

**PAPER 2**

**DISTANCE EDUCATION IN COMMONWEALTH ASIA**

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## CHAPTER TWO

### INTRODUCTION

Commonwealth countries in Asia are a mixed group, small in number but varying in size from Singapore to India. Rather than attempting to find common features where none exist this paper starts by looking briefly at education in Asia generally and then considers each of the Commonwealth countries in turn, leaving aside India which is covered in its own paper.

#### I. PATTERNS OF DEVELOPMENT (1)

##### 1. Background

Asia contains the two countries with the highest populations in the world, and as a continent is associated with a huge population. Education cannot keep up with population growth. Primary schools must be increased by 50 per cent over the remainder of this century, to maintain the existing enrolment level; about a third of the continent is under 15. The vast majority (except in Japan, Hong Kong and Singapore) lives in rural areas: but in cities like Bombay, Calcutta and Kuala Lumpur the population is doubling every 10 years. The size, rate of growth, population and mobility of the population is important for educational policy in the region.

There are extreme differences both in economic performance and educational achievement amongst the Asian countries, as shown by figures from the larger Commonwealth countries:

	Population(2) (mid '84) millions	GNP per capita USA \$	Number enrolled in education as % of age group (1983)		
			primary	secondary	higher (age 20-24)
Bangladesh	98.1	130	62	19	4
Hong Kong	5.4	6330	106	68	12
Malaysia	15.3	1980	99	49	4
Singapore	2.5	7260	113	69	12
Sri Lanka	15.9	360	101	56	4

While there has been tremendous expansion in enrolments in education over the last 20 years, the trend has been towards higher rates of growth at secondary and higher levels, and a continued lag in the education of girls.

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- (1) This section relies heavily on reports by Dr Muhammad Selim and Dr Raja Roy Singh of the Unesco Regional Office, Bangkok.
  - (2) Figures from 1986 World Development Report, World Bank OUP 1986 curriculum. In-service teacher education features prominently in many national education plans.

The supply of trained primary teachers overall has improved, but there are still substantial numbers of untrained teachers, and a major need for in-service training which accompanies attempts to diversify and develop the school

Meanwhile, the absolute numbers of children and young people out-of-school has increased, to include about 60% of the population between 6 and 23 years old. Non-formal education programmes are offered to these young people by various concerned ministries, but coordination between ministries remains weak and methods of delivery remain conventional.

The demand for higher education is growing, and cannot be met, even though higher education receives a large share of education budgets.

Moreover, inequalities of access according to socio-economic background, age, sex or race are noticeable. One solution to this problem has been seen as distance education.

## 2. The Development of Distance Education in Asia

In Asia as a whole, development of distance education has been patchy and mostly recent. Some countries have developed correspondence or distance alternatives to school for adults. The Korean Air Correspondence High Schools, started in 1974, now enrol about 75,000 students, mostly young working adults and Thailand's recently established radio-correspondence programme has 100,000 students studying at secondary level. Indonesia with the PAMONG project and the Philippines with IMPACT have used self-instructional materials for primary school level as a way of extending access to education where too few teachers are available. In Indonesia PAMONG is now firmly established as an alternative to the formal system. Indonesia has also used distance methods for teacher training, while Nepal is currently training teachers by radio. Thailand and Indonesia both make extensive use of media in their non-formal education.

In recent years, there have been dramatic developments at university level. In the sixties and early seventies, a few schemes started, mostly as extension or correspondence departments of existing universities: these include a number of Indian universities and the University Sains Malaysia Off-Campus programme. In 1974, the Allama Iqbal Open University, Pakistan (then the Peoples' Open University) admitted its first students. Within a few years, the idea of Open University had caught hold in Asia. The picture today is as follows:

Burma:	Open University being planned
China:	Central Radio and Television University, restarted late 1970s, currently about 1,000,000 students
India:	Andhra Pradesh Open University established 1982, current enrolments 22,929

- Indira Gandhi National Open University, established 1985, first enrolments in progress
- Indonesia: Universitas Terbuka, first enrolments 1984, current enrolment 115,000
- Republic of Korea: Korean Air and Correspondence University; established as Junior College 1972, full university since 1982; current enrolment 150,000
- Pakistan: Allama Iqbal Open University: first students admitted 1974, current enrolment 64,652
- Sri Lanka: Sri Lanka Open University, established as Sri Lanka Institute Distance Education in 1976, current enrolment 18,000
- Thailand: Sukhothai Thammathirat Open University, first enrolments 1980, current enrolment 167,000

This remarkable growth has had two important results. First, it has led to a strong community of interest within Asia, together with a creative, innovative approach to higher education at a distance. Second, it has led to an overshadowing of distance education for other purposes. While some countries have secondary-level distance education institutes, these seem to attract little interest. Some of the Open Universities are concerned with teacher training. But on the whole the glamour of the Open University idea has led to an under-exploitation of distance education to meet the very substantial needs at secondary level and for professional training. The potential of distance education for non-formal education as a tool for rural development has also been largely neglected, with the result that the term distance education is by many in Asia thought to apply only to open universities.

In each of the Asian Commonwealth countries, distance education is developing its own distinctive pattern. There is a danger that the current wave of enthusiasm for open universities will inhibit appropriate developments in some of these countries.

### 3. Bangladesh

A number of important target groups for distance education have been identified in Bangladesh. These include:

Primary school teachers: total 180,000; retraining needed;

Secondary school teachers: total, 90,000; 70% untrained;

Secondary school certificate failures (about 150,000 annually) and higher school certificate failures (about 90,000 annually);

External Degree candidates (annually about 50,000 more qualify for university than places available);

External vocational students (quantity unknown).(1)

An initial interest in introducing distance education to Bangladesh in 1980 to 1981 came to nothing. In 1983, two existing organisations, the Schools Broadcasting Programme and the Audio-Visual Educational Centre, were merged into a National Institute of Educational Media and Technology. Ideas began to crystallise focusing on in-service training for secondary teachers, and in 1985 the National Institute was renamed the Bangladesh Institute of Distance Education with a view to introducing a BEd degree.

(2) It was noticed that all the basic components needed for starting the B.Ed. had already been developed on a modest scale in BIDE. So, it was decided that with some additional facilities and modest funds the experimental programme could be started by BIDE under the academic protection of Rajshahi University. Several national level workshops were held to find out the ways and means for starting. All the 10 Teachers' Training Colleges, National Institute of Educational Administration Extension and Research (NIEAER), Institute of Education and Research (I.E.R.) of Dhaka University and Rajshahi University joined with BIDE to start the experimental programme.

It was decided that BIDE would operate the whole programme and 10 Teachers' Training Colleges would be used as regional centres. Their facilities would be utilised during vacation and off time for tutorial service, summer school, etc. Applications were invited for admission from in-service secondary school teachers. The response was enormous. More than 12,000 applications were received against 3,000 seats.

On first July 1985, the first experimental formal course under Distance Education (BEd) was started with 3,211 students.

The next intake of July 1986 took 3,288 out of about 20,000 applicants. The present role strength is 6,499.

The conventional BEd course of ten months' duration is extended in the distance education system over a period of two years. The whole period is divided into 4 semesters, each of 6 months' duration.

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- (1) Figures from Ralph Smith, Consultant's report to the Asian Development Bank on Bangladesh Open School Project, Feb/Mar 1985.
  - (2) The short account that follows is taken from a paper on Distance Education in Bangladesh prepared by Professor K M Sirajul Islam for the Regional Seminar on Distance Education, November 26 - 3 December 1986. The seminar was organised by the Asian Development Bank in collaboration with Sukhothai Thammathirat Open University and in co-operation with Unesco Regional Office, Bangkok. The extract is reproduced by kind permission of ADB.

The following media and support services are available for conducting the BEd programme:

printed course modules

audio cassettes: 60 minutes per subject per semester

radio: 30 minutes a week

tutorial classes: twice a month, with part-time tutors

counselling service (by correspondence and radio)

summer schools: annually, at the 10 teachers colleges

practice teaching: demonstrations and supervision in schools

BIDE, a multimedia organisation under the Ministry of Education is solely responsible for the overall management of the experimental programme.

The University of Rajshahi is responsible for the academic affiliation of the programme.

BIDE has entrusted the existing 10 Teachers' Training Colleges (T.T.C.) and the National Institute of Educational Administration Extension and Research (NIEAER) to work as regional centres. The principals of the 10 T.T.C.'s and one senior staff of NIEAER have been working as part-time coordinator of the regional centres. About 126 specialists of these institutions have been working as the part-time tutors. The coordinators, with the assistance of these tutors, in addition to their own duties, are to manage the field level operation of this experimental programme.

#### 4. Brunei

There are no known distance education activities in Brunei.

#### 5. Hong Kong(1)

Recently there has been a great deal of discussion among policy makers in Hong Kong over the introduction of a substantial open education programme.

