrates on such subjects as architecture and building technology leading to a Master of Science Degree.

12. This move it was feared could prejudice the success of other institutions of higher learning in the country which had already embarked on this field particularly in the recruitment of staff. The Minister sought the advice of the Council on the second stage of the course, as there had been complete agreement on the establishment of the first stage of the course at the University of Science Malaysia.

13. In order to gather data and evidence on the subject we convened a Seminar which was held at the University of Malaya on Saturday 29th and Sunday 30th September, 1973. The theme of the Seminar was 'Building Industry and National Development'. The terms of reference of the Seminar were:-

- (i) to examine the relationship between the building and other industries and national development in Malaysia;
- (ii) to suggest ways through which the building industry can contribute more fully towards the implementation of national development programme;
- (iii) to determine the manpower requirements of the building industry; and
- (iv) to provide guidelines on how institutions of higher education can meet these requirements.

14. The Seminar brought together 80 key personnel from the private and public sectors and institutions of higher learning connected with the building industry.

105. Documentation for the Seminar consisted of 11 working papers and covered the following three areas:

- (i) Importance of the building industry in the implementation of the Second Malaysia Plan;
- (ii) Building Industry and manpower needs;
- (iii) The role of institutions of higher education in meeting the demand for skilled technical manpower.

106. The Seminar was organized into four sessions. During the first three sessions working papers were presented which discussed in turn the three topics mentioned above. In the concluding session the seminar considered and adopted recommendations.

107. The general conclusion of the Seminar was that the boom in the building industry is likely to continue into the Third Plan and that despite the increase in output from the institutions of higher education, the public as well as the private sectors would still be short of professional manpower in the field of architecture, civil and structural engineering, quantity surveying and telecommunications etc.

108. The Seminar then made the following recommendations:-

- (a) that the manpower output especially in the following fields be increased:
 - (i) architecture;
 - (ii) civil engineering;
 - (iii) structural engineering;
 - (iv) surveying;
 - (v) telecommunications;
 - (vi) town and country planning;
 - (vii) land surveying
- (b) that training plans particularly for bumiputras at the professional and technical levels be increased;
- (c) that experienced staff should be sent for postgraduate and specialized training in local and overseas institutions;

- (d) that as a short-term plan administrative measures be adopted to:-
- (i) obtain more efficient utilization of existing available manpower;
 - (ii) remove unnecessary "red tapes";
 - (iii) improve techniques and management skills at all levels so as to increase production; and
 - (iv) persuade the return of qualified Malaysian professional and skilled workers presently working overseas, e.g. Singapore.
- (e) that legislation be introduced for the establishment of an Institute of Building in Malaysia to promote professionalism and ultimately evolve a code of conduct;
- (f) that the training of a qualified builder should take a multi-disciplinary approach;
- (g) that the public and private sectors look into the possibility of introducing counter-cyclical measures in order to provide for a regulated and phased-out demand in the construction industry;
- (h) that the staff training and development programmes for institutions of higher learning should be an integral part of the overall plans to increase needed manpower;
- (i) that the Higher Education Advisory Council should be given power exercised through finance to enable it to assume a more active role in co-ordinating and promoting higher education development;
- (j) that institutions of higher learning producing professional manpower should co-ordinate closely with professional bodies to ensure recognition of their courses of study by the profession;
- (k) that private institutions which provide technical training should be regulated to ensure uniformity of standards.

109. We are convinced that there is a great shortage of professional manpower in the country, and endorse the recommendations of the seminar.

110. We therefore recommend the establishment of the second stage of the School of Housing Building and Planning at the University of Science, Malaysia.

111. The Council thanks all participants for their co-operation, particularly Professor Yip Yat Hoong the Deputy Vice-Chancellor of the University of Malaya for helping plan and organize the Seminar, and the University of Malaya for giving the Council the use of their facilities.

CHAPTER 7

MANPOWER

112. The justification for economic planning in recent times, although considered by many a complicated and imprecise science, is based on the premise that it is pointless to prepare blueprints for economic growth without the necessary investment in human capital. Development means people and an effective manpower strategy is characterised by a tendency to accumulate educated human resources in advance of national economic growth.

113. A survey of manpower requirements in Malaysia was initiated by the planning authorities in late 1964. The Manpower Survey of 1965, which was published in 1966, was undertaken to provide the bases for the formulation of the First Malaysia Plan. The Survey technique was based on "user" requirements and was a sampling of existing companies and businesses under main headings such as Estates, Mining, Manufacturing and Construction. The Survey provided the groundwork for a very general chapter on employment and manpower for development for the First Plan. General figures for high level manpower, broken down into universities, higher secondary and secondary education, were published but with no details of the exact needs of high level manpower in the country. The Survey also suffered from the shortcoming that it was restricted to Peninsular Malaysia.

114. The absence of details and projections for high level manpower obviously led the Higher Education Planning Committee in 1967 to conduct their own mini-survey of the different types of personnel estimated to be needed in high level manpower, so as to plan the type of educational training to be provided at the tertiary level in the country in future. Conclusions, however, were again so general that the Committee turned to the formula approach, which related higher educational requirements as a portion of the total educated population of the country. At a time when there was only one university, such an approach may be said to be justified in indicating the total number of graduate manpower needed for the immediate future. With five universities, the problem of duplication is now of immediate importance.

115. Discussions with the various universities, the Institute of Technology MARA and the Ungku Omar Polyteknik indicated that the University authorities based intake into their institutions, and their courses, largely upon demand for places by students, and upon staff and capacity constraints, with reference from time to time to the assessments of professional bodies as to graduate needs in the immediate future. Whilst the universities and other institutions are doing their best in this regard, the Council is left with the impression that more effective and co-ordinated means of assessing higher level manpower needs are urgently required.

116. The Council concludes that it would be difficult to evaluate effectively the plans of expansion of the respective universities and higher educational institutions without more up-to-date data on higher manpower needs. Particularly data for the technical level is even more scarce as, for instance, in the construction industry. In that industry, for example, there is evidence that higher level manpower like architects and consultants are burdened with intermediary tasks, which could more economically be discharged by technical level personnel. In such a situation any forecasts of the number of architects required for the future would be distorted by the need for architects to carry out intermediary tasks. The Council decided to examine the possibility of a fresh survey of higher level manpower.

117. In October 1972, the Council became aware that the Economic Planning Unit was in the process of planning a sample survey of the manpower requirements of the whole country, including the building and construction industry, covering the professional, semi-professional, technical and skilled worker categories.

118. In January 1973, a meeting was arranged between members of the Council and officers of the EPU during which the relevance and importance of the proposed manpower survey in assisting the Council in its long-term planning was discussed. As a result of this meeting, the scope and strategy of the proposed survey was discussed in detail and the survey questionnaire examined against the requirements of the Council. In particular a special meeting was called with representatives of the building and construction industry, so that

the widest possible publicity could be given to the objectives and importance of the proposed survey and to ensure that the questionnaire to be utilised would be suitable for obtaining the data required.

19. The Council was informed that the Manpower Survey would be completed by August 1973. Tabulations would indicate the current stock of skilled manpower in the various industries against present and forecasted future needs for all categories. From such basic data, it would be possible to forecast the growth of the stock of skilled manpower, and the estimated needs for future manpower, and thus the balance of requirements.

20. The Council agreed to examine the plans and policies of existing universities and other institutions of higher learning against the results of the Survey, which at the time of writing this Report had not yet been received. Unless the results of the Survey are made available within a reasonable period, further studies of plans and policies for higher education in the country as a whole would be hampered.

CHAPTER 8

FINANCE

121. It is desirable to remind ourselves that education, in particular university education, is an expensive business, and this chapter will show how expensive it is.

122. In Table 8.1 is shown the total educational expenditure in Malaysia for the period 1962 - 1973, while in Table 8.2 we give the percentage of total education expenditure in relation to Gross National Product at market prices during the period 1962 - 1973.

Table 8.1

Total Education (Current and Development) (a)
Expenditure in Malaysia, 1962-73
\$ (million)

Year	Current	Development	Total
1962	219	43	262
1963	237	46	283
1964	283	51	334
1965	334	67	401
1966	360	63	423
1967	403	52	455
1968	404	53	457
1969	439	43	482
1970	477	44	521
1971	536	86	622
1972	798	112	910
1973 (b)	762	141	903

(a) 1962 - 63 Peninsular Malaysia only; 1964 onwards Malaysia

(b) Latest estimates: Economic Report 1973-74.

Source: Economic Report 1973-74, The Treasury Malaysia.

Table 8.2

Total Education Expenditure in Malaysia
in Relation to Gross National Product
1962 - 1973
(\$ Million)

Year (1)	Total Education Expenditure (2)	GNP at Market Prices (3)	(2) as % of (3) (4)
1962	262	6,916	3.8
1963	283	7,354	3.8
1964	334	7,822	4.3
1965	401	8,593	4.6
1966	423	9,177	4.9
1967	455	9,652	4.7
1968	457	10,068	4.5
1969	482	10,973	4.4
1970	521	11,617	4.5
1971	622	12,273	5.1
1972	910	13,194	6.9
1973	903	15,888	5.7

Sources: Economic Report 1973 - 1974.
The Treasury Malaysia.
Bank Negara Malaysia Quarterly Economic Bulletin
Vol. 6. No: 4. December, 1973.

23. It will be seen that during the period 1962 - 1973 while the G.N.P. increased from \$6,916 million in 1962 to \$15,888 in 1973 an increase of 230%, the amount spent on education during the same period increased from \$262 million to \$903 million i.e. an increase of 345.

Table 8.3
Government Grants to Universities (a)
1962 - 1973
(\$ Million)

Year (1)	Current (2)	Develop- ment (3)	Total (4)	Total Education Expenditure (5)	(4) as % of 5 (6)
1962	5.7	5.0	10.7	262	4.1
1963	7.1	3.8	10.9	283	3.9
1964	7.8	7.6	15.4	334	4.6
1965	11.0	5.1	16.1	401	4.0
1966	12.5	7.8	20.3	423	4.8
1967	15.5	6.7	22.2	455	4.9
1968	17.7	5.5	23.2	457	5.1
1969	20.0	2.7	22.7	482	4.7
1970	26.2	4.8	31.0	521	5.9
1971	34.7	3.7	38.4	622	6.2
1972	45.6	9.5	55.1	910 (b)	6.1
1973	70.4	29.4	99.8	903	11.5

(a) Excluding the capital and Recurrent costs of the University Hospital

(b) Increase due to the Implementation of the Aziz Report

Sources: (i) Financial Statements

(ii) The Expenditure Budget of the Federal Government

24. Table 8.4 shows the number of students in universities during the period 1959 - 1973.

Table 8.4
Full-Time Students in Universities
1959 - 1973

Year	Enrolment	Annual % Increase
1959	323	-
1960	654	+202
1961	1,010	+ 54
1962	1,341	+ 33
1963	1,736	+ 78
1964	2,225	+ 28
1965	2,835	+ 27
1966	3,603	+ 27
1967	4,560	+ 27
1968	5,566	+ 22
1969	6,672	+ 20
1970	8,217	+ 23
1971	9,841	+ 20
1972	10,966	+ 11
1973	15,444 *	+ 35

* Includes Diploma Course Students at the University of Agriculture and the National Institute of Technology. The breakdown is as follows:

Degree	-	11,188
Diploma	-	2,731
Postgraduate (Diploma)	-	690
Off-Campus	-	372
Advanced Degree	-	463

Table 8.5

University of Malaya, Cost (a) per Student
by Faculties

\$

Faculties	1969/70	1970/71	1971/72	1972/73	1973/74 (b)	1974/75 (b)
Arts	1,808	1,941	2,161	2,298	2,974	3,309
Agriculture	4,359	5,168	5,937	6,419	7,218	8,785
Economics and Administration	2,428	2,061	1,931	2,060	2,622	2,720
Education	3,484	2,905	2,608	2,588	3,282	3,918
Engineering	3,208	3,210	3,322	3,550	3,920	3,918
Medicine	9,587	9,158	9,666	8,735	10,504	10,443
Dentistry (excluding Dental Centre)	-	-	-	6,001	9,219	7,412
Science	4,030	3,963	4,066	4,124	4,706	4,923
Law	-	-	-	3,837	4,404	4,165
OVERALL	3,199	3,122	3,281	3,373	4,132	4,363

In calculating the cost per student the following expenditure are excluded:
 Academic staff, Training Scheme, Research Grant, Dental Centre, University
 Hospital, Tutorship Grant and Postgraduate course in Medicine.

1974 and 1974/75 are estimates.

Source: The Expenditure Budget of the Federal Government.

Table 8.6

National University of Malaysia
Cost per Student by Faculties

§

Faculties	1970/71	1971/72	1972/73	1973/74	1974/75
Arts	2,130	6,440	5,600	5,330	4,500
Science	7,705	17,090	19,030	19,970	16,100
Islamic Studies	2,149	6,040	4,200	4,260	4,000
Medicine	-	-	-	28,320	28,600
Economics	-	-	-	-	4,600
Malay Language	-	-	-	-	7,700
Average Cost	3,219	8,400	7,700	8,350	6,600

Source: The Expenditure Budget of the Federal Government.

Table 8.7

University of Science Malaysia
Cost per Student

§

1969/70 1970/71 1971/72 1972/73 1973/74 1974/75

Elementary Science Courses	-	-	@)			
School of Biological Sciences)))			
School of Chemical Sciences	9,127)	14,885)	7,585)			
School of Physics and Mathematics	)	)	)	9,425	9,009	8,589
School of Applied Sciences	-	-	-)			
School of Housing, Building and Planning	-	-	-)			
School of Pharmaceutical Sciences	-	-	6,123)			
Postgraduate Students	-	-	-)			
School of Comparative Social Science	-	5,941	5,556)			
School of Humanities (Postgraduate Students)	-	5,714	6,330)	4,547	5,547	5,918
Centre of Educational Studies	-	4,417	6,542			
Off-Campus Education	-	-	-	4,227	3,831	4,167
	9,127	10,408	7,495	6,171	6,639	6,785

@ Unit cost included in the Sciences

Source: The Expenditure Budget of the Federal Government

Table 8.8

Actual Expenditure (Recurrent)
Incurred by Universities

\$

Universities	1969	1970	1971	1972	1973*	1974*
University of Malaya @	21,343,819	24,276,568	28,036,146	30,275,625	38,280,753	40,748,322
National University	-	1,428,509	4,804,230	9,564,400	16,132,000	23,725,000
University of Science	520,239	2,700,316	4,473,839	9,626,738	14,188,604	18,972,033
University of Agriculture	-	-	-	718,690	10,516,929	13,520,677
National Institute of Technology	-	-	-	-	5,520,000	9,200,000
	21,864,058	28,405,393	37,314,215	50,185,453	84,638,286	106,156,032

* Estimates only

@ Excluding University Hospital

Source: The Expenditure Budget of the Federal Government.