##### Origins of the need for open education in Hong Kong

Hong Kong has had very rapid population growth since the end of World War Two which was brought about largely by two major migrations of people from mainland China. The first of these was in 1949 and coincided with the establishment of the People's Republic of China.

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(1) This section on Hong Kong is by John Coffey of the Council for Educational Technology

The second occurred in the 1960's during the Chinese Cultural Revolution. The existing schooling, training, and higher education provision simply could not cope with the demands placed on it by these substantial and unpredicted population growths.

A second important factor to consider has been the roots of the education and training systems. Pre 1949 the education system was exclusively based on United Kingdom models of schools and universities. Institutions, such as Hong Kong University, have a long history of activity based on European approaches to education. With the extraordinary influx of people from the Chinese Mainland other traditions came into play and the Chinese University was established to respond. Different systems of access to higher education were adopted for the Chinese University and for the Hong Kong University, the latter being based on a two year 'A' level course and the former on a one year 'higher' course.

The picture is further complicated by the addition of an independent Baptist College and two polytechnics. The polytechnics in particular were intended to meet the needs for technical training and were not intended to provide higher education. They are not at present able to award degrees. Nonetheless the pressures for higher education have been such that the Baptist College, the two polytechnics, and the two universities have together come to constitute the higher education provision in Hong Kong. They are funded through the universities and polytechnic grants council (UPGC) and provide places for 2.8% of the relevant 'A' level age group. A third university is being built and both the City Polytechnic and Baptist College will expand considerably over the next five years. Even when these plans are completed in the mid 1990's they will cater for less than 8% of the 'A' level age group. These figures make it clear that there is substantial under provision of higher education opportunity in Hong Kong at present and that even when the expanded provision comes on stream there will still be a substantial proportion of the mature adult population which is qualified for higher education but unable to get it.

This statement is further reinforced by the fact that large numbers of people spend substantial sums each year sending members of their families to institutions overseas to receive higher education. It is estimated that at least \$3,000,000,000 Hong Kong dollars are spent per year in this way. Families are prepared to go into considerable debt in order to ensure that qualified members receive the benefits and opportunities that flow from higher education. In this environment it is not surprising that there is a thriving correspondence course market and, given the absence of any effective controls, that the quality of the products on sale varies enormously.

It is not only in levels of higher education that there is a need. Universal secondary education is comparatively recent and there are many people in the adult population who undertake studies at this level. There is also a great need for technology training in a variety of topics. For example the Hong Kong Polytechnic recently offered a course in computer studies leading to a diploma. There are forty places available on the course and ten thousand qualified

applicants. Other evidence for the need for adult education comes from the thriving External Studies Departments in the two universities and Baptist College. The Chinese University in particular enrolls some fifty thousand students each year, seventeen thousand of whom are involved in one or other aspect of distance learning courses. At any one time more than a thousand students will be registered on distance learning activities.

### **Experience of Open Education in Hong Kong**

A number of centres in Hong Kong have some experience of operating or taking part in distance education schemes.

- (a) At the secondary level Caritas has established a set of programmes (analogous to the United Kingdom flexi-study schemes) operating in twenty four centres throughout Hong Kong. Courses include vocational courses as well as general studies courses.
- (b) Experience in management education is more substantial. The management association of Hong Kong runs a number of distance education courses in Chinese dealing with a wide range of business topics. The vocational council also has some modest experience in running distance learning schemes.
- (c) In higher education the Baptist College has for three years offered tutorial facilities for a distance education degree programme based at Ohio State University in the United States. Hong Kong Polytechnic and City Polytechnic are similarly associated with distance learning programmes developed elsewhere, namely from Brunel University and Warwick University in the United Kingdom.
- (d) Experience with broadcasting has been confined to the external studies pro learning it, nonetheless, cannot be counted as substantial experience sufficient to underpin a major development such as proposed by the Education Commission.

The most substantial experience in operating and running distance education schemes lies outside the major recognised institutions in Hong Kong. Among these is the Open College, a constituent part of the University of East Asia. The University of East Asia is based at Macau but the main activities of the Open College operate in Hong Kong. The Open College offers twelve degree programmes built on courses developed in institutions overseas, mainly from the Open University in the United Kingdom and Massey University in New Zealand. There is also substantial private activity linked to correspondence colleges based in the United Kingdom and elsewhere. These have a number of tutorial links inside Hong Kong itself though these are very difficult to quantify and, like the Open College, are not recognised by the Hong Kong government. Many other institutions in Canada, Australia and the United States are also attempting to set up distance education outposts in the territory.

## **Major problems facing the development of an open education system in Hong Kong**

Hong Kong plans to establish an open education consortium. Despite the great interest, by comparison with the size of the problem there is a real shortage of distance learning expertise in the territory. This is particularly evident in the area of tutorial support. Currently the tutorial staff from major institutions also have part time work in other institutions so that the total numbers of tutorial staff available is smaller than it appears in the statistics. The Open College makes use of expertise drawn from the business community as well as the academic community to support its tutorial efforts and this tactic will probably have to be adopted by other institutions if they are to be able to meet the need in a short term. This pool of expertise in the business community is probably quite large but it cannot be tapped without an effective training system in skills relevant to distance learning. Even the Open College admits to a deficiency in training its tutorial staff though it has an impressive system of monitoring tutorial work which compensates for this to an extent. The monitoring system could easily be adapted for use elsewhere.

The consortium, when operational, will make extensive use of materials produced overseas. It will also engage in collaborative activities with other organisations for the adaptation of existing materials and the production of new materials to meet particular needs.

The Republic of China is also very active in the development of distance education and has both printed and broadcast materials available and under development. Hong Kong is also looking to these sources as an important resource for its Cantonese population.

### **Main issues for Commonwealth Cooperation**

Hong Kong is currently not a full member of the Commonwealth because of its status as a dependent territory. It is not, therefore, represented as of right in the Commonwealth discussions, its interests being represented by the UK Government. With the transference of the territory to the Republic of China in 1997, it is difficult to imagine Hong Kong ever having full Commonwealth status. Nonetheless organisations in the territory do welcome contacts with Commonwealth member states and do wish to share ideas and expertise.

Hong Kong institutions would like to be involved in joint course development activities in the high technology area. The demand for high technology courses in Hong Kong is likely to be large, and the pool of qualified people is large.

Hong Kong institutions also see themselves as acting as translators from the English to Chinese and as collaborators in developing openings for distance learning activities in mainland China. The Peoples' Republic of China has indicated to institutions in Hong Kong that it would welcome their continued involvement in international activities in education and training, and so there is also the

opportunity for links outward from mainland China, through Hong Kong, to the rest of the English speaking world.

Institutions in Hong Kong are interested in any information that can be provided about materials and courses in development.

The credibility of Commonwealth cooperation in open learning, however, will lie in the areas of development of effective credit transfer and support for common currency degrees. Without these activities very little else will be regarded as having more than incidental value. Senior educationists recognise the difficulty of achieving these ends but saw opportunities for building on existing bilateral arrangements between institutions. A collection of information about existing bilateral arrangements and their nature would create essential information for extending similar bilateral arrangements to other organisations elsewhere. Each arrangement would have to be negotiated on its merits but the existence of similar parallel arrangements as models would make it easier to negotiate similar deals in new contexts. It is for this reason that an organisation such as the Open College of the University of East Asia is of such interest in Hong Kong. The Open College has already negotiated a range of degree programmes built round materials bought from other universities. This has included the negotiation for mutual acceptance of awards. This model and experience is of considerable interest to institutions in Hong Kong and has much potential elsewhere.

Common Currency degrees based on Commonwealth agreed syllabuses and standards also are seen as practical. Hong Kong institutions would certainly wish to take part in discussions leading to the establishment of such frameworks for academic activity. A start could be made in subjects such as science, mathematics, technology, and business where cultural differences are not of great importance.

#### 6. Malaysia(1)

The Universiti Sains Malaysia (USM) is unique among the six Malaysian universities in that it is the only one authorised to deliver a Distance Education (DE) program to home-based adult students in the country. There are no distance education programs in the school sector in Malaysia neither is there any vocational or career-oriented DE programs. The USM is also unique among the Distance Teaching Institutes (DTI) of the ASEAN region in that it is one of the very few conventional dual mode universities having such a program.

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- (1) This account is an abbreviated version of 'Distance Education in Malaysia', a paper prepared by Dr G Dhanarajan for the Regional Seminar of Distance Education, 26 November to 3 December 1986, organised by the Asian Development Bank in collaboration with Sukhothai Thammathirat Open University Thailand and in cooperation with Unesco regional office, Bangkok. The paper is reproduced by kind permission of ADB and the author.

Its monopoly in the Malaysian context is essentially a result of a governmental directive precluding the other five universities from operating similar programs.

Such (monopolies) decisions are arrived at after considerable discussions with the universities in order to maximize the returns from the limited financial, human and other infrastructural investments of a small country.