125. To bring out the generosity of Government towards universities attention may be drawn to the amount spent on a fully grown university, namely the University of Malaya, in 1973, with which may be contrasted the budget allocated to a few ministries and to a few State Governments. In that year \$38,280,753 was approved by Parliament for expenditure on the University of Malaya, while some ministries were allocated the following amounts:-

(i) Attorney-General	\$2.5m
(ii) Civil Aviation	\$5.5m
(iii) Royal Customs & Excise	\$26.1m
(iv) Ministry of Labour and Manpower	\$11.9m

In the same year some State budgets were only as follows:-

Perlis	\$5.8 million
Melaka	\$15.7 million
Trengganu	\$24.2 million
Penang	\$24.8 million

Thus it will be seen that in 1973 government expenditure on the University of Malaya was higher than some State and Ministerial Budgets.

126. Students pay fees though a substantial number are in receipt of scholarships, studentships and other grants; but fees payable by students, though in many cases onerous on their parents and guardians constitute but a minor portion of the income of universities, and the bulk of university income comes from the public purse. This is amply shown by Table 8.8 which gives the actual expenditure (recurrent) incurred by each of the five universities. These figures should be compared with those in Table 8.3, column (2) which shows the amount of grant given by government to universities to cover recurrent expenditure. Thus in 1972, when the total expenditure actually incurred by the universities amounted to \$50.2 million the government contribution was \$45.6 million. This means that government contributed directly slightly more than 90 per cent of the actual cost of running the universities.

127. The Institute of Technology MARA is not a university, but nevertheless we consider the amount of money spent on it during the period 1969 - 1974 (given in Table 8.9) should be brought to public attention.

Table 8.9
Institute of Technology MARA

Annual Expenditure
1969 - 1974

Year	Recurrent	Capital	Total
	\$	\$	\$
1969	5,753,012	2,563,035	8,316,047
1970	6,089,875	5,828,094	11,917,969
1971	6,934,000	3,696,384	10,630,384
1972	10,742,257	10,734,007	21,476,264
1973*	10,500,000	11,000,000	21,500,000
1974*	20,753,500	5,900,000	26,653,500

* Figures for years 1973 and 1974 are approved estimated expenditure.

Source: The Expenditure Budgets of Federal Government.

8. Arising out of this our first comment is that a large amount of money has been spent, is being spent and will continue to be spent on university education, and necessarily so if Malaysia is to progress, for education is the key to economic, social and political progress, but if we are to progress at a right speed and in the right direction the money must be spent wisely, for though Malaysia is rich compared to a few countries, yet there is so much to be done for the country in so many fields and within such a short space of time, that every available cent must be husbanded and husbanded with great care.

9. Our second comment is that while it is probably within the means of the private sector to start a collection for the founding of a university the amount of money that is required to pay the recurrent cost of running a university that is worthy of the name is beyond the capacity of the private sector, and the absence of privately founded and maintained universities in Malaysia, in contrast to the position in some neighbouring countries, vividly illustrates the fact of life. Within the foreseeable future we may therefore expect the Government to continue to shoulder the burden of university education. However, we see no objection to the establishment of private universities provided they conform strictly to government regulations and policies.

130. Our third comment is that in countries where private universities exist, it is but natural to expect private benefactors and those whose responsibility it is to find money to pay for staff, for buildings and other facilities, to have a large say in the running and in the policy of the university benefiting from their efforts and dedication. In our view, where the taxpayer pays for a university it is not unreasonable to expect him through his representatives in Parliament and Cabinet to have some say not in the day-to-day running but certainly in the objectives and policy of that university, for public money should be spent for the benefit of the nation at large.

CHAPTER 9

CLOSING THE GAP BETWEEN REGIONS

131. The Second Malaysia Plan says that closing the gap between regions is one of the ways of attaining national integration and unity.

132. In this chapter we shall discuss the gap that exists in opportunities for university education between regions; we do not however propose to deal with the gap in opportunities for university education that exists between races, for this subject in so far as the University of Malaya is concerned has been exhaustively dealt with by the Government Committee headed by Tan Sri Dr. Haji Abdul Majid bin Ismail, and it is better for another comprehensive report on this subject to be left to our successor, considering the limited time and resources available to us.

133. For historical and geographical reasons different parts of Malaysia have developed at different rates, and consequently the opportunities for education have not been evenly and fairly distributed throughout the country. This is especially true of the opportunities for university education. At present we have five universities sited as follows:

- a) the University of Malaya sited in Kuala Lumpur;
- b) the University of Science Malaysia sited in Penang;
- c) the National University sited in Kuala Lumpur;
- d) the National Institute of Technology sited in Kuala Lumpur; and
- e) the University of Agriculture sited in Serdang some 20 miles south of Kuala Lumpur.

134. Thus it will be seen that of the five universities four were crowded or near the federal capital, and there is only one outside.

135. The University of Malaya was the first to be opened in Malaysia (1957), and in those days the capital was the natural site for it. The second university to be founded (in 1969) was the University of Science Malaysia (originally called the University of Penang), and Penang was the agreed site for it because the agitation for its establishment was led by the inhabitants of the island, and there was general agreement that it should be in Penang, as the erosion of Penang's free port status and the decline of its trade it

was thought that Penang, already the site of the oldest school and of many other excellent schools in the country, should be developed as a centre for education as well as for tourism, in view of the beauty of the island with its attractive beaches and nearby cool mountain). The National Institute of Technology founded its natural base in Kuala Lumpur because it had been there (originally as a technical school and after the second world war as the diploma-awarding technical College and upgraded to university status in 1972) since the year 1906. The College of Agriculture also found its natural base in Serdang where it had existed (first as an Agricultural School and later as the diploma-awarding College of Agriculture) since the year 1931. The decision to open the National University was made in a hurry (in 1970) and as there was no time for the university to construct its own buildings it was accommodated at the Malayan Teachers Training College in the Capital.

However recently there has been a growing awareness that the Malaysian Capital, at present a wooded and attractive city because it is one of the smallest capitals in Asia, should not have a monopoly of universities in Malaysia, that when the capital has grown (as is inevitable) its over-crowding and congestion will not be conducive to research and study which require peace and quiet and serene atmosphere; and that universities, which are important growth points for economic prosperity, should be dispersed all over the country. This awareness is shown by the decision to move the National University away from the capital to Bangi, and the National Institute of Technology to Johore Bahru which we support.

We think that in Malaysia there is a need for regional universities, meaning that in Malaysia universities should not all crowd into the federal Capital, that on the contrary only one or two at the most may be in the capital, and that the rest should be elsewhere, so that university education may (as it should) be brought to the people. This point is worth stating in the Malaysian context, because in the minds of many Malaysians a university education is associated with cities and a city life-style. Malaysians do not realise that a university sited in a rural area will attract scholars and students from all

over the country and indeed from all over the world, and has a charm all its own, once it has an established reputation. Examples are Oxford & Cambridge.

138. As mentioned above the universities are important growth points for economic prosperity. We are aware of the impact on the local economy of a military base: the money spent by soldiers and their families generates business in the locality, and the removal of the base elsewhere spells ruin to many small businesses. The existence of a university in the locality has the same effect: it provides employment for a large number of people and generates income. Take for instance the University of Malaya. In 1972 it paid its staff, and for buildings etc, \$34.5m. The recipients of this money spent most of it in or near Kuala Lumpur. Add to this the money disbursed by the city government (\$60m. for 1973), not to mention the money spent by the Selangor State Government and by the Federal Government. The effect on the local economy may be imagined.

139. The dramatic effect on regional economies of having a university of the size of the University of Malaya may be gathered from the information that the University's 1973 budget is greater than the budgets of the following four states, for the same year -

Table 9.1

Some selected Examples of the Expenditure Budget of
State Governments

Perlis	-	5.8 million
Melaka	-	15.7 million
Trengganu	-	24.2 million
Penang	-	24.8 million

140. The State of Selangor where the federal capital was until 1st February, 1974, was the richest State in West Malaysia, and it is clearly unfair to other states that most universities should be sited in or near that state.

141. But we are of the opinion that, when Malaysia has more regional universities, it is most important that none of them should be allowed to develop into parochial universities taking students only from its vicinity. On the contrary, each of them should take in students from all over the country and its staff should be convinced that their mission is to instil in the minds of their

students a sense of oneness, of belonging to the Malaysian nation, and not to just one component part of it, though of course faculty and students should be proud of their own university as against other universities.

142. Under Malaysia's special conditions, where the central mountain range effectively divides the peninsula into two distinct parts, and a 1,000 mile wide sea divides Peninsula Malaysia from Sabah and Sarawak, so that the pace of educational, and therefore social and economic development has been uneven and there are many pockets of under development giving rise to dissatisfaction and even resentment, it is most important that each regional university in the country should not be allowed to develop into parochial universities accustoming its graduates not to look beyond the state border, and that every university in this country, whether regional or metropolitan, should be nurseries for producing Malaysians with a Malaysian outlook, nurseries for fostering the growth of national unity and a Malaysian nation.

143. Subject to our recommendations in Chapter 10 and 11 we are not in favour of establishing new universities. At present only one of our five universities is fully grown, namely the University of Malaya with a student population of 8,519 in 1973 and which has decided to reduce its undergraduate student population to 8,000 by 1975, the end of the Second Malaysia Plan period (1971 - 1975).

144. Universities are of many sizes, ranging from one with a student population of about 2,000 to, in the case of the University of Calcutta, about 100,000. Some say that the ideal size of a university should be one of 5,000. We are of the opinion that while economics of size may be achieved in a large university, a large university creates its own problems - for instance it will be difficult to administer and tends to be rather impersonal, as large numbers are unwieldy and reduce the sense of belonging and of intimacy. We would not therefore like to see any university here to have more than a student population of 8,000 or thereabout.

145. Each of the other four universities here has the following student populations in 1973:-

University of Science, Malaysia	1,543
National University	1,481
University of Agriculture	1,467
National Institute of Technology	1,599

146. During our visits and discussions the Governments of the States of Sabah and Sarawak suggested that the time was ripe for the establishment of a new university in each State. This subject is of sufficient importance to justify treatment in a separate chapter which follows immediately.

CHAPTER 10

UNIVERSITY EDUCATION IN SABAH & SARAWAK

147. Our visits to Kuching on November 10 and Kota Kinabalu on December 19, 1973 disclosed very strong desires on the part of both States for the establishment there of a university, or at least of University Colleges. Each Government undertook to give every possible help to establish a university or university college on its territory, even though it is a federal responsibility to finance universities and university colleges, and indeed the Sarawak Government went so far as to offer 250,000 acres of land in Bintulu to help launch a branch of the university of Agriculture and 5,000 to 10,000 acres to support the Institute of Technology MARA branch already established.

148. A copy of the memorandum submitted to the Council by each of the two Governments is given as Annexure 4 and Annexure 5.

149. The discussions which we had with the State Governments indicated that the desire was based largely upon the following:-

- (a) that Sabah and Sarawak tended to be isolated from the main stream of the higher learning in Peninsula Malaysia;
- (b) that each East Malaysian State has special localised problems linked with a lesser developed educational system; and
- (c) that the higher educational disciplines for the development of the resources of the two States had not been adequately emphasised in Peninsular Malaysian Universities.

150. Each State Government considered that an institution of higher learning should be located in each State. The alternative of locating a single institution of higher learning in one of the two States appeared to be unacceptable. Both States seemed to be in agreement that institutes of higher learning, not necessarily a university, be located in both States with disciplines suitable to the special needs of each of them. It was strongly argued that the establishment of a university, or other institution of higher learning, would automatically result not only in the students obtaining the types of higher education they wanted, but also in the institution becoming a catalyst for raising educational

standards in Sabah and Sarawak. It was also emphasised that a university, or other institution of higher learning, would contribute to national unity by the enhanced possibilities for the mixing of Peninsular Malaysian and Sabah and Sarawak undergraduates in a residential university environment.

51. Sarawak stressed the need for higher learning facilities for the agricultural and forestry sectors. The Bintulu Region of Sarawak alone contained enormous natural resources in terms of timber, oil and natural gas and large tracts of suitable arable land for agriculture and live stock breeding. The critical areas of higher educational needs were, therefore, agriculture, animal husbandry, port facilities, oil extraction and education.

52. Sabah likewise stressed its higher educational needs in terms of forestry and wood technology, mineral technology, petroleum engineering, marine studies, fisheries development, education and the humanities.

53. Both States gave data indicating the serious and critical shortage of education officers, graduates, teachers and professional personnel required in the education and development sectors and stressed the need for immediate action to provide the required graduate manpower.

54. A close examination of the statistics of primary and secondary educational programmes of the two States, however, indicated that both States would be unlikely to provide sufficiently qualified undergraduates to sustain a reasonably-sized university college, straight away. The total number of private students going abroad annually was given at 200 per year, there being at present 1,000 Sabahan students studying in countries outside Malaysia. A breakdown of the courses pursued by these students was not available either in Sabah or Sarawak, and it is not improbable that most of those abroad are pursuing non-degree courses.

55. The Council noted that negotiations had taken place between the respective State authorities and certain universities in Peninsular Malaysia for the establishment of campuses in Sabah and Sarawak. The University of Agriculture intends to open a branch in Sarawak offering initially diploma-courses, while the Sabah Government has invited the National University to open a branch

in Sabah. Having regard to the fact that the establishment of branches of universities in Peninsular Malaysia is imminent in Sabah and Sarawak, and in the case of the Institute of Technology MARA, for example, was already a fait accompli, the Council is of the opinion that the problem now is not so much the justification for the establishment of branches but the real danger of haphazard development of tertiary education in Sabah and Sarawak. The Council is unanimously of the opinion that the mistake of the past should not be repeated in Sabah and Sarawak, and the opportunity be firmly grasped to ensure that tertiary education in Sabah and Sarawak would be developed along sound, economical and non-wasteful lines. Experience confirms that the establishment of branches by universities, acting solely in their own judgment, and the subsequent development of those branches, in different and varied locations, will inevitably lead to needless duplication of disciplines and courses, and to wastage of manpower and financial resources. It is to avoid this pitfall that we made the proposals which follow immediately.

10. The Council recommends:

- (i) that immediate action be taken to set up a branch campus in each State of existing universities;
- (ii) that those branch campuses eventually develop into one university and serve the needs of both the States and Peninsular Malaysia;
- (iii) that ultimately the one university to split into two separate universities - one for each State;
- (iv) that a post of a high-powered co-ordinator be established to co-ordinate courses, curricula etc., so as to avoid wasteful duplication; and
- (v) that the institutions of higher learning to be established in Sabah and Sarawak to be national in character taking in students from all over Malaysia and that students from Sabah and Sarawak should continue to be admitted to universities in Peninsular Malaysia.

CHAPTER 11

UNIVERSITY STATUS FOR INSTITUTE OF
TECHNOLOGY MARA

157. It has been proposed to us, especially by Datuk Arshad bin Ayub, the Director of the Institute of Technology, MARA (ITM) that ITM be granted university status so that as well as conferring diplomas it may also confer degrees.

158. Before discussing this proposal it will be useful to give a brief description of ITM.

159. Like other educational institutions here, ITM then known as the Dewan Latihan RIDA started modestly, in 1956, with 25 students and the object was to fit bumiputras not for Government service, but for employment in the private sector. It has no premises, and so associated itself with Goon's Institute, a private commercial school. It taught mainly shorthand and typing, and other commercial subjects. In 1965 RIDA became MARA and the Dewan Latihan is today ITM.

160. In July 1973 it has 4,424 students in eleven schools including 437 pre-university and preparatory course students. The breakdown is as follows:-

School of Accountancy	824
" " Administration and Law	623
" " Applied Science	517
" " Architecture, Planning and Survey	344
" " Art and Design	304
" " Business Management	659
" " Computer Science, Actuaries and Statistics	169
" " Engineering	295
" " Hotel and Catering Management	115
" " Library Science	74
" " Mass Communications	73
Pre-university	225
Preparatory course	<u>212</u>
Total	<u><u>4,424</u></u>

161. It will be observed that the courses are all down-to-earth courses, very useful to those wishing to work in commerce and industry and agriculture, and that ITM does not offer courses in the humanities. In accordance with its policy of fitting its bumiputra students for employment in companies and firms rather than in Government, it conducts 58 professional and sub-professional courses.

162. The minimum entry qualification is the M.C.E., but for candidates intending to sit for the examinations of the Institute of Cost and Management Accountants U.K., the Association of Certified Accountants U.K., Institute of Chartered Secretaries and Administrators U.K., for the external LL.B. degree examination of the University of London, for the Diploma in Librarianship examination and for candidates intending to study journalism, the minimum entry qualification is the H.S.C. Students from Malay-medium schools with S.P.M. are accepted for certain courses.

163. Projected student enrolment is as follows :

1974/5	6,000
1975/6	7,000
1976/7	8,000
1977/8	8,000

164. Salaries paid to ITM graduates in the private sector point to the success of the courses offered.

165. ITM follows the semester system (two semesters a year) rather than the term system. Performance of students is determined by the continuous assessment system which takes into account not only the student's performance at the end of the year but also his performance throughout the year and if he is a senior his performance during every semester since his enrolment. It is said that this system keeps students on their toes and provides a better indication of their progress.

166. If he is successful the student is given a diploma. Students in the School of Administration and Law however sit for the London University external LL.B. degree. Some students such as those in the School of Accountancy take the examinations of outside professional bodies.

167. Thus ITM itself confers no degrees.

168. However a number of ITM diploma-holders go to university abroad.

Some universities in the U.S.A., U.K. and Australia offer attractive exemptions to ITM diploma-holders. For instance diploma-holders in Business Studies are admitted into a number of American universities at third year level, which means that at the end of three years they return with a Master's degree. U.K. and Australian universities offer professional courses and various professional bodies offer exemptions at intermediate level.

169. Until recently it took three years to obtain a diploma, but that has been changed so that today it takes four years to obtain a diploma.

170. Details of output of graduates both at Degree and Diploma level is shown in Table 11.1.

171. ITM's original main campus was in Petaling Jaya, but its main campus is now in Shah Alam, though it still retains its premises in Petaling Jaya. In 1973 it opened a branch in Kota Kinabalu and another in Kuching and it plans to open a third in Perlis. The Kota Kinabalu branch opened with 200 and the Kuching one with about 100 students. Students stay at each branch only a year after which they transfer to Shah Alam to complete their courses. Each of the branches like the main campus offers down-to-earth courses. For instances the Kuching branch offers courses in applied science, business studies, accountancy and public administration. The intention is eventually to turn the Kuching campus into a specialist centre for plantation management, animal health and production and land surveying. At Kota Kinabalu like in Kuala Lumpur in the old days ITM even teaches stenography for students from both Sabah and Sarawak. In their second and subsequent years students in these branches will move to the main campus in Peninsular Malaysia.

172. What are the arguments for granting university status to ITM?

They are best set out in the latest memorandum submitted to us by Datuk Arshad bin Ayub himself, reproduced as Annexure 6. These arguments may be summarised as follows:

- (a) ITM is well placed to play an important part in implementing the Second Malaysia Plan's objective of enabling bumiputras to own and run 30% of commerce and industry within 20 years. It will be better placed to do so if it can award degrees;
- (b) If ITM is allowed to give degrees, it will not abandon its diploma-courses which it will continue to give as hitherto, and the intention is that only about a third of ITM's courses and a third of its diploma-holders will be involved in degree programmes;
- (c) ITM has sufficient status, strength and experience to be a degree-awarding university;
- (d) ITM has well qualified staff members to conduct degree-courses - three of them have Ph.Ds. and 30% have masters and 20% have recognised professional qualifications. This means that 60% of ITM's staff members have postgraduate qualifications;
- (e) ITM has an extensive staff training programme;
- (f) Many of ITM's professional courses merit the granting of university status;
- (g) ITM's diploma-level professionally-oriented programmes provide excellent preparation and background for degree-level programmes that are professionally-oriented;
- (h) If ITM can award degrees, promising ITM diploma-holders can work for a degree at ITM itself, instead of having to go elsewhere;
- (i) Courses offered by universities tend to be theoretical, but degree-courses offered by ITM will ensure continuity of professional and practical orientation;
- (j) Money will be saved if ITM can offer degree-courses;
- (k) Degree-courses at ITM will stimulate its diploma-courses;
- (l) Degree-courses will not significantly increase ITM's operating costs and money spent at ITM should not be spent on merely producing diploma-holders;
- (m) University status will attract better qualified staff to join and remain with ITM;

- (n) a degree programme will enable ITM to guide students more effectively because of a longer period of study;
- (o) Preparing students for examinations of various professional organisations is unsatisfactory and can only be temporary;
- (p) ITM's degree-courses will not duplicate degree-courses of other universities, and ITM's degree-courses will have a strong practical bias. ITM will not neglect its responsibility for producing bumiputra sub-professionals.

173. The arguments against granting university status to ITM are as follows:

- (a) Malaysia is woefully short of sub-professionals, who are just as important to national development as professionals;
- (b) Malaysia is especially short of bumiputra sub-professionals whose existence is vital if the New Economic Policy is to achieve its objective of rectifying the imbalance between races and of restructuring society;
- (c) allowing ITM to confer degrees will result in destroying the original concept behind the establishment of ITM namely to fit bumiputras for participation in the private sector;
- (d) if say 30% of students in ITM are allowed to take degree-courses as against 70% who will take diploma-courses, probably as much as 70% of the teachers' time and effort will be spent on degree students and only 30% on 70% of the students.

174. After anxious consideration we have decided to recommend that ITM be given university status. We are impressed by the quality and enthusiasm of the staff and students of ITM and by their achievements and we are of the opinion that ITM is in no way inferior to the College of Agriculture and the Technical College both of which have been granted university status, and we do not think that it would be fair to hold back ITM any longer. But this is subject to several conditions. First, ITM should not be allowed to have more than 30% of its students on degree courses and should strictly adhere to its original policy and practice of producing sub-professionals. To ensure this we recommend that a representative

of the Treasury should be appointed by office to sit on the ITM's Governing Council. We are also of the opinion that as the shortage of sub-professionals exists not only among bumiputras but also among non-bumiputras Government should seriously consider opening more institutions of the present ITM type to produce sub-professionals. Secondly, we are of the opinion that in order to avoid duplication ITM should give up its plan to introduce degree courses in subjects available in existing universities, unless in the opinion of the Government there are compelling reasons for duplication; examples are engineering, accountancy and librarianship. Thirdly, ITM should not be allowed to offer courses in arts and the humanities: it should on the contrary continue to be profession-oriented as at present. It is Government policy (which we endorse) to provide that 40% of the graduates produced by our universities should be graduates in arts and 60% in the sciences, instead of the other way round, and we are of the opinion that nothing should be done to hinder or delay the achievement of this objective. Fourthly, we are of the opinion that when ITM enjoys university status it should open its doors to non-bumiputra students. The presence of non-bumiputra students on ITM campus will sharpen competition between ITM students and this will be good not only for all ITM students, but it will also enhance the prestige of ITM as a university in the academic world. However in view of the racial imbalance existing today the number of non-bumiputras will at first be small, but the position should be reviewed from time to time.

Table 11.1

Output of Graduates: Past and Projected ITM

Course	Number Graduated 1964-1972 (Inclusive)	Output of Graduates			
		Actual	Estimated		
		1973	1974	1975	1976
Diploma Course					
Diploma of Accountancy					
Association of Certified Accountants	13	13	19	13	15
Institute of Cost and Management Accountants	42	5 (est)	7	10	12
Diploma in Accountancy	79	38	50	80	80
Diploma of Administration and Law					
Bachelor of Laws (L.L.B. London)	4	3 (est)	10	20	20
Chartered Institute of Secretaries	131	4 (est)	10	20	20
Diploma in Public Administration	72	32	46	57	57
Diploma in Stenography and Public Secretaryship	484	120	81	81	81
Diploma of Art and Design					
Diploma in Textile Design	17	9	11	12	12
Diploma in Fine Art	12	10	8	13	15
Diploma in Fashion Design	-	-	4	6	6
Diploma in Industrial Design	-	7	5	8	6
Diploma in Pottery (Ceramics)	-	2	4	6	8
Diploma in Graphic Design	17	11	11	11	15
Diploma in Jewellery and Silversmithing	-	7	8	8	8
Art Teachers' Diploma	-	20	25	25	25
Diploma of Applied Science					
Diploma in Planting Industry Management	53	25	20	25	27
Diploma in Forestry	20	15	18	20	22
Diploma in Industrial Chemistry	10	12	8	15	17
Diploma in Animal Health and Production	10	17	18	35	30
Diploma in Rubber and Plastics Technology	-	9	8	10	20
Diploma in Food Technology	-	-	-	20	20
Diploma in Wood Technology	-	-	-	18	18
Diploma of Architecture, Planning and Survey					
Architecture	24	15	11	21	25
Building Economics	27	9	7	19	19
Town and Country Planning	16	6	8	17	20
Evaluation	18	6	9	15	22
Technician (T.C.P.)	-	17 (est)	17	15	20

Table 11.1 (Cont'd.)

Course	Number Graduated 1964-1972 (Inclusive)	Output of Graduates			
		Actual	Estimated		
		1973	1974	1975	1976
Faculty of Business Management					
Advanced Diploma Business Management	0	-	-	-	16
Diploma in Business Studies	206	48	65	45	40
Diploma in Banking Studies	66	22	20	65	70
Institute of Marketing	27	19 (est)	15	25	30
Chartered Institute of Transport	0	4 (est)	9	15	17
Chartered Insurance Institute	0	6 (est)	7	12	15
Diploma in Office Management	13	-	-	-	-
British Institute of Management	15	-	-	-	-
Institute of Purchasing & Supply	7	-	-	-	-
Credit Management	-	11 (est)	25	25	30
Faculty of Computer Science, Series & Statistics					
Institute of Statisticians	1	4 (est)	7	11	15
Computer Science	-	3	4	10	13
Faculty of Engineering					
Medical Engineering	-	-	6	4	6
Electrical Engineering (Power)	-	-	-	3	5
Electrical Engineering (Electronics)	-	-	-	3	5
Civil Engineering	-	-	-	4	6
Technical Assistants (Electronics)	-	-	-	12	14
Technical Assistants (Land Surveying)	-	-	-	10	12
Faculty of Hotel & Catering Management					
Diploma in Hotel & Catering Management	52	19	16	27	27
Certificate in Hotel & Restaurant Services	136	430 (est)	430	430	430
Faculty of Library Science					
Diploma in Librarianship	-	-	8	18	25
Associate of Library Association	-	-	10	15	20
Faculty of Communication					
Advertising	-	-	-	6	5
Journalism	-	-	-	8	15
Public Relations	-	-	-	6	10
Total	1,572	978	1,051	1,351	1,064

Certificate Courses	Number that obtained full certificates up to 1971 and estimates for 1972 - 1976	Total number that obtained minimum entry to University up to 1971 and estimates for 1973 - 1976
University Arts (H.S.C.Arts)		
to 1971	105	300
1972	-	37
1973	-	40
1974	-	60
1975	-	50
1976	<u>-</u>	<u>60</u>
	105	547
University Science (H.S.C.Science)		
to 1971	78	128
1972	14	31
1973	15	35
1974	12	42
1975	15	45
1976	<u>17</u>	<u>49</u>
	151	330

CHAPTER 12

LANGUAGE POLICY

175. By progressive implementation of Bahasa Malaysia at the school level, it is envisaged that by 1983 all Malaysian students entering universities will have their entire primary and secondary education in that medium. As universities form the apex of the education system they will have therefore to orientate their language policy so as to be in line with the language policy of the national education system. This means that by 1983 all universities must ensure that they will be fully geared to conduct all their courses at first year level in Bahasa Malaysia. However as the English language will continue to play a significant role in the field of higher education, universities must ensure that while emphasising the use of the national language, it will be possible for them to maintain the same standard of proficiency in English language among their students.