The program was launched in 1971 on an experimental basis and it continued to be so till 1982 when its status was changed from one of experiment to that of a regular program thereby giving it the status of an established faculty and permanence. In its 16 years of existence the program has changed structurally and academically. Today it is poised to play an even greater role in Malaysia's attempts to bring higher education to its diverse population.

### **Educational setting**

The present conduct of education in the country is carried out according to the dictates of the Education Act of 1961 with subsequent modifications since then to suit the changing needs of Malaysian society. As envisaged by the Act, by 1985 free education was made available to children up to secondary school level. The nation's educational system can be stratified into four categories. They are:

Pre-school education: Children between four and six years old receive pre-school education. There are about 5,667 pre-school establishments and they cater to nearly 279,000 children. Almost 80 per cent of these schools are run by government agencies, not necessarily by the Ministry of Education. The rest are run by private business concerns.

There is a general feeling that this sector of the country's educational system needs careful enquiry as there seems to be a wide variation between the 'better' and the 'poorer' run schools. Curriculum, supervision, control and training in this sector is seen as an immediate necessity by policymakers and the population at large if the country is to benefit from this activity.

Primary education: Primary education lasts six years. Children enter school between six and seven and graduate into the lower secondary school at 11 or 12. In 1985, 2.2 million children were enrolled in the nation's primary schools most of which are state-run. It was also estimated in that year that almost 98.3 per cent of the children who had entered Standard 1 in 1980 completed Standard 6 indicating that at least at the primary school level attrition is almost negligible. Five years ago the primary school curriculum was revised to place emphasis on the three Rs and simple manipulative skills to make this sector of education more meaningful to the children at large.

Secondary education: The transition rate from primary to secondary schools in 1985 was about 88.2 per cent. Almost a million children were registered in the lower secondary schools (age 12 to 14) and another 310,000 were registered in the upper secondary schools (age 15

to 17) making a total of 1.3 million secondary school going children in the country. In 1985 about 190,000 students sat for their school final examination (Malayan Certificate of Education). For almost all but the top 30 per cent this will be the end of their academic training. The upper 30 per cent enter pre-university (matriculation) programs which lead up to the Malaysian High School Certificate and if successful go to the local universities or teacher training schools, go off-shore to pursue tertiary education, or follow career, technical and vocational studies locally.

Technical and vocation studies: There are nine government-run technical schools in the country with a total enrolment of 6,700 students in 1985. These are children who have gone through the primary schools and have opted for a technical career. Besides these there are also 40 vocational secondary schools with a total enrolment of 13,700. These schools conduct trade courses of various kinds.

Teacher education: In 1985, 9,100 teachers were under training in the country's 24 teacher training colleges. Teacher trainees in these colleges are secondary school (MCE or HSC) graduates who undergo a two or three-year program for certification before being deployed in primary and lower secondary schools. Teachers in upper secondary schools are expected to have a degree and would normally undergo a four-year program in the universities. The Fifth Malaysia Plan clearly indicates that there is a shortage of trained teachers at all three school levels.

Tertiary education: Malaysia has a family of six universities, one of which has its antecedents before independence and the other five after. In fact the sixth university is just a year old while the other four are about 15 years or so. Four of the universities are multi campus in nature and between the six of them they had an enrolment in excess of 70,000 students in 1985. This figure includes students pursuing degree (54.1 per cent), diploma (36.1 per cent) and certificate (9.8 per cent) courses. Besides these about 5,280 students were also following matriculation programs in the universities. In 1986 about 8,600 students were freshly enrolled into the universities out of about 50,000 applicants. This shortfall in opportunities is not new and has largely been the most important factor in the movement of Malaysian students overseas. In 1985 it was estimated rather conservatively that about 60,000 Malaysians were studying overseas in degree and diploma courses. Another 35,000 are expected to go abroad in 1986.

#### **The off-campus academic programme of Universiti Sains Malaysia**

In 1969 when the Universiti Sains Malaysia (USM) was set up the founders included the following as one of the main recommendations of the new University:

"... it was recommended that the new university should have the power to grant external degrees. We agreed and recommended this accordingly. We understand that the University of Malaya has this power, but has not so far exercised (it) on the ground that

it lacks the facilities. Our draft constitution leaves it to the authorities of the University of Penang (the original name of the Universiti Sains Malaysia) when to exercise its power to grant external degrees." (1)

The University from its inception took the above recommendation seriously, the foundation Vice-Chancellor and his Academic Planning Board declared in 1971 the establishment of their Unit for Off-Campus studies with the following statement:

"... The off-campus education programme is a constitutional commitment to enable both the university to benefit itself as well as the society that sustains its educational enterprise. It is to cater for the many Malaysians who, for one reason or another, do not get as much of it (education) as they can turn to advantage or as they discover, sometimes too late, that they need. It is meant primarily for adult students in full time employment or working in the home, the programme functions to balance the inequalities of opportunity that exists between working men and full time university students."(2)

The new unit which was part of the Centre for Educational Studies was given a mandate with several objectives. These were:

- (i) To help those adults who had earlier missed the opportunity for obtaining a higher education and thus qualify for a degree;
- (ii) To narrow the gap of educational objectives among the various ethnic groups in the country;
- (iii) To take education to economically deprived and geographically isolated areas;
- (iv) To increase the nation's (supply of) high level manpower;
- (v) To improve the performance of those already in employment by updating their knowledge and skills.

At launching, the University offered courses in the Humanities and Social Sciences. However by 1973, due to pressure especially from the Ministry of Education courses in the Natural Sciences and Mathematics were also included in the program. During much of this period the academic year was organized on the basis of three terms with annual examinations at the end of the academic year. To further maintain the high quality of the USM degree off-campus students were expected to spend a compulsory residential year. Since then, while still maintaining all of the safeguards to protect the program's respectability and the University's standards structural changes have

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- (1) Report of the Cabinet Committee on the University of Penang, 1969.
  - (2) Report of Academic Planning Board, University of Penang, 1971.

been introduced to include characteristics that make distance education organizationally efficient and academically sound. Following evaluation by a University and Ministry of Education team the unit was in 1981 upgraded into a center with both academic and administrative responsibilities. This allowed the center to employ academic staff (both educational and content specialist), design curriculum, manage course creation, development, delivery and support. It does not allow the center to award degrees. What the center in practice does is to help off-campus students acquire up to 90 credits in the distance education mode thereby enabling them access for one year full time study at USM on campus for 30 more credit units and graduation. Students are now expected to spend a minimum of five years off-campus and one year on campus (5 + 1).

Unlike the other distance learning systems of Southeast Asia, USM's program is run by a conventional university and therefore not surprisingly it imposes all of the academic entry qualifications such universities impose on prospective students.

Since 1983 approximately 500-600 students are offered admission into the off-campus program annually.

Being tied to a conventional university and its graduation requirements the nature of the program's academic structure had to conform to the many regulations governing this. The three degrees offered are patterned after traditional Commonwealth structures. Students are expected to carry an approximate workload of 4,000+ hours spread over four years in the full-time mode. The 4,000 hours are fragmented into 120 credit units offered over eight semesters. Off-campus students are not full-time students and therefore the University has presumed that it may not be possible for them to acquire the necessary graduating credit units in eight semesters over four years like their on-campus counterparts. Based on this premise the academic program is structured as follows:

- (a) The students will be expected to acquire 75 per cent or 90 credit units in the off-campus mode and the remaining 25 per cent in a final full-time residential year where they will follow higher level course.
- (b) In the off-campus mode students are expected to take a minimum of five (stages) academic years (up to a maximum of ten) to acquire the 90 credit units. This works out as about 18 credit units a year.
- (c) Each academic year for the off-campus student takes 35 weeks of which three are spent in residence at the University (The Intensive Course). An on-campus student on the other hand carries the same load in a semester lasting 15 weeks.
- (d) Students have a choice of majoring in Science and Mathematics (BSc with Honors), or Humanities (BA with Honors) or Social Science (BSocSc). They are also allowed to cross minor in any of the three areas provided they satisfy the necessary

prerequisites. In 1985 students were spread among the three programs as follows:

Arts	414
Social Sciences	336
Sciences	522

### The courses

The University willed that the courses offered in the off-campus mode should not be dissimilar to those offered in the on-campus mode, at least as far as the content was concerned. However USM demanded that course delivery should be appropriate to the needs of the home-based learner. In return for this demand the University in its transcripts and other official documents deliberately does not distinguish those graduating through the off or on-campus mode.

In 1971 when the program started, only eight courses were offered in the off-campus mode. In the current year (1986) 128 courses are available to off-campus students throughout Malaysia.

Like any other organization involved in distance education, the creative act of teaching is divided among different persons. At USM teaching is performed by:

- (a) a lecturer or team of lecturers from the Centre of Off-Campus Studies or from any of the other Faculties of the University who create the printed material as well as conceptualize and sometimes produce other media supplements. In these tasks the teacher can avail himself or herself of instructional design and other (editorial) expertise located in the center. Technical and design expertise is also available from the Centre for Educational Technology of the University.
- (b) a lecturer or lecturers who "manage" the course when it is delivered to the students. These individuals are responsible for preparing the assignment, examination and conduct of the intensive course from year-to-year. Course managers need not be, though they often are, the same individuals who create the courses in the first place.
- (c) the regional tutor who meets with the students, in the many study centers, throughout the academic year.

All of these teachers are expected to work together with the knowledge that the whole operation encompasses a single teaching act even though their individual efforts are separately created or performed. It is therefore essential that a carefully devised plan be prepared for course development with complete awareness of the other person's responsibilities.

## **The delivery system**

Courses in the Off-Campus program are delivered in a variety of forms. Being a mixed mode institution the University has a large pool of talented academic staff which it draws on heavily for tuition. Briefly the following modes of delivery are used - a short note on how each mode is used is also included.

- (a) **Print:** This is the principle teaching instrument. All of the knowledge for a course is presented in an interactive text. We follow two styles, often mixing both. In one form a comprehensive study guide is written around a recognized textbook or book of readings. In the second form, especially in the science and mathematics courses, comprehensive interactive texts are created. These texts include all of the content a course needs. This is so because of a lack of good textbooks in Bahasa Malaysia (Malay language) which is the medium of instruction in all Malaysian universities. This production of science books in the national language is one of the valuable spinoffs of the Off-Campus program.
- (b) **Radio:** Used weekly for counselling and general information purposes. Our research shows that this medium is unreliable as a teaching tool in the Off-Campus Program mainly because of the frequency of postponed and cancelled programs by the broadcasting organization. Students soon learn not to rely on published timetables. Therefore, very realistically, missing radio programs should not expose students to examination difficulties, consequently enrichment becomes the major purpose of the medium.
- (c) **Cassettes:** This medium is used for direct teaching, comprehension and review. Cassettes are supplied along with other materials to all students.
- (d) **Interpersonal:** Dual mode institutions have a distinctive advantage in the availability of human academic talent. USM uses this resource to great advantage. The annual residential school of three weeks provides unlimited access for students to course writers, course managers and other academics for consultation. One cannot help but believe that the greatest amount of teaching/learning takes place at this time. During the rest of the year the university makes available regionally-based part-time tutors, especially for the science and mathematics courses, for consultation. These tutors are regularly trained for their jobs by the University. Often they are graduate high school teachers.

## **Support systems**

From the beginning of its off-campus program, the University made an unequivocal stand on providing a high quality off-campus education which would be just as good as its on-campus. This meant providing a support system that would ameliorate as many of the disadvantages of

self-learning as possible. In order to achieve this goal, we made use of the excellent high school and teacher-training college systems spread throughout Malaysia. These physical facilities were needed to provide space for laboratory exercises, tutorial classes, library resources and examinations. We also had to emplace subject tutors, counsellors and study center administrators to make these facilities functional.

Today there are 13 study centers spread throughout the country. No student has to travel more than 90km to reach a study center. These centers are used for the following purposes:

- (a) A venue for orientation meetings: fresh and continuing students meet at the start of each academic year to plan out their study programs with the help of the University's administrators.
- (b) A venue for tutorials: between July and the following March of every academic year tutorial sessions are held every weekend for one subject or another. Students registered for courses for which tutorials are being held on any weekend are expected to attend these sessions.
- (c) A venue for laboratory classes: USM is quite unique among DTI's in that from its very early days it delivered high level science courses. To provide the necessary facilities for practical work we organized laboratory classes in the study centers. Part-time tutors/demonstrators helped with the conduct of these exercises and the University supplied the necessary equipment and the consumable items. At one time practical classes were conducted for about 32 science courses involving a total 600 hours per academic year per center.
- (d) A venue for housing reference material: Set textbooks, reference books, photocopies of journal articles, reports, past examination papers and non-print media material are all made available for students and part-time staff.
- (e) A venue for meeting visiting lecturers: Academic staff from the campus occasionally visit to handle especially difficult topics.
- (f) A venue for assessments: Students take their continuous tests and final exams in the familiar surroundings of their regular study centers.
- (g) A venue for social gathering and self-help study groups: The first is a regular occurrence but the second has not really become a popular activity.

#### **Usage of study centers**

Through experience we have found that we have to be proactive in order to popularize the use of the study centers. Students using these facilities regularly are often found to be the ones who do well in their courses and remain in the system till completion. Active

promotion of study centers take the form of regularly organized tutorials, peer group meetings, library and counselling sessions. Students see and use study centers for academically-oriented activities, rather than for social and other functions. Based on data of student course load for the 1981-1982 session, someone who registers for a maximum of 18 to 20 science credit units may spend up to a maximum of 240 hours an academic year in the study center or about 7.5 hours a week for 32 weeks of the academic year.

Though statistics are available for the 1986-1987 session the impression is that study center use has seen a steady increase over the years and it is anticipated that with more courses being added to our profile, it will continue to do so over the next few years.

The University does not employ staff on a full-time basis to run study centers. Because of the availability of good educational institutions around the country neither do we need our own premises. Through contractual arrangements with selected institutions in the regions, we use the facilities during non-working hours. We employ the most senior staff of the host institution to act as our manager (designated as Resident Tutor) for the center.

The Resident Tutor is paid a very small monthly honorarium to carry out the above activities. The person takes his directions from the Director of the Off-Campus Program. He in turn gives direction to a host of subject tutors under his supervision on the conduct of their responsibilities. Each study center has on an average about 60 part-time tutors. They are all paid by the hour and their responsibilities include assisting the students under their care with specific study problems, help in laboratory classes, counsel on study strategies, help in carrying out assignments and marking assignments and providing feedback to students.

Besides support in the regions, the University also runs two campus-based support services. These are a reference library service whereby our students from throughout the country can borrow books from the University's main library which houses nearly 500,000 volumes of books and journals, and a counselling service through a 'HOT LINE' - a telephone recording service which is open 24 hours a day throughout the year.

#### **Assessments and examinations**

All regulations relating to course assessments and examinations are decided by the senate of the University. The responsibility for conducting these rests with the examinations section of the University's registry. In order to minimize inconvenience to students, examination centers are set up throughout the country with the assistance of the examination syndicate of the Ministry of Education. Exam papers are dispatched to the various centers where the syndicate officers undertake proctoring. Exams are conducted under strict supervision. Written examinations are compulsory for all courses and they are held annually. To provide a second chance for those who fail in a sitting, a supplementary exam is also held. In

most cases the coursework contributes between 30-40 per cent towards examination grades.

### **Organization and administration**

The Center functions as a faculty of the University. Under the governance of the University's senate it formulates its academic policies (eg courses, teaching methods, delivery systems, exam systems, etc). To execute the policy, the Center operates under the leadership of a Director, who has three Deputy Directors to look after the various academic functions (curriculum design, course creation, tutorial support systems, etc).

There is also under the Director a senior assistant registrar and two assistant registrars who assist in the administration of the system (course registrations, student records, material dispatch and assignments receipts, production schedules, warehousing etc). There is a student counsellor who works with the academic and administrative staff in ameliorating student problems.

### **Financial resources**

The Off-Campus program derives its operational and development budget from the Government of Malaysia. A fee is also collected from the students, but under the existing financial regulations of the Government this revenue is returned to the Federal Treasury. In 1985 the Center received a total operational allocation of MYR.748,048. However this figure does not include the wages of the personnel working full time in the Center, nor does it include the cost of the wages of the other sectors (eg the Central Printing Unit, the Centre of Educational Technology, the various faculties which provide academic manpower, the registry, bursary, library and chancellory which contribute a certain portion of their own resources towards the running of off-campus). When all of these costs are added, the operation and development budget of the Center is approximately MYR.3,663,209 for the support of 1,272 students in 1985.

### **Cost effectiveness**

The Center's main expenditure falls under four major categories. These are:

- (a) Developmental, which mostly relate to purchase of text processing, data storage and transmitting facilities as well as creating working space for its staff. Since buildings within the campus are already there, the Center actually enables the University to make a more efficient use of these; and hence, they do not get included as part of the cost of off-campus operation. Printing facilities and non-print media production facilities are central facilities of the University - the Off-Campus Center is but one of the many users of these resources. Taking away two of the above items from the Off-Campus budget means in 1985 the development cost of the Center at MYR.303,328 constituted 7.7 per cent of its operational cost.