176. A language functions in four different ways in a university, namely:-

- (a) as a tool of administration i.e. used in correspondence and in the conduct of meetings and ceremonies;
- (b) as a means of transmitting knowledge i.e. as used in lectures, tutorials and seminars;
- (c) as a means of obtaining qualifications including degrees, diplomas, certificates to be obtained via examinations and finally;
- (d) as a research tool i.e. used for conducting research such as in field works and the recording of results in the form of essays and dissertations.

With regard to the first function, it is observed that in line with government policy, universities are already to a large extent using the national language in all their ceremonies and functions such as convocations and the reading of pledges by newly enrolled students. All official correspondence on administrative matter at central level both internal and external (except for those letters to be sent abroad or due to some technical difficulties) are already being carried out in Bahasa Malaysia. There have been lapses in the observance of this policy

and as language used in this field is often the most visible, and also by which the public judge university performance in implementing the use of the national language, it is therefore recommended that such deviation should be kept to the minimum.

177. The three remaining functions are actually confined to the academic field, and they are the ones which present universities with the greatest challenge.

178. So far there is only one university in the country i.e. the National University of Malaysia which is using Bahasa Malaysia at its main medium of instruction. However, students are required to take up English as a subject, or alternatively English with another language. This is to ensure that students on graduation will have at least a working knowledge of one international language.

179. Although according to plan universities are not expected to start using Bahasa Malaysia as a medium of instruction until 1983, there are already two universities, namely, the National Institute of Technology, and to a lesser extent the University of Agriculture, Malaysia which are already well ahead in their implementation programme of switching to Bahasa Malaysia.

180. At present all courses at degree level in the National Institute of Technology are conducted in Bahasa Malaysia. English as a subject is made compulsory for the first two years; while in the remaining three of the five year degree course one or two subjects will be taught in English. Courses at the diploma level are at a transitional stage. While the third or final year of the diploma course is still conducted in English, the first and second years are already conducted in Bahasa Malaysia. It is anticipated that by the coming 1974/75 session, the entire diploma course will be conducted in Bahasa Malaysia. Just like degree students, diploma students too are required to take English as a compulsory subject in the first two years, while in the third and final year two or three subjects will be conducted in English. In both instances, English is made compulsory so as to ensure that students would truly become bilingual.

181. The University of Agriculture Malaysia which also adopts a two tier system has set the year 1980 as a target when all courses at diploma level will be conducted in Bahasa Malaysia. Two years later, that is in 1982 all courses at degree level will be taught in Bahasa Malaysia.
182. The other two universities, namely the University of Malaya and The University of Science will be switching to Bahasa Malaysia at a much slower pace. However, both are optimistic that they will be able to convert to Bahasa Malaysia according to plan.
183. The main difficulties which are encountered by universities in converting to Bahasa Malaysia is that a large percentage of their teaching staff consists of expatriates. The local staff too are new and very few of them are proficient in Bahasa Malaysia. To overcome this situation, intensive courses in Bahasa Malaysia are being conducted for the academic staff. In spite of the intensive course, it may not be possible for the academic staff to lecture or give tutorials in Bahasa Malaysia. For instance, University of Science besides making Bahasa Malaysia an integral part of the course further requires that the language be used in examination. From 1969 to 1971, all examination papers, except language papers, required that at least one question be answered in Bahasa Malaysia. The number of questions to be answered in Bahasa Malaysia is being progressively increased so that between 1975 to 1979 this will be 65% and by 1980 it will reach 80%. After 1983 new students at the university will be from completely Bahasa Malaysia medium schools. Then the university will require that students answer at least one question in the sessional examinations in English while in subsequent years, they will be required to answer up to two.
184. The University of Malaya has adopted almost similar measures i.e. providing staff with adequate facilities to learn Bahasa Malaysia, and making it compulsory for all undergraduates with the exception of those who have been given special exemption such as undergraduates who have passed H.S.C. Malay. Those exempted are required to follow another language course.

185. In the next few years universities will be admitting students with varying degrees of proficiency in Bahasa Malaysia and English language. In view of the continued importance of the English language, it is essential that during the period of transition correct emphasis be given to learning of the English language. It is particularly important as students will continue to use books and journals in that language. There will be lectures too, which will continue to be delivered in English for it will not be possible to compel foreign academic staff to lecture in Bahasa Malaysia when they are too old to learn it. They should however be welcomed for the knowledge they bring and students must therefore be able to understand their lectures. The same principle should also apply to local staff, except that they be given a stipulated period during which they must learn Bahasa Malaysia and be able after that to give their lectures in that medium, unless they are also too old.

CHAPTER 13

GENERAL

186. Vast amounts of money have been spent and are being spent on universities as can be seen from table 13.1.

Table 13.1

Government Grants to Universities

\$ Million

Year	Total allocation
1969	22.7
1970	31.0
1971	38.4
1972	55.1
1973	99.8

187. We support the expenditure of so much money on universities because they are an essential training ground for our future leaders in politics, government, commerce and industry, agriculture and so on. But needless to say, such money should be spent wisely.

188. It should be spent first on producing graduates in sufficient number required by the country. Our universities should not produce more graduates than are required. It is unwise to squander the taxpayers' money on producing graduates who are unwilling to do non-graduate jobs and whom nobody wants to hire as graduates. Politically it is attractive in the short term to expand university facilities so that every Sixth Former with the minimum qualifications can enter university. But in the long term it is very dangerous to allow the country to be flooded by unemployed or unemployable graduates: their expectations have been raised, they are articulate and will vent their anger on Government and society.

189. Secondly, public money should be spent on producing not just any graduates. When Malaysia has sufficiently developed, the country can then afford the luxury of giving some citizens education simply for the sake of improvement of their mind. But at present Malaysia has not reached that stage. While reasonably well off compared to some countries, there is so much to be done, and we have so little time

it, and it is therefore imperative that our scarce resources, natural and man-made, be carefully husbanded. We should therefore see to it that our expensive universities should concentrate on producing mainly graduates with expertise that is relevant to the country's pressing needs, and eschew starting or expanding courses to produce graduates who are not in demand.

The long-term objective of Government is to so change the present heavy emphasis on arts subjects so that in due course science subjects will constitute a significant proportion of university courses compared to arts subjects. We support this objective.

But at the time care should be taken to see that universities do not become simply technical institutes turning out graduates with mechanical minds. University graduates should be persons who are not only at home in their particular disciplines; on the contrary, they should be well read, they should have a broad mind, capable of mastering new subjects and new techniques, of producing and testing new ideas, of adapting old ideas to changed circumstances, in short persons who are creative. Malaysia can progress only if we have at the top innovative leaders who are not prisoners of the past and present.

To produce the right kind of graduates in sufficient number is easier said than done. Because of staff recruitment difficulties it is easier to expand courses in arts than in the sciences. Secondly science courses require expensive laboratories and equipment. Thirdly, as explained in chapter VII in order to produce any kind of graduates in sufficient number, it is necessary to know our manpower needs of the future.

In this connection it is necessary for universities to keep in touch not only with each other and with Government and with the private sector, but also with educational institutions producing sub-professionals, so that in the build-up of any particular profession there is integrated planning. For instance, engineers require support staff else the engineer will spend much of his expensive time doing work which should be done by less qualified and less expensive staff, and it is well known that every engineer requires four to six technical assistants. It will be unwise for the country to produce say 100 engineers annually but say only 200 technical assistants. If full advantage is to be taken of the professionals

Produced by our universities our planners should see to it that at the same time enough sub-professional staff is produced; without integrated planning there will be lop-sided development.

194. The Council noted also the lack of emphasis on the relationship between intermediate and higher education. The close connection between these two levels of education and manpower, and their direct interdependence for planning purposes, was emphasised time and again during Council's deliberations and has left the strong impression that a closer link must be forged between higher education planning and the planning of intermediate education. Furthermore, the validity of any final proposals for higher education planning would be weakened if a comprehensive study of intermediate education is not undertaken at the same time. The Council recommends that immediate consideration be given to an assessment of the present availability of, the future requirements for, and the longer term planning needed for intermediary manpower, with particular emphasis upon establishing the relation of intermediary education to higher education in the future structure of the human resources of the country.

Future of the Council

195. Finally a word about the future of the Council. At present the Chairman and all our members are part-time, and all our staff are part-time also. The Chairman and all members have other full-time duties and responsibilities, and it is impossible for them to be appointed full-time to the Council. As members will have to be chosen from eminent and therefore busy members of the community, who can draw on their experience for advice to the Minister, it is inevitable that most if not all of them should be part-time; but if that is so, then ideally the chairman should be full-time, to give leadership to the other members, and to devise the supervise the research and data collecting that is expected by members if they are to give informed advice. In other countries a body such as the Council is usually headed by a retired Vice-Chancellor or similar person who commands the confidence of Government, of the public and of universities. Perhaps at present Malaysia does not have a person of similar calibre who can be released to serve as full-time chairman. In that case, we think that at least the Council should have a full-time deputy chairman, a person

with sufficient prestige to command the confidence of Government and the public and universities, a person on whom the part-time chairman and part-time members can depend for collecting the necessary information to be served in an organised manner and for guiding and helping and supervising the work of the staff. We are however fully convinced that whether the chairman is full-time or not and whether there is a full-time deputy chairman or not, the Council should be served by a full-time staff. At present our small staff accommodated in the Ministry of Education serves both the Ministry and the Council. We do not think that this is satisfactory to the Ministry or the Council or to our staff.

196. As regards our power, at present we do not have any teeth and we are powerless to influence or stop plans and developments announced by universities in the newspapers. As at present constituted and organised it is inevitable that the Council is only advisory and can move but slowly, but if universities are to develop in a co-ordinated way and not haphazardly, so that no university will be allowed to go its own way with little or no regard to what goes on in other universities and to national needs and priorities, it will be necessary for the Council to be constituted and organised in a different way.

197. We feel that in future while the Council should remain advisory, every proposal to establish new universities or expand existing university facilities should first be referred by the Minister to us for examination and that no decision should be taken on the proposal until the Council has had an opportunity to express its views; in this way the Council will be able to co-ordinate university development, without in any way prejudicing the right of the Minister and Government to have the last say.

Appreciation

198. Finally we would like to place on record our appreciation of the services of our secretary Tuan Syed Abdullah and his assistant Mr. K. Ragupathy who have cheerfully and efficiently done whatever is necessary to lighten our work; and we thank also the Ministry of Education and all bodies and persons with whom we have corresponded or talked on matters relevant to our terms of reference, for their co-operation.

Tan Sri Mohamed Suffian bin Hashim
(Chairman)

Abang Yusuf Puteh

Joan Lim Pek Bee

Datuk Abdul Hamid bin Ahmad

Kamarul Ariffin bin Mohamed Yassin

Haji Abdul Hamid Egoh

Kington Loo

Datuk Abdullah bin Ayub

H.F.G. Leembruggen

Datuk Abdullah bin Mohamed

Dr. Mahathir bin Mohamed

Datuk Athi Nahappan

Datin (Dr.) Salma binti Ismail

Jaffar bin Hussein

Dr. Tan Chee Khoon

Dr. Tan Tiong Hong

Kuala Lumpur,

31.3.1974.

MEMBERS OF THE HIGHER EDUCATION ADVISORY COUNCIL

Chairman

The Hon'ble Mr. Justice Mohamed Suffian bin Hashim, P.S.M., D.I.M.P., S.M.B.(Brunei), J.M.N., P.J.K., LL.D.,(S'pore), D.Litt.,(Malaya), M.A.(Cantab.), LL.B.(Cantab.), Bar-at-Law.

Members

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2. Datuk Abdul Hamid bin Ahmad, D.P.M.J., K.M.N., P.E., M.I.E.M.
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9. Y.B. Senator Kamarul Ariffin bin Mohamed Yassin, Bar-at-Law.
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11. Encik H.F.G. Leembruggen, J.M.N., B.A.(Hons.).
12. Y.B. Senator Dr. Mahathir bin Mohamed, M.B.B.S.
13. Datin (Dr.) Salma binti Ismail, B.C.K., L.M.S.(S'pore), L.M.(Dublin).
14. Y.B. Dr. Tan Chee Khoo, L.M.S.(S'pore).
15. Dr. Tan Tiong Hong, M.B.B.S. (Sydney).

Secretary

Tuan Syed Abdullah bin Syed Yahya, B.A.(Hons.) Malaya, Dip. In Develop. Admin., L.S.E.

Encik Ismail bin Mansor, B.A.(Hons.) (until 18.12.72).

Assistant Secretary

Encik K. Ragupathy.

Encik Hussin bin Md. Zin, B.A. (until 1.10.73)

VISITS OF THE HIGHER EDUCATION ADVISORY COUNCIL

<u>Date</u>	<u>Place</u>
1. 7th September, 1972	University Malaya, Lembah Pantai, Kuala Lumpur.
2. 14th February, 1973	National University, Jalan Pantai Baru, Kuala Lumpur.
3. 3rd May, 1973	University of Science Malaysia, Minden, Pulau Pinang.
4. 21st June, 1973	National Institute of Technology, Jalan Gurney, Kuala Lumpur.
5. 22nd June, 1973	University of Agriculture Malaysia, Serdang, Selangor.
6. 20th July, 1973	Institute of Technology MARA, Shah Alam.
7. 21st July, 1973	Tunku Abdul Rahman College, Jalan Ampang, Kuala Lumpur.
8. 22nd September, 1973	Ungku Omar Polytechnic, Jalan Dairy, Ipoh, Perak.
9. 9th November, 1973	Kuching, Sarawak.
10. 19th December, 1973	Kota Kinabalu, Sabah.