- (b) The operational cost in 1985 was MYR.748,048 or 19 per cent of the Center's total budget. A substantial portion (about 45 per cent) of the money went towards the support of the tutorial system. One of the Center's major functions is text processing and this component consumes perhaps 20 per cent of the operational budget.
- (c) Staff wages at the Center since 1981 have seen a dramatic increase. This is a reflection of the Center's move towards having its own academics as befits a faculty. The academics who form part of the Center's establishment will eventually be responsible for the creation and management of all the off-campus courses. At the moment the Center has filled less than 50 per cent of its staff strength. In 1985 the total wage cost of Center-based staff (both academic and non-academic) amounted to MYR.1,231,371 or about 36.3 per cent of our budget.
- (d) The Center relies on many parts of the University community to provide a variety of services. These range from providing content specialists, printers, audio and video producers, to administrators of one kind or another from the chancellory, registry, library, bursary, etc. Using a formula devised in 1981 by the reviewers of the Ministry of Education, these 'kind' services amounted to MYR.1,653,462 dollar value or roughly 42 per cent of the cost of running the off-campus. In any dual mode institution it is inevitable that a certain portion of the cost of maintaining the whole university has to be assigned to the off-campus sector. The quantum of this portion will depend on the level of sophistication the Off-Campus Program takes. In the case of the USM this level is high and consequently the cost of their contribution is also accorded a high value.

Table 1 is a rough analysis of the cost of operating the Off-Campus Program between 1981 and 1985. It can be seen that the hour cost of maintaining students has seen a steady increase over the last years which is partly a reflection of the Government of Malaysia's decision to upgrade the quality of program in 1981.

**TABLE 1**

The Off-Campus Programme Budget (1981-85) (in MYR)

Year	(1)	(2)	(3)	(4)	(5)	(6)
1981	40,960	624,400	372,121	1,133,457	1,607,978	742
1982	150,400	909,306	362,100	1,246,457	2,668,213	937
1983	70,000	662,225	607,017	1,366,914	2,706,156	1,102
1984	144,000	666,592	755,384	1,503,148	3,099,124	1,109
1985	303,328	748,048	1,231,371	1,653,462	3,936,209	1,272

Notes:

- (1) Development cost: Incurred by Off-Campus Center - does not include cost of buildings and facilities previously installed.
- (2) Operational cost: Includes the recurrent expenditures for materials and supplies (including chemicals, glassware, etc) for running the program. The figure also includes the wages of regional staff, rentals and utilities.
- (3) Staff salaries: The wages excluding fringe benefits of academic as well as non-academic staff of the Center.
- (4) Cash value: In kind contribution of the other sectors of the University towards running of the off-campus program. Contributions from the Chancellory, Registry, Bursary, Library, Central Printing Unit, Faculties of Mathematics, Chemistry, Biology, Physics, Social Sciences, Humanities, Languages and Educational Technology.
- (5) Grand Total
- (6) Enrolment

Various authorities have clearly expressed the difficulties of working out accurate cost-effective arguments for running distance education programs. While this is partly true for single mode Open Learning Institutions, it is certainly very true for the dual mode ones, where clear-cut formulae do not exist. Most of the time the dual mode institutions start off by presuming that their external studies program does not need or consume new resources but will rely on efficient and complete use of existing ones, both human and material. Experience in Malaysia and elsewhere clearly indicates that this assumption is far from right. External studies programs consume a lot of resources and the cost of graduating an external studies student will very much depend on the academic structure, the quality of courseware, the strength of the delivery and support systems. In the case of USM a very rough and simplistic costing indicates that in 1985, the cost of maintaining an off-campus student carrying an 18-credit unit workload per academic year amounted to about MYR.3,094. Presuming that this student successfully carries the same workload for the next five years, he would cost the University about MYR.15,472 for the 90 credits (1985 value). In the final year as a full-time residential student he would cost the taxpayer between MYR.8,000-MYR.10,000 (1985 value) for one year. This would mean the output cost of the off-campus student will be between MYR.23,472 and MYR.25,472. A similar student in the on-campus mode would have cost between 32,000 and 40,000, or about 27.37 per cent more than his off-campus counterpart. This conclusion is based on the fact that the above mentioned off-campus student and the rest of his cohort will continuously be successful at every stage of their study and either graduate in the minimum time or continue to be in the system till they graduate. Once again our experience in the USM indicate that less than 70 per cent of every cohort graduate in the minimum stipulated

time and perhaps as much as 15 per cent fail to complete the program. Therefore one has to assume that the above-quoted cost figures are an underestimate. One other aspect of establishing cost effectiveness which I have not taken into consideration here is the opportunity costs (savings) a nation acquires in processing students through the distance education mode and the number of years such graduates will contribute to the nation's manpower needs after graduation. Clearly in the case of the USM's program where 99 per cent of the students are in years in their professions making further contribution to societal needs. Clearly the USM's Off-Campus Program can be considered cost effective even as it is. However it cannot be purveyed as the most economical of systems - a situation which is not beyond reach provided the University or Government increases its enrolments by multiple folds or the University reduces the quality of its educational enterprise drastically. Both are unlikely to occur in the foreseeable future.

#### 6.4 The future of distance education in Malaysia

Given Malaysia's demographic picture, her manpower needs and the dearth of educational opportunities especially in the tertiary sector, distance education should have a meaningful role to play. I emphasize tertiary education because it is the one sector of the country's educational scheme where present and future (Fifth Malaysia Plan) provisions are woefully inadequate against demand. The country seems to be well on the way to meeting all of its needs at least up to the turn of the century for formal school, teacher training, career, technical and vocational education. However there does not seem to be any coordinated attempt at meeting the continuing education needs of the population - neither is there any centralized provision being made for addressing the life-long educational needs of the rural agricultural communities. There are, however, provisions being made available by the extension arms of the various policymakers concerned that these provisions would suffice for now.

Though distance education via an Open University through the mass media has been discussed by senior educators and politicians, no definite stand has been taken and if taken has not been announced by the Government. The Fifth Malaysia Plan is also silent on this. Given this fact and the current economic downturn, one can only make the grim prediction that major developments are unlikely to happen soon. However, the Universiti Sains Malaysia, as part of the Fifth Malaysia Plan, is preparing to further expand its student intake as well as diversify its course offerings over the next five years. In doing it they will face two major hurdles. The first relates to financial resources - given the ambition to expand provisions to cater for 5,000 students(1) and still maintain high quality, it will need an

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(1) M Mohammad and I T Kecik (1986) Distance Education at USM. A paper presented at the ACU meeting in Penang, 1986.

input of money far beyond what has been allocated to the Center. The second relates to academic talent. The university's current strength lies in its conventional academics. To induct them to newer areas of educational delivery will necessitate a massive in-house retooling program. This may have to be coupled with advanced course creation and development facilities that will considerably reduce the long-lead time that is currently needed from the course conceptualization to the course delivery stage.

## 7.0 The Maldives

The islands have a population of about 172,000 scattered among 200 islands. A little educational broadcasting takes place but otherwise the only notable use of distance teaching has been a recent initiative in teacher education, funded by the Australian Development Assistance Bureau.

Among the needs were the teaching of English as a second language and early childhood education. In the absence of suitable Australian programmes, two certificates from Massey University, New Zealand, have been adopted. The numbers are small, 6 students in Early Childhood Education, 4 for teaching English as a second language; but the certificates are designed for sparse and scattered enrolments. Course materials and the assessment of exercises and the ultimate assessment of performance are the responsibility of Massey staff; Australian aid supports not only the fees, but provides tutorial support at the Institute of Male. Most of the candidates are graduates.

There have been several proposals with regard to distance education for non-formal and community education, using an open-university type programme. Although nothing has yet resulted, the authorities consider that some form of distance education will be necessary in the future to educate both children and adults.

## 8.0 Singapore

Singapore now has primary and secondary education for all, and a national university and polytechnics. Distance education is not at present important. The Singapore Broadcasting Corporation in association with the university and polytechnics is considering plans to link classrooms and living rooms, using a cable television network. Apart from this, distance education is left to the private sector. A local organisation, Stamford College, offers technical and commercial courses in classes and by correspondence. A number of foreign organisations and universities also operate, mostly on a small scale. These include:

Wolsey Hall and University of Warwick, UK, distance MBA programme. An associated textbook is being published locally in Singapore. It will cost about \$25,000-30,000 (Singapore) to graduate;

Western Australian Institute of Technology; business degrees are offered on a partly distance mode. Students receive cyclostyled

notes, tutors visit occasionally from Australia, and students should attend an orientation course annually for 6 weeks in Perth. The cost is about \$8,000 (Singapore) annually for 3 years.

Western Australian College of Advanced Education; bachelors' degree in communication. This is offered in a similar mode to WAIT courses, but is slightly less expensive.

Royal Melbourne Institute of Technology; working with Singapore polytechnic to develop a split degree programme.

## 9.0 Sri Lanka(1)

### 9.1 Introduction

Distance Education as we understand it today, was introduced to Sri Lanka in 1976 with the establishment of the Sri Lanka Institute of Distance Education (SLIDE). The objective of the SLIDE was to provide tertiary level education in the fields of mathematics, science, management and technical studies to those who were unable to continue higher education in the institutes of higher learning due to socio-economic and other reasons.

The SLIDE inaugurated and conducted 4 main programmes:

- (1) Higher National Diploma in Management Studies;
- (2) National Diploma in Science;
- (3) National Diploma in Mathematics;
- (4) Higher National Diploma in Technology (Electrical and Electronics and Telecommunication Technology).

#### The Open University of Sri Lanka

The SLIDE was just four years old when it was absorbed into the newly created Open University of Sri Lanka.

The Universities Act No.16 of 1978 provided for the establishment of an 'Open University for the purpose of providing Higher Education facilities to those who are not students of any of the Universities, Campuses of Universities, University College or Institutions recognised for the purpose of providing courses of study approved for the examination of any of the aforesaid Higher Educational Institutions'.

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- (1) This account is an abbreviated version of Distance Education in Sri Lanka', a paper prepared by Dr D A Kotelawe, assisted by Mr N Samarasundera, for the Regional Seminar on Distance Education, 26 November - 3 December 1986, organised by the Asian Development Bank in collaboration with Sukothai Thammathirat Open University, Thailand, and in cooperation with Unesco Regional Office, Bangkok. The paper is reproduced by kind permission of ADB and the author.

Accordingly, the OUSL was established by Ordinance in mid-1980. The OUSL has autonomous status comparable to other Universities established by the Universities Act of 1978. However, it differs in structure from other Universities in keeping with its special objectives.

The OUSL is not merely to cater to those failing to gain admission to the conventional universities. It is also to provide for continuing education to those who are already employed as can be seen from the incorporation of the SLIDE and the ESA which catered not only to Higher Education, but to professional training of those already employed.

The administrative structure of the OUSL is different from that of other universities. Its main policy-making body is the Council which controls finance and policy matters including academic. Its academic policy and function is determined at the primary level by two Boards of Study (viz. The Board of Study for Humanities, Social Sciences and Management and the Board of Study of Mathematics, Science and Technology). The purely administrative functions are under the charge of a Registrar, while the educational services at the Regional Centres are overlooked by a Director of Regional Services. The Bursar is in charge of the financial administration under the supervision of the Registrar.

The Board of Study for Humanities, Social Science and Management conducts the following programme of study:

Certificate in Pre-School Education	- 1 year program
Certificate in Entrepreneurship	- 1 year program
Certificate in Professional English	- 1 year program
LL.B. Degree Program	- 4 year program
Post-graduate Diploma in Education	- 2 year program

In addition, the Board of Study provides a support programme in English for Science and Technology for the Board of Study for Mathematics, Science and Technology. A further course, English for Legal Studies, is also provided to service the LL.B. Degree Programme.

The Board of Study for Mathematics, Science and Technology has a more streamlined structure of programs of study. The Board has a well graded progression of programs as follows: foundations, certificate, diploma, bachelor's degree, post-graduate, and continuing education.

The Foundation courses are the gateway to the other programs of Study. The areas of study offered in general sciences are: mathematics, physics, chemistry, botany, and zoology.

A combination of these subjects can be offered for the Degree of Bachelor of Science.

In the Technology area, the following programs are offered: civil, communications, electrical, electronics, mechanical and textiles.

The current student Enrolment in the Programs of Study of the two Boards of Study of the OUSL is as follows:

Pre-school Education	-	271
Entrepreneurship	-	159
Professional English	-	1,967
Post-graduate Diploma in Education	-	1,388
Law (LL.B)	-	554 (only for 1st year)
Science Degree	-	1,487 (including Foundation Level)
Diploma in Technology	-	3,430 (including Foundation Level)
Engineering Degree	-	31
		<u>9,287</u>

The media of instruction used are as follows:

(a) Printed material

The main medium of instruction is the printed course material. Course material is prepared by specially selected course teams from both within and without, and every effort is made to follow the principles of instructional technology for distance study in the preparation of course material.

(b) Audio and video tapes

Audio cassettes are used to some extent to supplement printed material, and video very much less. The radio and television are not used as a direct medium of instruction, even though the OUSL does broadcast some general education material. Preliminary steps have been taken for the production and audio and video cassettes on a larger scale in the future. Since the academic staff has been trained in conventional Universities, efforts have been and are being taken to keep the lesson writers informed and instructed in the appropriate use of print and electronic media through workshops, seminars and handouts.

(c) Computers

Computers are not being used in instruction at present, and are as yet at an experimental stage as a medium of instruction.

(d) Face-to-face teaching

Face-to-face teaching makes an important component of instruction. This is done through workshops, seminars and laboratory work, the scope and frequency of which is determined by the particular character and needs of a program of study. (eg Face-to-face instruction is most frequent in the Professional

English programme as language teaching requires a large element of interaction with the teacher.)

(e) Two-way communication

Assignments form an important element in the teaching process. They are marked and returned to students with comments. Assignments carry a component of marks in the final examination grade.

(f) Regional services

The OUSL is presently being provided with a fully equipped Press, a Publishing Unit to handle the publishing aspects of instructional material, and an Audio Visual Unit to produce audio, video and other related material. A system of Regional Centres and Study Centres help to service the students in distant areas. They serve both as resource centres and as places where face-to-face instruction is provided. The establishment of a fully-fledged Institute of Instructional Technology is being seriously considered.

## 9.2 Distance Education for Teacher Training

Until recently the minimum academic qualifications required of persons seeking to enter the teaching profession was the General Certificate of Education (Ordinary Level). The required qualification is now upgraded to included passes in three subjects at the General Certificate of Education (Advanced Level).

There are over 28,000 untrained non-graduate teachers with only GCE Ordinary Level and Advanced Level qualifications. The Ministry of Education has embarked on a programme of training them through distance education methods. For this purpose the Ministry has set up a unit under a Director of Education, and has obtained aid from the Swedish International Development Agency (SIDA). The programme began in 1979 with courses for the training of school and regional administrators. The teacher training programme has five components as follows:

- (a) Printed material supplemented by audio visual material;
- (b) Assignments;
- (c) Contract lessons (at monthly intervals);
- (d) Local or Regional Centres;
- (e) Practical training.

The ministry programme started by training the trainers. Personnel necessary for the infrastructure of a distance education establishment such as those involved in the production of course material, their layout, printing and distribution, tutoring and evaluation and examination work were trained. In these tasks the Ministry was assisted by specialists from LiberHermods and the University of Lund. The inputs of these specialists have been most fruitful and they continue to be obtained.

The following courses of teacher education are currently being conducted for about 9,000 teachers:

- (a) Elementary education;
- (b) Mathematics education for secondary level;
- (c) Science education for secondary level.

### 9.3 Problems and prospects

Distance education in Sri Lanka, first introduced to meet pressing educational and training needs, is now about 20 years old. However, the inadequate understanding of the concept at various levels beginning with the general public has been a hindrance to its further development. This factor is at least partly responsible for the inadequate funding made available for the development of an inadequate infrastructure. This in turn makes it difficult for distance education institutions to serve their students as required. Hence, the prospects held out by distance education institutions as a solution to pressing large scale educational and training problems are not fully realised yet. However, steps are now underway to remedy this situation.

Training of educators is a serious problem. Most educators who come into distance education come with backgrounds in conventional education. Inculcating in them the concept and methodologies of distance education is a task to be undertaken if distance education institutions are to progress rapidly.

The electronic media are not adequately utilised in distance education at present. Audio, video and computers are used only sparingly or they are at an experimental stage. Investment in the development of these media could immensely help in the tasks undertaken by the distance education institutions.

At the OUSL there is a heavy bias in favour of Science and Technology in the structure of programs. This involves heavier expenditure and more complex teaching arrangements. Greater use of audio and video as well as computers, it is believed, could help overcome some of these financial and organisational problems.

Distance education offers solutions to the education of young hopefuls as well as those already employed. Opening avenues of obtaining a qualification for the young by developing new courses and programs can help the young. For those who obtain a qualification in the technical education system of the country as well as in the teacher education system, the OUSL could provide programs for further career development. For those employed with fully professional qualifications like engineers and lawyers, it could provide courses for updating their knowledge.

## 10. Conclusions

The Commonwealth countries in Asia can boast a few modest, reasonably successful initiatives in distance education; but, overall, there is

little. The need for more opportunities is particularly acute at higher levels, and two private initiatives are particularly important for the development of distance education both within the region and as a model for educational expansion elsewhere. The Open College in Hong Kong was the first such initiative. It is a parasitic institution, using courses from other institutions as well as the usual use of teachers from the formal sector as tutors in their spare time. The Open College is totally funded from student fees, and the cost per student for the equivalent of a one-year full-time degree is HK \$13,200 or UK £1,200 (1986 figures, considerably less than an average per student cost at the UK Open University of £1,800 per year)(1). The use of existing materials wherever possible can thus dramatically reduce costs. The second such venture, DISTED services in Malaysia, is still in its infancy.

## II. EXPERIENCE OF COOPERATION

### 1.0 Exchange of materials

In Asia the Open College of the University of Asia and DISTED services, Malaysia, operate by offering course materials developed by other institutions. The establishment of these systems is not simply a matter of purchasing materials, but relies on discussion and agreement between partner institutions. In the course of the establishment of DISTED services a number of key points for consideration or negotiation in similar ventures have emerged.