Annexure 3.

MEETINGS OF THE HIGHER EDUCATION ADVISORY COUNCIL

<u>Date</u>	<u>Place</u>
8. 8.1972	Dewan Bahasa dan Pustaka, Kuala Lumpur.
7. 9.1972	Court Room, University Malaya, Kuala Lumpur.
12.10.1972	Board Room, Dewan Bahasa dan Pustaka, Kuala Lumpur.
17.11.1972	Court Room, University Malaya, Kuala Lumpur.
12. 1.1973	Court Room, University Malaya, Kuala Lumpur.
14. 2.1973	Meeting Room, University Kebangsaan, Kuala Lumpur.
15. 3.1973	Court Room, University Malaya, Kuala Lumpur.
3. 5.1973	Universiti Sains Malaysia, Pulau Pinang.
22. 6.1973	University of Agriculture, Serdang.
20. 7.1973	Institute of Technology MARA, Shah Alam.
22. 9.1973	Ungku Omar Polytechnic, Jalan Dairy, Ipoh.
9.11.1973	Kuching, Sarawak.
19.12.1973	Kota Kinabalu, Sabah.
28. 2.1974	MIDF, Jalan Ampang, Kuala Lumpur.
1. 3.1974	MIDF, Jalan Ampang, Kuala Lumpur.
22. 3.1974	MIDF, Jalan Ampang, Kuala Lumpur.

ANNEXURE 4

REPORT OF THE AD HOC COMMITTEE

ON CASE FOR

DEVELOPMENT OF HIGHER EDUCATION IN SARAWAK

REPORT OF THE AD HOC COMMITTEE ON CASE FOR
DEVELOPMENT OF HIGHER EDUCATION IN SARAWAK

I. TERMS OF REFERENCE

The State Government has been requested by the Higher Education Advisory Council to submit its views on the development of higher education in the State. An Ad Hoc Committee comprising the Deputy State Financial Secretary (Chairman), the Director of State Planning Unit, the Director of Education, the Director of Agriculture, the Director of Lands and Surveys, the Conservator of Forests, the Director of Public Works, the Director of Drainage and Irrigation and the State Development Officer was accordingly appointed with the terms of reference to consider the possibility or feasibility of establishing a university or university college in the State. These terms of reference were later enlarged to include an examination of the possibility of setting up technical college in the State as well.

2. With these as the terms of reference, the Ad Hoc Committee noted that institutions of higher learning, if found desirable, could be established in the State in the following forms taking into consideration the special needs, conditions, peculiarities and problems of the State in particular and those of the country at large:

- (i) as an independent university in the State;
- (ii) initially, as a university college affiliated to an existing university in Peninsular Malaysia;
- (iii) as an independent technical college; or
- (iv) as full-fledged faculties/branch campuses of parent institutions of higher learning already established in Peninsular Malaysia.

II. DEVELOPMENT OF EDUCATION IN THE STATE

3. If the term "higher education" is taken to mean post secondary school institutions, such as technical colleges, university colleges or universities then, except for teacher training institutions, there are no such institutions of higher learning in Sarawak. The relatively under-developed educational system in the State is due primarily to its history where education in the past was left very much to the initiative and efforts of voluntary organisations and communities. This led to the opening of Christian, Chinese and private schools. Most of these schools were established in urban areas. A great number of children living in rural areas did not have access to educational facilities.

4. The past education policy was not motivated by a desire to produce enough educated people to serve the needs of the public or private sectors, nor to unite the diverse races that inhabited the State. Only in the last decade did Government take an active part in opening secondary schools in rural areas. Primary education came under the responsibility of Local Authorities as from 1948 but was administered without much success. The nett result is that when the State achieved independence within Malaysia in 1963 it was faced with two problems in the field of education: first, the problem of nation building and integration with the rest of the country and second, the problem of providing sufficient manpower.

5. The State Government is fully conscious of these weaknesses and has recently taken concrete steps to rectify them by:-

- (i) the abolition of the Common Entrance Selection Examination from primary to secondary schools; and
- (ii) the taking-over of the management of primary schools from Local Authorities.

6. These decisions reflect the Government's long-term policy of promoting an educational revolution to enable every citizen to get his due share of knowledge and training and to prepare him to play his role in strengthening and developing the country. The overall and long-term objectives of education and training in the State are to promote national unity and to meet the requirements of national development. In pursuance of these objectives the programmes for the remaining years of the Second Malaysia Plan and beyond will concentrate on three major areas:-

- (i) to develop and expand the education system for its eventual integration with the national system of education;
- (ii) to provide more equitable and increased educational opportunities throughout the State so as to correct imbalances; and
- (iii) to orientate the education system towards modern science and technology by placing special emphasis on the teaching of science and by providing increased facilities for vocational, technical and higher education.

7. With the State entering Malaysia in 1963, education development expanded rapidly. Total school enrolment rose from 123,612 in 1963 to 166,073 in 1970. The figure is expected to increase to 220,120 by 1975 and 268,500 by 1980. The number of Form VI students which was only 199 in 1963 rose to 641 in 1970, is expected to reach 1,330 by 1975 and 3,650 by 1980. Similarly, the total number of Form V students at 928 in 1963 rose to 2,099 in 1970,

is expected to increase to nearly 3,193 by 1975 and 9,600 by 1980. The dramatic increase in the number of Form V students in the near future is the direct result of the recent decision taken by Government to abolish the Common Entrance Selection Examination from primary to secondary schools.

8. The rapid increase in the total enrolment especially at the secondary school level clearly demonstrates that in the immediate future there will be a tremendous demand from students in the State alone for higher education at the university and college levels.

III. CONSTITUTIONAL POSITION

9. Education is a Federal matter. At the time of the State joining Malaysia a special provision was embodied in paragraph 17(b) of the Inter-Governmental Report, 1962, which makes it very clear that the State would be given due consideration when facilities for higher education were expanded in the country. The provision reads:

" When expansion of higher education facilities was being considered by the Malaysian Government the requirements of the Borneo States should be given special consideration and the desirability of locating some of the institutions in the Borneo States should be borne in mind. "

10. The State has been in the Federation for a decade already. While substantial sums have been allocated in both the First and Second Malaysia Plans for the development of higher education facilities in the country, practically no provisions have been included during the 10 years for the development of such facilities in the State. This position was studied by the Higher Education Planning Committee in 1967 which came to the conclusion that there was no justification to establish a university in the State in view of the small number of students from Sarawak to fill such an institution when established in the State. The Committee recommended instead that students from Sarawak who qualify should be accommodated in the existing universities in Peninsular Malaysia. If this thinking, which as explained below is outdated, is accepted it seems definite that by the end of the Second Malaysia Plan in 1975, i.e. after the State has been in the Federation for 12 years, no separate institution of higher learning will be located in the State. This is not in line with the spirit of paragraph 17(b) of the Inter-Governmental Report particularly at a time when facilities for higher education were rapidly expanded in Peninsular Malaysia, nor in consonance with the rapid development of secondary education in the State and the objectives of the State Government's new education policy as explained in Part II of this Report.

11. However, in June 1973 the Chairman of the Higher Education Advisory Council was reported to be generally in favour of establishing a university in this region.

IV. POSITION OF HIGHER EDUCATION IN THE STATE

12. There is an immediate need to review the policy of extending facilities for higher education to the State. The view expressed by the Higher Education Planning Committee in 1967 that the time was not ripe to establish a university or institutions of higher learning in the State due to insufficient students from the State is certainly no longer valid. As indicated at paragraph 7, that with the rapid expansion of secondary education in the State, the increasing number of students seeking university or college education is sufficient to justify the immediate establishment of such institutions in the State. When the view of the Higher Education Planning Committee was reached in 1967 Sarawak was only producing 396 Form VI students and 2,397 Form V students whereas the corresponding projected figures are expected to reach 1,330 and 3,193 by 1975 and 3,650 and 9,600 by 1980. It will have to be realised that even if approval is now given for the establishment of higher education facilities in the State it will take at least 3 years for such facilities to be operational by which time the number of eligible students in Sarawak alone seeking university and college education will be 6,150.

V. HIGHER EDUCATION AND THE NEW ECONOMIC POLICY

13. Since 1969 the Government policy and development strategy have undergone great fundamental changes. The New Economic Policy to restructure the Malaysian society has been formulated to guide the nation. This Policy has the over-riding objective of achieving national integration and unity and more balanced regional development. The latter calls for the dispersal of development, amenities and facilities to rectify the imbalance not only between regions and within States but also amongst the races. The arguments in favour of regional balance transcend the simple per capita measure. They rest more fundamentally on the notion that all regions in Malaysia share the benefits of development. One imbalance is in education. One measure to rectify this imbalance is to ensure that Bumiputras and the disadvantaged have greater access to higher education to enable them to participate more effectively in modern sector activities.

14. Sarawak is less developed than Peninsular Malaysia. It has been pointed out that the level of education development lags behind that of Peninsular Malaysia. This is most glaring in the lack of higher education facilities. While rapid progress has been made recently in the field of secondary education, higher education development is almost totally absent in the State. The need to close this gap cannot be too strongly emphasised as nearly 80% of the population in the State is rural.

15. The crowding of institutions of higher learning in Peninsular Malaysia, particularly in and around the Federal capital, is inconsistent with the objective of the New Economic Policy for more balanced development in the country. The time is ripe to locate some institutions of higher education in Sarawak as there will be sufficient number of students seeking such education. Such institutions will act as catalysts for development and progress in the largest State in the Federation which has enormous natural resources but is relatively backward, economically, socially and educationally.

16. A regional university and colleges established in the State will have a tremendous impact on the local economy and will represent a concrete step in the dispersal of the centre of higher learning. They will play a vital role in stimulating progress and development in the State. Such a regional university and colleges will not only admit students from the State but also from all over Malaysia. They will thus develop characteristics of their own and will discourage the development of parochial attitudes. They will also hasten the integration of the two regions of Malaysia as such institutions are ideal nurseries for the growth and cultivation of national unity.

17. Besides being teaching and research institutions concerned primarily with the accumulation, preservation and dissemination of knowledge, the regional university and colleges can be utilised indirectly to assist in the formulation of development plans and directly by producing graduates conversant with the problems existing in the State who may be involved in the implementation of projects. They will assist to decentralise growth of skills, organisational capacities and development programmes thus avoiding the mistakes of the one-city country or State where all development or facilities are crowded in one or two large urban centres only. Also, Sarawak has much to offer for the setting up of such a regional university by way of its rich history, heritage, varied cultures, vast natural resources and its peculiar geographical, natural and social features as well as its problems.

VI. STATE NEEDS AND TYPES OF INSTITUTIONS

18. The lack of trained and experienced manpower poses as the most serious constraint to the planning and the implementation of development programmes and projects in the State. There is no doubt that of the number of limitations on development of Sarawak, none compares in importance and gravity with the shortage of trained and experienced manpower as evidenced during the implementation of the First and Second Malaysia Plans. The critical areas are in agriculture, forestry, engineering, education, health and other professions. It is estimated that by 1980 the State will require some 2,000 university graduates and a far greater number at the sub-professional level (see Appendix I). This shortage is experienced by both the public and private sectors.

19. This demand in human resources with the necessary skills cannot be met by ad hoc methods such as by sending people abroad or to Peninsular Malaysia for training as the number that can be trained in this way is limited. Also, institutions abroad may not offer courses relevant to the needs of our country nor will they be in a position to inculcate into our students Malaysian consciousness. The demand can only be met by long-term overall policies and planned development. The right types of institutions must be set up to train and provide the manpower required to meet the development needs of the State. The establishment of such institutions in the State will also have the effect of closing the gap of educational opportunities between the two regions.

20. The existing five universities can and will be expanded but with a population of about 12 million in a country which is committed to rapid social and economic development to uplift the standard of living of its people, they are obviously insufficient to cope with the over-increasing demand for more places. Similarly, educational institutions at the college level which are so vital to produce the sub-professional personnel urgently required are also glaringly deficient. Thus with the present shortage of facilities for training at the university and college levels and in order to meet the technical and professional manpower needs of the country, more facilities for higher education will have to be provided.

21. The high-level manpower shortage could partially be met with the establishment of a university in Sarawak. Similarly, the need for the sub-professional level of personnel can be catered for by the establishment of colleges at the four major growth centres in the State. As such institutions are expected to play a dominant role in tackling local problems it is recommended that independent institutions at the university and college levels be set up in the State. Extensions of faculties or campus branches of existing institutions in Peninsular Malaysia will not be in a position to play such a role and are, therefore, not recommended.

VII. LOCALITIES FOR INSTITUTIONS OF HIGHER LEARNING

22. Various localities are available for siting the university and colleges in the State. It has been argued as to why they should be established in the State, and in the context of the nation as a whole regional imbalance is to be rectified, similar precaution has also to be taken in the State. Within the State there is also a need to correct imbalances. As the long-term development in the State is to be based on a self-sustaining system of ports or regional centres with a converging network of transport and communication facilities and as the major elements in this development strategy will be the development of the Kuching Region, Central Sarawak and the Miri Region, Sibul and Miri will thus continue to expand as major growth centres while Bintulu will be developed into another major growth centre. Thus the suitable localities in the State to site the proposed institutions, taking into consideration facilities, amenities and services are Kuching, Sibul, Bintulu and Miri.

23. The Bintulu Region possesses vast potentials for development. The region has enormous natural resources - timber, oil and natural gas, together with sizeable areas of land suitable for agriculture. The timber resources, identified by the FAO Inventory Study, indicate the existence of large stands of merchantable timber of good quality. The study has recommended the establishment of viable timber industrial complexes. Part of the region is also included in the Miri-Bintulu Regional Planning Study Area. This study indicates the existence of a large acreage of land suitable for agricultural and livestock development. Very substantial volume of fine quality natural gas has been found off the coast of the region and steps are being taken to extract it.