#### 1.1 Choosing partners

The selection of a supplying institution is affected by whether the local operation can grant its own degrees. Open College grants local degrees of the University of East Asia; DISTED services is not a degree-granting body, and therefore sought complete packages leading to graduation with the provider institution. Thus, its initial degrees will be Canadian or Australian. DISTED is, however, negotiating with Open College, and if agreement is reached DISTED students will also be able to opt for a University of East Asia package which in itself is composed of courses from several sources. It is also probable that the various providers of courses to DISTED will agree on cross accreditation, so that an Australian university will recognise Canadian credits, and vice versa. Initial discussions with the providers suggest that this will be acceptable.

#### 1.2 Gaining approval

For Malaysia, the financial advantages of DISTED services to the individual and the economy are considerable. Study with DISTED will cost about \$4,000 Malaysian a year as compared with \$40,000 Malaysian a year for a Malaysian in Canada. For Canada there are advantages too in being a partner. It is not at present possible to finance and

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(1) Open College figures from Don Swift; Open University figures from Ralph Smith, UK Open University, verbally presented in conference.

accommodate large numbers of Malaysians in Canadian Universities. It is however, possible that some Malaysians may complete split-site programmes, doing the first two years' study in Malaysia and a final year at a Canadian University. Thus, a reasonable programme for Malaysians can be sustained. For this to happen, it is necessary for DISTED to select degree packages where the credits will provide a good basis for transfer to face-to-face study. This arrangement may also result in higher standards of performance among Malaysians in Canada, as their performance will have been monitored prior to their arrival in Canada.

### 1.3 Selecting courses

The factors described above mean that there are several criteria for course selection. Student demand and suitability of course content are obvious requirements; accreditation patterns and possibilities are also crucial, especially for a non-degree granting organisation.

### 1.4 Assessment and registration procedures

Since DISTED students are attached to the providing institutions, arrangements have to be made to control progress and standards. The following arrangements have been made with the Open Learning Institution, the Canadian partner:

- \* registration needs to be direct with the provider, through DISTED services; a computer-based communications system is highly desirable for this;
- \* the contract between provider and user needs to agree procedures for appointing and monitoring local tutors;
- \* the contract needs to specify procedures for conducting examinations; in the case of DISTED services and OLI, examinations will be marked in Canada and no cheap and rapid means of transferring exam answers has yet been identified. Air couriers will be used.

### 1.5 Expansion

An initial agreement between partners can contain potential for expansion. The agreement between OLI and DISTED services makes DISTED the agent for OLI in Brunei and Singapore, although no services are as yet offered in these countries, and OLI is the agent for DISTED services for procuring courses from other Canadian Universities.

### 1.6 Problems

Some financial hurdles have been set before DISTED. It had to negotiate so that its students in Malaysia get the same tax concessions as other Malaysians paying for education from abroad. Another difficulty has been copyright payment. Provider institutions will have obtained copyright for the use of extracts only in the country of origin, Canada or Australia. These extracts may be

substantial where a course is designed as a study guide. The payment required to obtain rights for use in Malaysia (which, in fact, is best negotiated in terms of world rights) can be substantial, amounting to several thousand dollars. While costs will be recovered over a few years, this kind of capital outlay is difficult and out of line for a model of distance education which otherwise has low start-up costs.

## 2.0 Cooperation on training

### 2.1 Unesco

Unesco's lively programme to encourage innovation in higher education in the Asia/Pacific Region is described elsewhere in the paper on the SW Pacific, and involvement of various countries in the region has been mentioned earlier. All that needs to be said here is that the series of seminars has resulted in the production of some training materials for distance educators in the region, and has strengthened links between institutions and individuals who work in them.

### 2.2 Sri Lanka Ministry of Education: Swedish International Development Agency (SIDA)

The in-service teacher training scheme has been developed with the help of Swedish distance educators, funded by SIDA. A three-year scheme of support has included training courses in Sri Lanka and attachments for Sri Lankans in Sweden, in order to develop course design and production and administrative skills amongst project staff.

SIDA staff have also helped with some training at the Sri Lanka Open University, the Rector of the Fernuniversitet, Germany, has provided advice on the production of printed materials, while Japan has provided equipment and training for staff to use it.

### 2.3 Outside and international training

Training in distance education for individuals from the region has been insignificant, as far as recognised courses are concerned.

#### IEC courses

About seven individuals from the six countries have participated in either the ULIE/IEC four months course or Masters' courses, rather a small number.

#### South Australian College of Advanced Education

A diploma in distance education, to be studied at a distance, is available in some countries, but only one or two individuals from the region have enrolled.

#### University of Surrey

Parts of the diploma in the Practice of Higher Education, studied at a distance, were developed in collaboration with Malaysia, and

initially several Malaysians took the course. Numbers have now diminished.

### The Asia and Pacific Institute for Broadcasting Development

AIBD is based in Kuala Lumpur. Various broadcasting agencies in the region have a fairly close association with AIBD, and some broadcasters associated with distance education have attended its courses.

## 3.0 Personnel exchanges and training

Over the last few years, a major collaborative venture has taken place, with the Universiti Sains Malaysia and the Open Learning Institute, Canada as the main partners, together with other major and minor associated links. As this experience is of some importance as a model, it is described below at some length.\*

### 3.1 Initial steps

USM uses as course writers university lecturers from the mainstream. Right from the start of the Off-Campus programme, there was a serious need to reorient these part-time writers to their new job. Dr Dhanarajan as Coordinator of the science programme recognised this need and made efforts to develop a training programme. Up to 1982 there were three training workshops, two with UKOU consultants, and one with IEC. But occasional one-off workshops were not producing the goods - finished courses - and in late 1982 an agreement was reached with Australia for a long-term programme, followed by an agreement with OLI in 1983.

### 3.2 The components

#### 3.2.1 Component 1: The Australian agreement

Deakin University, Australia, offered to train social sciences and arts writers, two for each subject; Murdoch University would take maths and physics writers. A scheme was agreed for three years, with writers to be trained in Australia. Managers at USM would also have opportunities to visit Australia to broaden their perspective. The project was to be funded by the Australian Universities' International Development programme.

#### 3.2.2 Component 2: OLI/USM demonstration project

In 1983 a similar agreement was reached with OLI, funded at around \$50,000 Canadian by CIDA, to train two chemistry and two biology writers. A Canadian spent one month in late 1983 with USM starting with process, then the four writers came to OLI in early 1984.

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\* The account is based on an extended tape-recorded interview with Shannon Timmers of OLI and Raj Dhanarajan of USM.

### 3.2.3 Component 3: A three year OLI/USM agreement

The pattern was to continue with four people a year, and would also involve training the course developers, (that is, the Malaysians who would train other writers), supporting the development of materials, and upgrading the USM production system. As such it was a package to set the whole production process on a solid footing. This project was costed at about \$80,000 Canadian a year.

### 3.2.4 Component 4: Equipment grants

With the emphasis on course production, progress was held back as USM equipment needed upgrading. In 1984 two extra grants of \$75,000 Canadian were made to allow USM to upgrade its computing and word processing equipment and provide a facility whereby diskettes could be passed directly between OLI and USM. This extended to the introduction of laser printing at USM, so that a complete new production system could be linked with the writing.

### 3.2.5 Component 5: Technical assistance

OLI had experience in course development, media production and print production which could be of use to USM. There was also expertise with data processing, and scope for training middle level management. A new proposal was submitted to CIDA in 1984, but finally approved only in 1986. The budget was \$500,000 over 3 years, based on the same kind of counterpart system. This meant that from 1986 the exchange programme has changed, with counterparts agreeing on specific work plans for their period of partnership.

### 3.2.6 Component 6: Tripartite agreement

In 1984, OLI and USM had signed a memorandum of understanding. In 1986, this was extended to include the Universitas Terbuka in Indonesia. This agreement was to share course material, initially as training models, but also with a recognition that USM had strength in the sciences and UT strength in the arts subjects, which might lead ultimately to full exchange of courses. The OLI/UT training links, described later in section 6,9, were also, incidentally, timed so that Indonesians and Malaysians came to Canada together.

## 3.3 Comparison of approaches

The Canadian focus was on management of the course development process. Actual production was stressed, by making sure that a plan was made during the initial visit from Canada to Malaysia, and writers were required to complete two units before coming to Canada. During the two month period in Canada a large segment of the writing was completed.

In Australia, the maths and science writing went well. This was probably partly due to the fact that the syllabus was easily translated into a course design. In arts and social sciences, in contrast, considerable work was needed to develop a course design.

The arts and social science writers therefore started at a disadvantage.

With OLI, a clear plan was made at the beginning, and has been adhered to ever since. With Deakin, the plan changed every year, to try to produce more satisfactory results, but to little positive effect.

Another difference was in the approach. The Australians, and Deakin in particular, put the emphasis on training and research, as a preliminary to effective writing. OLI on the other hand had production as a priority. In fact a modelling system was introduced on the microcomputers for developing the course units, which resulted in greater productivity without any loss of quality. This technique also had an enduring benefit in that writers learnt to handle word processors.