24. Bintulu is the focal point of development in this region and is being planned to provide transport, industrial, commercial and cultural facilities. Within the structure of the town adequate provision will be required for educational facilities to meet the needs of the rapidly expanding industrial and commercial enterprises. Surveys and plans are being prepared for the provision of infrastructural services to permit the immediate extension of residential areas and development of industrial and commercial complexes. This development will present a special need for skilled manpower and will demand a dynamic approach. The siting of the university in these environs will materially help to meet the special manpower needs and the university should be a nucleus for the development of techniques and skills for industrial and commercial projects.

25. Suitable State land is available at Bintulu for siting the university and access and public services are also available.

VIII. ASSISTANCE BY STATE FOR DEVELOPMENT OF HIGHER EDUCATION

26. Institutions for higher learning are very costly to establish and maintain, and although education is a Federal matter and the entire cost of providing it is constitutionally the sole responsibility of the Federal Government, the establishment of such institutions will entail the Federal and the State Governments working closely together. In this connection the State Government will provide the State land where available to site the university and the colleges and is also prepared to make available the resources from 250,000 acres of forest to the Federal Government to assist in defraying the cost of setting up and operating those institutions. Furthermore, the State Government can assist in the training and recruitment of staff for these institutions by making available fellowships to many of our promising students now studying abroad.

IX. SUMMARY RECOMMENDATIONS AND CONCLUSIONS

- (i) Immediate review should be made and due consideration should be given to extend higher education facilities to the State in accordance with the undertaking provided under paragraph 17(b) of the Inter-Governmental Report, 1962. The time is ripe to extend such facilities to the State;
- (ii) The State is the biggest in the Federation, almost as large as the whole of Peninsular Malaysia, is generally less developed and has enormous natural resources and potentials with a predominant Bumiputra population. The extension of higher education facilities to the State will be a positive measure towards national integration within the Government's New Economic Policy which is designed to achieve more balanced regional development, correct economic and educational imbalances and close the gap in educational opportunities to ensure that more Bumiputras and the disadvantaged have greater access to higher education essential for their effective participation in modern sector activities;
- (iii) Recognising that the single most important constraint on development in the State is the shortage of trained and experienced manpower at the university and sub-professional levels, it is recommended that immediate steps be taken to establish a university and colleges in the State to supply the personnel with the skills required to meet the technical and professional manpower needs of the State in both the public and private sectors;
- (iv) It is desirable that a university and colleges and not an extension of any existing institutions in Peninsular Malaysia be established in the State;
- (v) That the university and colleges should be established in the State as regional institutions of higher learning admitting students of all races and faiths throughout the country thus contributing towards national integration and unity and engendering common values and appreciation of the problems of the two regions of Peninsular Malaysia and the State;

- (vi) In line with the policy of spreading the benefits of development and public investment evenly between regions and within the State and taking into consideration the future plans for developing Kuching, Sibul, Miri and Bintulu into major growth centres it is recommended that the university should be located in or around Bintulu and the colleges in the four major growth centres; and
- (vii) Although education is a Federal matter, the State is prepared to fully co-operate and assist in establishing the proposed university and colleges.

Table 1: Total Population, Town Population and Labour Force Projections, Sarawak, 1970 - 1990

Year (a)	Total Population (b)	Town Population (c)	Labour Force (d)
1960	744,529	132,939	286,743
1970	975,918	205,784	338,130
1980	1,286,307	351,508	445,062
1990	1,695,415	601,296	586,614

- Notes:
- (a) For 1960 and 1970, data from the two Census are used.
 - (b) Projections for 1980 and 1990 based on 2.8 annual growth rate.
 - (c) Projections for 1980 and 1990 based on an annual growth rate of 5.5%.
 - (d) Labour Force refers to those between ages 15-64 who are employed and unemployed. For 1960, figure refers only to those economically active between ages 15-64. For 1970, preliminary census data is used. For the year it is assumed that labour force forms 34.6% of the total population.
 - (e) Area of State = 48,050 square miles.

Table 2: Total Enrolments and Projected Enrolments for All Primary, Government and Aided Secondary Schools, Sarawak, 1965 - 1990

Year	Primary	Lower Secondary	Upper Secondary	6th Form	Overall Total
1965	119,416	10,462	1,969	250	132,097
1970	114,007	17,041	4,384	641	166,073
1975	165,330	46,507	6,953	1,330	220,120
1980	189,500	55,950	19,400	3,650	268,500
1985	218,400	64,200	19,800	4,100	306,500
1990	247,600	74,900	22,700	4,700	349,900

Source: Education Department, Sarawak.

Notes: (1) Figures for 1965 and 1970 were actual enrolments as at September.

(2) Enrolments in Upper Secondary and 6th Form classes determined, among other factors, by the prevailing selection policy/ (promotion rate) for such classes.

(3) The C.E. Selection Examination will be abolished in 1974, i.e. all those pupils who complete Primary 6 in 1974 and wish to be admitted to a Government or Aided School will be admitted to a Secondary School.

Table 3: Estimated Number of University Graduates Required in Sarawak by the Public and Private Sectors, 1976 - 1980

Serial No.	Types of Courses	Estimated Annual Requirement	Total Estimated Requirement, 1976-1980
1	Natural Resources	70	350
2	Engineering and Applied Sciences	100	500
3	Organisation and Management	60	300
4	General Degree and Education	120	600
5	Other Professions (Medical, Legal, etc.)	40	200
	Total	390	1,950

ANNEXURE 5

MEMORANDUM AND JUSTIFICATION

FOR

THE DEVELOPMENT

OF

HIGHER EDUCATION

IN SABAH

MEMORANDUM ON THE DEVELOPMENT OF HIGHER EDUCATION IN SABAH

I. TERMS OF REFERENCE

The need for the establishment of a University or University College in Sabah has been felt and voiced for some time. The Higher Education Advisory Council is aware of the demand of Sabah for University Education in loco. Consequently it has requested the State Government to submit its views on the development of higher education in the State.

A Committee was set up to inquire into:

- (i) the need and feasibility of establishing a University or University College in Sabah;
- (ii) the courses of studies most relevant to Sabah;
- (iii) and make appropriate recommendations accordingly.

II. NATIONAL AND STATE ASPIRATIONS

With the advent of independence through Malaysia in 1963, it was natural that National and State aspirations should be seen as having their best possible fulfilment in the proper planning and development of higher education which symbolises the other of equal opportunities for all. Such aspirations have been prompted by recent demographic growth, an increasing trend of so-called "educated unemployment" among the school-leavers, growing social demands which reflect the newly awakened educational and socio-economic aspirations of all strata of the rakyat and yet an unprecedented demand by the public and private sectors for justified professional and skilled manpower to meet the declared national objectives and goals as set out in the Malaysian Plans.

If the term "higher education" is taken to mean post upper secondary school institutions except for teacher training institutions, there are no such institutions of higher learning in Sabah similar to the technical colleges, university colleges or universities as were established in Peninsular Malaysia.

In view of the above the current trend of thinking in Sabah - a conception dating to pre-1963 - is that the State Government would desire to see that the future location and establishment of institutions of higher learning should be on a more rational basis which would help in reducing the whole regional imbalance in the development of higher education between Peninsular Malaysia and East Malaysia particularly in Sabah. This will then help in bridging the existing "quality gaps" of education between Sabah and other States of Malaysia. It is of the view that institutions of higher learning if properly developed, not only become focal points of educational development in an area but also have a multiplier effect on the whole socio-economic and political structure of the country of which these form an integral part.

Institutions of higher learning, when established in Sabah will not and should not only be open to eligible candidates of Sabah origin, but also candidates from all States of Malaysia

Such institutions will offer several courses as mentioned later on in this memorandum which are not duplication of those available in other parts of Malaysia thereby encouraging the freedom of movement of students and faculty staff between States of Malaysia and fostering genuine national integration and exchange of ideas and knowledge.

III. CONSTITUTIONAL PROVISION UNDER I.C.C. REPORT

Although education is a federal subject since Sabah became a component state of Malaysia, nevertheless the special needs of the state in educational matters have been recognised by the Federal Government including the provision and development of higher education.

This was clearly stated in paragraph 17(b) of the Inter-Governmental Committee Report, 1962 which reads:-

".....when expansion of higher education facilities was being considered by the Malaysian Government the requirements of the Borneo States should be given special consideration and the desirability of locating some of the institutions in the Borneo States should be borne in mind".

IV. STATE POLICY ON HIGHER EDUCATION

The State policy and objectives on higher education have been unequivocally expressed by official statements as follows:-

(i) In September 1964, the State Cabinet had approved a proposal to establish a Junior College and declared that -

"It is proposed that the policy should be to begin modestly and work gradually towards an eventual University or University College. The first step would be to establish a Junior College offering a two year Post-School Certificate course, leading to Higher School Certificate. As and when possible this would be extended to a three-year course, including two years of what is at present Sixth Form work and one year of University work; at the end of this course those who do well would go on to the University of Malaya or Singapore to complete their degree course, whilst others would be awarded a Certificate by the College. This would subsequently be extended to a four-year course, i.e. including the first two years of University work, and so on until a full degree course was eventually provided and the Junior College into a University proper"

(ii) On 29th May, 1967, T.Y.T. Yang di Pertua Negara, Sabah had announced that -

"As a long term objective, it is our firm belief that a University College should be established in Sabah. Year by year, more and more of our students who have completed their secondary education will need places in institutions of higher learning. We cannot forever depend on the assistance of the universities overseas to accept the increasing number of our students who need university education. Therefore, my Government feels it necessary that preliminary preparation should be made to lay the foundation work for a University College to be established in our State, preferably as part of the University of Malaysia to enable future exchange of students from East and West Malaysia. In this respect, we will be able to cope with and provide places for as many students in our country who are capable and willing to pursue higher education and at the same time foster the growth of a more united Malaysian Nation".

V. STATE NEED FOR UNIVERSITY COLLEGE

There is a very strong demand in the State for a University College to be sited in Sabah. This urgent need has been felt by the people and recognized by the State Government which has given full support to establishing such a University College. There are a number of reasons to justify the demand:-

(a) Review of Past Policy on Higher Education

There is now a great urgency to review the past federal policy in the extension of higher education facilities to East Malaysia. The view as expressed by the Higher Education Planning Committee in 1967* that the time was not ripe then to establish a university or institution of higher learning in East Malaysia is certainly no longer valid now nor acceptable to the State. If it has been the long-term objective of the Committee to expand facilities for University Education to provide for 4% of the 19 years olds by 1985 the Sabah demographic growth figures as shown in Appendix III need no further justifications. The State shall be having an estimated total of 62,000 persons in the age group ranging from 17 to 19 years old by the year 1980 and 69,000 persons between the ages of 17 and 19 in the year 1985.

* See Footnote on Page 101.

At the rate the secondary school enrolment is increasing at present and in future (especially after the proposed abolition of the Primary Six Examinations in Sabah by 1976) Sabah shall have 2,480 and 2,760 students representing the 4% of the above target age group by 1980 and 1985 respectively.

It must be pointed out that even if approval is given now for the planning and establishment of a University College in Sabah it will take at least 5 years for the institution to be operational and that will be about 1979 or 1980. Appendices I and II attached show that by the year 1980 Sabah's total population will have increased to 903,841 from the 1970 figure of 653,264. The student population will have increased from 121,686 in 1967 to 261,428 students by 1980, of whom 79,966 students will be attending classes ranging from Bridge Class to Form V. In addition another 1,400 students (see Table 1 below) will be taught in the Form Six classes (excluding further Education Classes) of the existing and now secondary schools under construction with World Bank Loan and Federal funds, the proposed Junior College and the MARA Science College, both of which are planned to be established shortly. In view of this planned programme of rapid educational development in Sabah, the State is more than confident that it has more than the potential number of students seeking admission to a local institution of higher learning if this is established.

Table 1 Projected increase of Upper Secondary Enrolment in Schools and Further Education Classes, Sabah 1973 - 1990

YEAR	FORM IV		FORM V		FORM VI		UPPER VI		GRAND TOTAL
	School	FEC	School	FEC	School	FEC	School	FEC	
ACTUAL									
1973	3,791	63	3,250	151	186	45	152	35	7,673
PROJECTED									
1974	4,512	120	3,753	60	210	55	186	45	8,941
1975	5,459	160	4,467	100	260	80	210	55	10,791
1976	5,925	200	5,405	140	370	110	260	80	12,490
1977	6,280	260	5,866	170	480	150	370	110	13,686
1978	9,207	350	6,213	240	590	180	480	150	17,410
1979	8,812	400	9,115	320	645	210	590	180	19,772
1980	11,688	440	8,073	380	755	250	645	210	22,441
1985	17,532	1,200	12,110	950	1,100	500	1,100	400	34,892
1990	26,298	2,500	18,165	2,000	1,600	850	1,500	700	53,613

As it is now the solution (albeit on a very short-term manner) for the State is to send Sabah students for training in institutions of higher learning either in Peninsular Malaysia and countries overseas. The total number of students sent annually on State or Sabah Foundation scholarships and on private funds to institutions of higher learning in Peninsular Malaysia exceeds 150. In addition it is noted that between 250 and 350 private students had gone abroad for overseas studies annually and there is at present about 2,000 Sabah students studying in countries outside Malaysia.

It is felt that in the case of the latter whereby students have to go overseas for higher education it will not serve the long-term objective and goals of the country in the training and provision of the local middle level and higher level manpower. On an average each of these private overseas scholars spends between \$500 and \$600 per month and apart from the heavy strain imposed on local money resources in the form of foreign exchange etc. it may entail and had in fact entailed a fair degree of 'brain drain' in that several of these scholars would not return to serve the State after a long period of 'acculturation' in overseas countries. Moreover institutions abroad, apart from having limited places for overseas students unless they are sponsored by their home government, may not always offer the types of courses or fields of studies (let alone the experience) relevant to the needs of the country nor will they be able to inculcate into the scholars the essential Malaysian consciousness or outlook.

(b) Manpower needs of the economy

Sabah, which is the second largest State in area and richly endowed with natural resources (see Appendices IV to VI) is very rapidly developing. On average the annual rate of growth of its Gross National Product from 1967 to 1973 is about 10.7% compared to the national average of 6.5%.

Such high rate of growth cannot be sustained unless it has a continuously expanding pool of indigeneous skilled and semi-skilled personnel. According to the State Ministry of Industrial Development, the State is undergoing two types of growth in various industries, namely by expansion and by creation of new industries. A preliminary manpower survey conducted by the State Manpower Advisory Committee indicates that during the next five to ten years, Sabah will be developing and expanding the following industries:-

Footnote:

- * "There is currently no justification for the establishment of a university level institution in East Malaysia in view of the limited number of students qualified for entry into a University. However, fullest opportunities and encouragement can be given to students from East Malaysia to enter institutions of higher learning in West Malaysia". From Perspective Plan for the Development of Higher Education in Malaysia (1967)

Genetic Industry	- Agriculture Livestock Fisheries Forestry
Extractive Industry	- Lumbering Mangrove Metal Mining & Quarrying Crude Petroleum and Natural Gas
Manufacturing Industry	- Agro-based manufacturing industries Wood-based industries Cement and cement products Beverages Electronic equipment Ship building
Construction Industry	- Building Construction Road Projects Ports Power
Service Industry	- Transportation Maintenance Hotel

Commerce

(c) Higher Education and New Economic Policy

This is also in line with the New Economic Policy of restructuring the society by correcting racial imbalance and regional imbalance in sharing the fruits of development within the context of an integrated Malaysian Nation.

The setting of the University College in Sabah would correct the present uneven distribution of institution of higher learning throughout Malaysia. It would also enable the Government to honour its commitment in providing a proportionately greater number of university places for the bumiputras to correct the present disparity in the professional and sub-professional levels of manpower between the bumiputras and non-bumiputras.

VI. PROPOSED ESTABLISHMENT OF UNIVERSITY COLLEGE AND COURSES OF STUDIES

In order to facilitate the eventual implementation of the declared State policy on the establishment of an institute of tertiary learning, it is proposed that:

- (a) A University College, which is Science and Technology-oriented initially as a branch campus of a well established University in Peninsular Malaysia be set up as a nucleus for further growth into an autonomous University.

(b) The proposed University College should cater for courses or fields of studies for which Sabah, by virtue of its natural resources, economy and unique geographical and cultural setting can become the base for training and research. The courses or fields of studies can cover the following:-

- (i) Forestry;
- (ii) Mineral Technology including Petroleum Engineering;
- (iii) Marine studies/Fisheries;
- (iv) School of Education;
- (v) Humanities

It is proposed that the courses of studies should be designed not solely for the post-higher secondary school leavers but also for working adults.

VII. FUNCTIONS AND ROLE OF THE PROPOSED UNIVERSITY COLLEGE

At the outset, it must be reiterated that the proposed University College should not exist as an 'alien implantation' in the State. Its functions and roles must be such that it will harmonise with the needs and changes of the society and thereby directly or indirectly contribute to the national development and objectives of the country as a whole and with Sabah in particular. Such functions and roles can be briefly summarised as hereunder:-

- (i) It must be specifically designed to provide training to alleviate the acute shortage of the requisite qualified professional and skilled manpower at the middle and the highest leadership level and thus contribute to the industrial and agricultural expansion of the country;
- (ii) It must have a multiplier effect and will promote the progressive development and uplifting of the standard and quality of education at the primary (first) level, the secondary (second) level and the teacher training programme through its teaching, research and extension programmes;
- (iii) Promoting the desired socio-cultural exchange and dissemination of knowledge and technology between Sabah and other States of Malaysia and thereby bringing about the feeling of unity and oneness amongst the States;
- (iv) It should also be an institution providing the necessary scope and study programme for out-of-school adults who desire to pursue further studies as their life-long education.

VIII. FEASIBILITY OF PROJECT

(a) State Contributions towards the Project

The State is aware that the establishment of a University College involves a substantial outlay of capital costs and annual operating expenditure but it is an undisputed best form of

investment in human resources of the highest calibre. Although education is a federal subject and the entire cost of providing for higher education in the State is constitutionally the responsibility of the Federal Government, the State will cooperate fully and assist in establishing the proposed University College including providing the site as it had already done in the case of the Junior College and the local branches of the MARA Institute of Technology. Since several of the courses proposed for this University College are oriented towards the development and expansion of the major state industries, it is anticipated that such industries benefitting from the institution will reciprocate through financial and personnel support. Furthermore, the Sabah Foundation, which was established with the major aim of providing for the educational advancement of the rakyat, will definitely continue to play a major role in this project as it has been doing through its current programme of sending scholars for higher studies in institutions of learning both in Peninsular Malaysia and overseas. The State Government can assist further in the training and recruitment of staff for this institution by making available fellowships or scholarships to promising scholars for further studies and research abroad.

(b) Adequate Student Intake

It was pointed out earlier that the projected enrolment for Sixth Form classes in 1980 will reach 1,400. This is a very conservative projection as the outflow of students who venture outside the State in search of higher learning either as Government scholarship holders, Sabah Foundation scholarship holders and privately financed students has not been taken into consideration in computing the projection.

In two or three years' time supporting institutions such as the Junior College, the MARA Science College, and Sabah Branch of MIT/SF, would be fully set up. These, in addition to the existing and new secondary schools with Sixth Forms, and candidates from the local Further Education Classes including working adults, Peninsular Malaysia and Sarawak, would ensure a steadily growing stream of students seeking admission to this new University College (see Appendix VII).

IX. SUMMARY AND CONCLUSIONS

- (1) The establishment of a University College in Sabah will help reduce regional imbalances in the development of higher education and the disparity in the distribution of academically qualified personnel between Peninsular Malaysia and East Malaysia, particularly in Sabah.

- (2) The intake is open to all eligible students throughout Malaysia and this is a positive measure to ensure national integration through exchange of knowledge, ideas and personnel as well as to foster better understanding of our culture.
- (3) The establishment of a University College is a fulfilment of paragraph 17(b) of the Inter-Government Committee Report of 1962.
- (4) Sabah, as announced by our TYT Yang Di-Pertua Negara on 29th May 1967 ".....cannot forever depend on the assistance of universities overseas to accept the increasing number of our students, and to meet the university education".
- (5) The proposed University College is Science and Technology-oriented and is in conformity with the New Economic Policy of the Government. The proposed courses of studies are relevant to the needs of both the National and State programme of development, present and future.
- (6) Sabah is also an ideal location to become the base of training and research in the proposed fields of studies outlined and thereby the State can play a positive role in the development of higher education.
- (7) The establishment of a University College offering the recommended courses of studies is an investment in human resources of the highest calibre.
- (8) Although constitutionally higher education is the responsibility of the Federal Government, the State will co-operate fully and assist in establishing the proposed University College.
- (9) The rapid increases in demographic growth, school enrolment, natural resources development and Gross National Product as well as their projected multiple increase, more than justify the establishment of such a University College or University in Sabah as soon as possible.

17th December, 1973.

Kota Kinabalu.

APPENDIX I

TOTAL POPULATION & ECONOMICALLY ACTIVE
FORCE, SABAH 1951 - 1990

Census Year (1)	Total Population (2)	% increase over previous census (3)	Total economically active force (4)	% increase over previous census (5)
Actual				
1951	334,141	-	140,629	-
1960	454,421	36.0%	176,626	25.6%
1970	653,264	43.8%	215,000	21.7%
Projection				
1980	903,841	38.4%	276,715	28.7%
1990	1,337,905	48.0%	409,606	48.0%

(Source: i) Second Malaysia Plan, 1971-75,

ii) Population Census Statistics, Malaysia, 1972).

APPENDIX II

ACTUAL/PROJECTED ENROLMENT FOR ALL
PRIMARY & SECONDARY SCHOOLS, SABAH, 1963-1990

YEAR	TOTAL PRIMARY ENROLMENT	TOTAL SECONDARY ENROLMENT		GRAND TOTAL
		Bridge Class to Form V	Form Six	
(1)	(2)	(3)	(4)	(5)
ACTUAL				
1963	63,482	6,514	61	70,057
1964	75,880	8,307	77	84,264
1965	86,413	11,344	78	97,835
1966	99,450	14,017	133	113,600
1967	104,817	16,670	199	121,686
1968	107,426	21,593	226	129,245
1969	109,947	26,715	239	136,901
1970	110,607	30,313	290	141,210
1971	113,570	33,156	271	146,997
1972	117,831	38,739	296	156,866
1973	123,315	43,883	338	167,536
PROJECTION				
1975	138,390(1)	50,721(2)	470	189,581
1980	180,062	79,966	1,400	261,428
1985	234,221	125,886	2,200	362,307
1990	304,669	198,175	3,100	505,944

(Source: Sabah Education Department
Annual Report, 1972)

FOOTNOTE: (1) : annual rate of growth will be 5.4%
(2) : " " " " " " 9.5%

APPENDIX III

AGE DISTRIBUTION OF POPULATION IN 1970
AND SIZE OF AGE GROUPS IN 1980 AND 1985

Age Range	1 9 7 0		Expected Age as on 1980	Expected Age as on 1985
	Total Population	% of total Population		
0	22,861	3.5%	10	15
1	22,584	3.4	11	16
2	24,640	3.8	12	17
3	23,424	3.6	13	18
4	22,746	3.5	14	19
0 - 4	116,255	17.8%	10 - 14	15 - 19
5	22,829	3.5	15	20
6	23,095	3.5	16	21
7	21,384	3.3	17	22
8	21,398	3.3	18	23
9	20,205	3.1	19	24
5 - 9	108,911	16.7%	15 - 19	20 - 24
10 - 14	81,195	12.4	20 - 24	25 - 29
15 - 19	61,284	9.4	25 - 29	30 - 34
20 - 24	44,936	6.8	30 - 34	35 - 39
25 - 29	46,166	7.1	35 - 39	40 - 44
30 - 34	43,176	6.6	40 - 44	45 - 49
35 & above	151,751	23.2	45 & above	50 & above
TOTAL:	653,674	100.0%		

(Source: Annual Bulletin of Statistics, Sabah)

APPENDIX IV

GROSS NATIONAL PRODUCT OF
SABAH, 1967 - 1973

<u>YEAR</u>	<u>TOTAL G.N.P.</u> <u>(\$ Million)</u>	<u>% INCREASE</u>
1967	746	-
1968	791	6.0%
1969	859	8.6%
1970	921	7.2%
1971	991	7.6%
1972	1,047	5.7%
1973	1,346	28.6%

(Source: Annual Bulletin of Statistics,
Sabah)

APPENDIX V

TOTAL AREA OF MAIN CROPS CULTIVATED IN
SABAH FOR SELECTED YEARS FROM 1960 TO 1972

MAIN CROP	TOTAL	AREA	IN	THOUSAND	ACRES
	1960	1965		1970	1972
Rubber	173.5	251.6		262.1	265.1
Coconut	50.7	110.0		136.1	146.8
Wet Padi	46.0	62.5		76.7	80.3
Dry Padi	30.6	25.2		27.0	26.5
Oil Palm	Nil	Nil		95.0	118.6
Hemp	4.4	5.7		0.5	0.5
TOTAL:	305.2	455.0		597.4	637.8

(Source: Annual Bulletin of Statistics,
Sabah)

APPENDIX VI

TOTAL VALUE OF PRINCIPAL PRODUCTS (SABAH)
FOR SELECTED YEARS FROM 1960 TO 1973

PRINCIPAL PRODUCTS	TOTAL VALUE IN \$MILLION				
	1960	1965	1970	1972	1973 Ending September
Timber	90.2	185.4	395.8	409.3	580.9
Palm Oil	Nil	1.3	18.1	37.4	28.7
Rubber	49.5	34.0	36.5	25.3	34.4
Fish/Prawns	0.9	3.6	8.0	11.9	12.8
Copra	40.2	13.5	6.8	11.6	5.8
Cocoa Beans	0.02	0.5	4.4	4.9	5.1
Hemp	5.2	2.7	0.3	Nil	Nil
Palm Kernel	-	-	1.9	3.1	3.7
TOTAL	186.02	241.0	471.8	503.5	671.4

(Source: Annual Bulletin of
Statistics, Sabah)

Annexure 6.

MEMORANDUM DATED

15 DECEMBER, 1973

BY

DR. ARSHAD AYUB,
DIRECTOR,

INSTITUTE OF TECHNOLOGY MARA (ITM)

MEMORANDUM DATED 15 DECEMBER, 1973
BY DR. ARSHAD AYUB, DIRECTOR, ITM

REAPRAISAL OF ITM'S REQUEST
FOR UNIVERSITY STATUS

I have received from time to time a number of memoranda and oral representations from MARA Institute of Technology requesting consideration for university status. While I have agreed in principle to this request, I have, nevertheless, felt that it was not opportune to broach this topic for the time being. However, two recent developments have made it necessary for me to reappraise my original contention and to give more serious consideration to ITM's request.

Our recent decision to encourage the establishment of a branch campus of the Universiti Pertanian* in Sarawak has made our claim about a saturation of universities in Malaysia somewhat untenable. Secondly, the Mid-Term Review of the Second Malaysia Plan reveals some startling statistics of the nature of imbalances between the Bumiputras and the other components of the population of Malaysia. It is my firm conviction, after reading through this important document carefully, that all the proposed remedies to rectify this anomaly of Malaysian economic life will depend to a large extent, if not exclusively, on education and training. Given a short-span of twenty years to recast our economic structure to reflect a more equitable distribution of income and ownership of wealth, Malay enrolment into the various professional, technical and scientific courses of studies will have to be accelerated progressively in the years ahead. The Mid-Term Review has given a new urgency to ITM's case for university status.

Accordingly, I would like to present to members of the Higher Education Council my personal opinion of the pros and cons of the case at issue and I fervently hope that Honourable members will give this matter some serious consideration.

I have always contented that ITM has done a magnificent job of its present function that it should continue to strive for greater excellence within the framework of its present terms of reference. This contention is based on the very justifiable argument that Malaysia needs a far greater number of intermediate tertiary institutions to produce a vast number of sub-professional personnel. It would be a wrong decision of the greater magnitude, therefore, to promote ITM to a new function and in the process to allow it to abrogate its dynamic role in the training of sub-professionals stretched across

* University of Agriculture Malaysia.

58 different courses. If this happened I feared that we might need to create another mara Institute of Technology to fill the vacuum.

Many of you will recollect that I have made a few public pronouncements to the effect that no new university was contemplated for the near future because of the proliferation of universities in the recent past. There was some apprehension that the existing universities would lead to a glut of unemployable graduates who would pose a potential threat to our social security.

This has been our strongest point against ITM's request of university status. But other peripheral arguments are no less relevant. When I said that the time was not opportune, I was thinking, in addition to the above arguments, of the academic prerequisites which are necessary for the meaningful existence of a university. Has ITM the necessary faculty of university calibre? It is equipped with the full range of the para-phernalia that goes to make a university? What about ITM's entry requirements, quality and standards of **examinations**, the acceptability of its graduates in the market and **other institutions** of similar status and a whole gamut of related **questions**? I must admit that I was more inclined to swing to a negative view point rather than to give ITM the benefit of a fair and systematic hearing of their case in these matters.

Another argument advanced against ITM is that it is still a nascent institution not sufficiently matured to be a centre of scholarship. Basic to this argument is a conservative attitude that sees things in terms of a time-span on a graded scale of priority. An orderly progression along this scale on a predetermined time-table has always been regarded as the form of the growth of a university.

Weaved into the maze of these arguments is another often unstated reason. Many people fear that ITM is on a war-path of empire building and that the intrinsic quality of education might be lost sight off in this constant struggle to expand horizontally and vertically. Some base their fears on personalities involved. This can be very unfortunate.

The man who Heads the ITM is identified as the Institution and vice versa and ITM's struggle for recognition and progression to a higher level is construed as the personal aim and ambition of the Director himself. I believe in the theory that a great institution is the lengthened shadow of a great leader and that the aims and objectives of the institutions are quite indistinguishable from the hopes and aspirations of the man. I shall look at the pros for ITM purely from an institutional standpoint and shall not be clouded

in my judgment by the human element although I am a great believer in the notion that man often times makes his own destiny.

The Higher Education Advisory Council by giving its blessings to the establishment of a branch campus of the University Pertanian in Sarawak has will-nilly set a precedent which may work to the detriment of ITM's chances for university status. Conceivably, it will be quite difficult to deny the four other universities their branch campuses, if a good case is put up for them by each respective university. I can anticipate the great likelihood of a university college or branch campus in Sabah in the near future to balance the delicate question of the development of higher education in East Malaysia. I hazard a guess that most universities in the light of this precedent will be thinking of either short-term or long-term plans to having branch campuses of their own as one of the more desirable prongs of their extension programme.

It can be expected that the creation of each additional branch campus or university college will mean that ITM will be that much handicapped to progress towards university status. I, therefore, recommend that ITM's request for university status be considered against the total development of branch campuses and university colleges of the future for the latter category of institutions belong to the same genus as a university. Perhaps, a time-table of priority should be drawn up indicating the exact location on the time scale of priority where ITM can hope to receive favourable consideration to its quest for a more challenging role.

From the point of view of educational development, the Mid-term Review of the Second Malaysia Plan is, indeed, a momentous and epoch-making document. In it is spelt out not only the exact location of imbalances in our economic structure but the actual form and nature of the imbalances. For example, only 7% of professional technical and managerial posts are held by Bumiputras in 1970 in the commercial and industrial sector. In the same year only 484 Malay students were enrolled in the sciences or professional studies in the universities. There was a slight improvement for the respective figures for 1973 but no where near to anything that can bring to fruition the broad objectives of the New Economic Policy. I believe that the Mid-Term Review has given a dimension to the direction of tertiary educational development and the pace at which it ought to be implemented over the next twenty years.

It is my humble submission that our thinking on future development of tertiary education must be made with reference to the findings of the Mid-Term Review which has data for planned action for structural changes in employment, income status and wealth ownership - in short the blueprint

for the ultimate success in restructuring of Malaysian Society.

In the light of this framework, Malay enrolment into professional courses of every description must increase more than proportionately to the annual increase in student population for tertiary institutions over the next two decades if sectoral changes in occupational hierarchy between the various races is to be accomplished.

I submit that Mara Institute of Technology is well-placed to play an active role in this respect. It is already conducting fifty-eight professional and sub-professional courses. With some imaginative structural changes at the margin, it will be able to assume the added responsibility of launching into degrees programmes.

ITM has stressed very cogently that in seeking a mandate to conduct higher level courses, it is not going to relinquish its present role for bumiputras. It sees its degree programme as a logical extension of training to the brightest of its graduates. The proposed structure is somewhat analogous to a university which desires to establish post graduate programme for its outstanding graduates.

The diploma courses will not be affected in any way but will now form the starting point or the entry requirements of the degree course. ITM has further taken pains to emphasise that only about a third of the best of its diploma holders will be involved in the degree programmes.

In support of its claims to university status, ITM has presented the following arguments in its favour. It has referred to the Sir Alexander - Carr-Saunders's and Robin's Reports as the starting point for its claims for university status.

According to the Sir Alexander - Carr-Saunders's Report on University Education in Malaysia, 1948, an institution ought to qualify for the conferment of degree granting powers when it has acquired sufficient status, strength and experience. The Commission was quite precise in its definition of these three attributes. Status referred to the standing institution commanded in the community as an institution of higher learning; strength was defined on grounds of familiarity with standards of teaching and procedure of examination appropriate to degree work.

ITM has shown quite cogently that it has all the three necessary prerequisites. There are about fifteen courses that are fully professional in status and orientation while the vast majority of the rest are semi-professional recognised by both the public and private sectors as equivalent to pass degree status in terms of initial salary.

The qualifications and calibre of faculty in ITM, are also commensurate with those required of an institution of higher learning.

There are 7 ph.D's and about 30% of the faculty are holders of Masters Degrees, while another 20% are holders of fully recognised professional qualifications. This will work out to a gross aggregate of about 60% of the faculty having post graduate qualifications.

The extensive staff training programme coupled with the enhanced attraction of ITM consequent upon the conferment of degree granting status, will ensure that staff will not pose a formidable problem.

The oft-quoted argument that ITM faculty have not vigorously involved themselves in research has been countered on two fronts. First, it is argued that the teaching function predominates in the Institute and that any lecturer having a work load of sixteen hours of lecture cannot be expected to find the time to conduct serious research. Second, even inspite of this, many lecturers conduct research of an applied nature. To prove this point, statistics have been quoted to show that ITM lecturers have presented forty odd papers at various conferences and seminars since 1970. In addition, they have been instrumental in organising seven national seminars and four national surveys. At the same time many have contributed regularly to ITM's Quarterly Journal.

2. In turning to the Robin's Report, ITM has stressed its educational philosophy of equal academic awards for equal performance. It pointed to the existence of the Council of National Academic Awards in U.K. whose primary function is to validate the quality of academic standing of colleges, polytechniques and institutes of technology and to confer equal awards up to honours degree status for equal academic performance.

ITM feels that many of its professional courses are already of equal academic standing compared to honours degrees of universities. It cites the case of the diplomas in Library Science, Mass Communication, Art and Design, Advanced Business Studies, Engineering, Public Administration and all the eight external professional courses as belonging to this category. Since the Higher Education Advisory Council does not have the machinery for the validation and conferment of equal awards, it requests, therefore, that it be granted the status to conduct degree courses in various professional areas.

3. Until now the MIT has opened its doors to the so-called "low achievers" who have been low-achievers due largely to poor socio-economic circumstances. The ITM claims that over the past seven years, its work with these so-called low-achievers has revealed that :

a) A significant number of the students, working under better environmental conditions and given more effective teaching, have shown marked improvement in achievement as well as in their motivation to continue

with their studies.

b) Some of the ablest students have gone to foreign and local universities and have performed creditably, obtaining B.A.'s B.B.A's, M.B.A. degrees.

c) A number of the good students have obtained distinguished records in professional examinations conducted by foreign bodies.

d) The diploma-level professionally-oriented programmes currently offered by the MIT provide excellent preparation and background for more advanced degree-level programmes that are professionally oriented.

4 Based on the above, the MIT argues that if they were to have the status or power to confer degrees, the promising MIT students who are desirous of continuing with higher education could do so at the MIT itself. They could thus avoid some of the frustrations and problems involved in going to universities here or abroad. These problems are threefold.

a) There is the problem of evaluating the level of achievement of MIT students. It has been found that this creates many problems and gives rise to much frustration.

b) Programmes offered by universities are largely academic and thus will not be a logical sequel to diploma programmes of the MIT. If there were degree programmes at the MIT, it could then ensure continuity of professional or practical orientation throughout the programme.

c) A considerable savings, in terms of costs and effort involved in obtaining admissions, organising travel, etc., can be effected if the MIT had its own degree programmes.

Thus, by having its own degree programme the MIT can circumvent the problems that students who wish to continue with their education currently experience.

5. Just as high schools derive considerable encouragement and stimuli through the presence of H.S.C. classes, so will institutes or colleges of technology like the MIT gain considerable strength and stimuli from the existence of degree courses. The ITM has argued that it needs, this type of innovation to energise and encourage students at the MIT.

6. From the point of view financial considerations it is felt that this proposal makes good sense. Because millions of dollars have been invested in the MIT, it would not be justifiable to be content to use the resources for training only sub-professional personnel. Further, if our objective is to be effective in correcting the racial economic imbalance, then there is added reason why MIT should, aim to provide degree level programmes, particularly in areas where there is an acute shortage of bumiputras. The development of degree courses will not significantly increase the

Institute's operating costs because they would be starting from a sound basis. There is a case even for running a few short post-graduate courses such as in Credit Management, Mass Communications and Library Science. Further, as the MIT is technological and commercial in its emphasis, the more Malay students that they can entice away from arts studies at universities to the professional courses at the MIT the better it would be. It is not the intention of the MIT to enter into the teaching of liberal arts. Instead, the MIT will maintain its professional orientation and thus get greater value for its investments.

7. It is reasonable to anticipate that, with the existence of a degree level programme at the MIT, many advantages would be derived from staffing. Not only would the programme enable them to attract better qualified staff, it would also enable them to retain those staff who receive higher degrees through their own staff training programme. In addition, the presence of a group of well-qualified staff would act as a resources pool of expertise that could be used to tackle many problems that call for systematic investigation or research.

Some beneficial permeation of expertise would occur all down the line so that staff members who are teaching subjects at a lower level can look up for guidance and help to those who are better qualified. The total effect of the introduction of degree programmes would be to create a qualitative strengthening of the curriculum and teaching at all levels.

8. Another significant advantage that could be derived from a degree programme is the ability to guide students more effectively because of a longer period of study. Unlike universities which have students for only three years, the ITM would have them for the first three years (diploma and such professional level). This will enable the ITM to determine their aptitudes and abilities not only on the basis of one written examination but on the basis of intimate knowledge of daily work and personal development.

9. At present, a number of MIT's courses are geared to preparing students for the examinations of various external bodies, i.e. the professional organizations. This arrangement can only be temporary and is in many respects unsatisfactory. Further, with the necessity in the near future to introduce Malay as a medium of instruction, it would become difficult to continue with these external programmes. A satisfactory solution to this problem is the development of ITM's own courses to fully professional or degree levels so that the external courses can be discontinued when instruction in Malay medium becomes imperative.

10. Finally, in considering this subject, ITM repeatedly emphasised that the ultimate justification for having degree programme at the MIT is to provide a form of training which would be different both qualitatively and in terms of areas of specialization from existing degree programmes. MIT's degree programmes would be focussed on areas in which the universities do not specifically offer degree courses and they would have a strong practical bias. Where there is some duplication it would have to be justified in terms of the need to supplement the efforts of other institutions. In developing degree programmes the ITM will not in any way neglect its current function of providing sub-professional training for Bumiputras.

Conclusion

Having given this matter a considerable amount of thought and after having weighed the arguments for and against, I am compelled to conclude that there is much merit in the proposition that the MIT should be given university or degree granting status. I would like now, to submit for your further consideration this brief memorandum and request you to give the subject your serious consideration.

Note ITM is an abbreviation for the Institute of Technology MARA. It is also known as MIT. (MARA Institute of Technology).

SELECTED BIBLIOGRAPHY

1. Federation of Malaya, Annual Report 1930 and 1932.
2. Report of the Mc Lean Commission 1939.
3. Report of the Carr-Saunders' Commission 1947.
4. Report of the Joint Committee on the future of the University of Malaya 1958.
5. Report of the Higher Education Planning Committee of 1967.
6. Higher Education in Malaysia - Ahmad Ibrahim
UNESCO Bulletin Vol. VII No. 1.
7. Higher Education Malaya, 1945 - 1960 - Che Chee Eng
University of Singapore 1961.
8. Report of the Dr. Haji Abdul Majid Committee on Campus Life of Students 1971
9. The Progress of Education in Malaya during the Post-War Period,
1947, 1960 - W.Y. Syn 1964.
10. A Briefing for the Higher Education Advisory Council on 21.6.73 -
National Institute of Technology.
11. Taklimat kepada Majlis Penasihat Pelajaran Tinggi - Universiti Pertanian
Malaysia Serdang 22hb, Jun, 1973.
12. Second Malaysia Plan 1971 - 1975.
13. Mid-Term Review of the Second Malaysia Plan 1971 - 1975.
14. Education in Malaysia - Ministry of Education.
15. Educational Statistics of Malaysia 1936 - 1967 - Ministry of Education.
16. Economic Report 1973 - 1974 - The Treasury Malaysia.
17. Bank Negara Malaysia Quarterly Economic Bulletin Vol. 6 No. 4 Dec. 1973.
18. The Expenditure Budget of the Federal Government Years 1970 - 1974.
19. Kalendar - University Malaya 1973/1974.
20. Officer Year Book - 1972.
21. University Science Malaysia 1973/1974 - Handbook.
22. Unit Pusat Universiti - Instruction to Candidates applying for
Admission 1973/74 Session.
23. Universiti Kebangsaan Malaysia: Laporan Tahunan ke 2, 1971-1972.
24. Revised Report of the Royal Commission on Teaching Services West
Malaysia - 1971. Tan Sri Abdul Aziz bin Mohd Zain.