A further difference related to openness. OLI and USM freely exchanged reports on progress. USM hardly ever saw a paper from Deakin. This made sensible development difficult. At the back of this was, probably, lack of understanding of differences of procedure, in that the Australians may not have realised that reports to senior personnel in Malaysia would not automatically reach the actual practitioners.

Deakin University used a team approach to course development, while the other institutions used a partnership of editor and writer. The USM writers sent to Deakin attended seminars on programme development, when they had expected simply to get down to writing.

### 3.4 Results

#### 3.4.1 USM

USM now has about 25 good science courses, and 10 good non-science courses. Now after several years of the Off-Campus programme it has a slate of materials that can stand comparison with any. It also has equipment to support its production system, and uses an established model for course design which encourages a high standard.

The achievements in course production are varied. 16 writers in all were attached to OLI and 16 to Murdoch, and 75% of these produced good materials. 36 non-science writers went to Deakin, and only a handful produced good materials, with only about three excellent ones.

The innovations in course development methods and the acquisition and use of new equipment have improved overall productivity and quality at USM. The Off-campus Unit has been able to shift from traditional methods of publishing to modern 'desktop' approaches, with resultant reductions in production time, combined with a better product.

The use of new technology has had an impact on USM as a whole, for example the registration system has been streamlined.

### 3.4.2 OLI

Involvement in the project has brought benefits to OLI staff in the form of job satisfaction. At a time of lack of job mobility in Canada, staff have had the opportunity to take part in a stimulating partnership. Those that have had contacts with Malaysians have frequently gained new enthusiasm, confidence, and an assurance that their skills are of value. There is a noticeable increase in productivity among staff after such contacts, although this has to be set against the loss of the labour during consultancy work.

### 3.4.3 General

OLI and USM have developed a system which uses a computer to provide a framework for the construction of units. In contexts where writing tends to be concentrated in short bursts at workshops or during attachments, this modelling system has proved of great value. It also promises well as a model of course development for the region, well-suited to large open universities which need to develop a big range of materials rapidly. The project has combined training in course design and writing with the introduction of suitable easy to use production technology.

## 3.5 **Contributions to success**

In assessing the OLI/USM partnership, it seems best simply to list points which may have contributed to the success of the venture. Future collaborative projects could serve to confirm which of these features are critical for success.

- \* The partners were prepared to act before the money came;
- \* Personal partnerships and agreements were critical;
- \* Liberal communication between partners was essential. This needed to include visits by co-ordinators in both directions. A recent innovation has been the requirement that the Malaysian co-ordinator accompanies trainers to Canada, in order to follow up training effectively;
- \* The partner institutions discovered that skills in all sorts of activities could be shared: counterpart relationships were beneficial in technical areas such as printing as well as in course design;
- \* The partners needed to be ready to extend and change the agenda, but in a planned way, and with an understanding that the relationship would eventually dissolve;
- \* The groups from Malaysia were sufficiently united to be able to share their skills, such as skills at the keyboard for word processing and skills in English to help the less experienced to participate fully;

- \* The contrast between the science and arts courses is interesting. While at this stage, judgements on the quality of courses are based on assessment of materials rather than students, the initial reactions suggest that we need to lay a ghost. Conventional wisdom says science is more difficult to teach at a distance than arts; experience says science materials are easier to write well than arts. A sensible conclusion to draw is that a great deal of the fuss made over teaching science at a distance is unnecessary.
- \* The Canadian co-ordinator visited Malaysia regularly before exchanges took place, partly to plan programmes, but also to assist in the nomination of suitable candidates and to become aware of their roles and training needs;
- \* The Canadian approach aimed to develop individually tailored programmes, with a one-to-one link between individuals. The approach was to respond to the needs of USM rather than to start with a model to attain;
- \* The responsiveness of CIDA as the funding agency enabled the partners to adapt the programme rapidly. CIDA in Canada and the High Commission in Malaysia were equally helpful.

### 3.6 Difficulties

The partnership has faced many difficulties. Those that deserve particular mention are:

- \* Staffing of training programmes. OLI is a working institution, not a consultancy body. Its staff are in touch with day-to-day practice of distance education and are thus ideally placed to advise others; at the same time, they have skilled in certain aspects of distance education; second, a training assignment may require someone to leave a job half done at a point where another cannot easily take over.
- \* The administrative burden on the co-ordinator at OLI becomes greater, the more different functions and different institutions are involved. This means that while more trainees apparently bring economies of scale, such economies are countered by increasing stress for the co-ordinator. To indicate the changed magnitude of activity, six transatlantic journeys in 1985 have grown to about 75 in 1986, including a second Asian link project.
- \* Where the contacts are concerned with course development, it is important to ensure that linked institutions have adopted similar patterns of course development. One probable reason for the relative failure of the Deakin/USM link, was the mismatch between the course team approach used by Deakin and the course adviser approach used by USM.
- \* varied individualised training programmes are difficult to conduct without good training materials. OLI has felt the lack

of a comprehensive bank of materials.

- \* because of the nature of USM's programme, it is difficult to assert that the link is cost-effective. The University obliges the off-campus programme to include courses for topics of minority interest at high levels. The costs of the strategy, if it is to be assessed as a model, need to be separated from the actual per student costs, in cases where student numbers are very low.
- \* with four institutions in three different continents involved, a meeting between all four has not been possible.
- \* selection of candidates for training becomes an issue over the long-term. In the initial years, groups emerge; later, it becomes more a matter of selecting individuals who have not yet had a turn, which can result in groups which lack cohesion and are of variable quality.

#### 4.0 Adaptation of materials

To help the Open University of Sri Lanka to develop a mathematics foundation course, the British Council funded collaboration between UKOU and OUSL staff to adapt selected UKOU courses for use in Sri Lanka. The courses had to be fitted to the context and altered to print-based rather than multi-media materials. UKOU lecturers visited Sri Lanka regularly and worked with Sri Lankan lecturers until the materials were complete. OUSL now feel that this collaborative experience was useful to them in that through it they acquired course material that could serve as a model for other courses. As a method of acquiring a course, however, they found it unsatisfactory, as it was laborious and time-consuming.

#### 5.0 Collaboration on research

- 5.1 A multi-country research programme, sponsored by International Research and Development Centre, Canada, is currently nearing completion. The project started in 1984, and is due to finish in 1987. It started as a result of a contact between Dr Dhanarajan of the Universiti Sains Malaysia and the IDRC Social Science division. Discussions concerning the need for research in distance education led to a meeting in Penang Malaysia, which various Asian distance education institutions were invited to attend bringing with them proposals. Four institutions arrived with proposals; the Allama Iqbal Open University, Pakistan; the Universitas Terbuka, Indonesia; the Sukhothai Thammathirat Open University, Thailand; and the Universiti Sains Malaysia. A representative of the Open Learning Institute Canada also attended, and has remained associated with the project throughout as research adviser, with Dr Dhanarajan of USM as co-ordinator. The various projects are as follows:

STOU, Thailand: a study of the impact of STOU graduates in Thailand, considering how far the expectations of both the students and their employers have been met, and the attitudes of

employers to STOU. Two researchers are working on the project which is nearly complete.

UT, Indonesia: an investigation of alternative student support systems, comparing group study with four different kinds of leadership: a university lecturer, a graduate teacher, a senior student from the formal system acting as mentor, and finally a study centre with no formal arrangements. Two researchers are working on the project which is nearly complete.

USM, Malaysia: the research aims to improve the quality of instruction and of delivery through a study of student characteristics. These will be related to their styles of learning and their conception of the learning system, and correlated with exam results. Four researchers are working on the project and it is nearly complete.

AIOU, Pakistan: the research is a study of dropouts. Two researchers are working on the project, which will be complete some time in 1987.

The research projects are each intended to take two years. The researchers meet annually to discuss methodology, and are also able to visit each other.

The project is funded at \$250,000 Canadian altogether. This will cover research over two years at all four institutions, with an equal division of the money, funds for three methodology meetings, visits to each other, consultancy and publication results.

So far, the project goes well. The group has been able to agree on research areas and methodology for all four projects, and has developed useful instruments and approaches to analysis. It is hoped that the programme will expand on completion of the initial phase, and develop into a comprehensive regional research network concerned with open learning in Asia.

5.2 A meeting in 1983 between representatives of the Universiti Sains Malaysia, the Open Learning Institute, Canada, and the University of the South Pacific looked at possibilities of course transfer in science subjects. Research ideas generated at this meeting are still to be followed up.

#### 6.0 Other Asian links with Commonwealth Countries

6.1 UKOU/STOU: credit transfers at masters level. An agreement is being sought by STOU on a co-operative project to offer credit transfer for Masters' level courses in science and technology. STOU also forms one of its English courses from BBC materials.

6.2 University of Guelph/STOU: The two universities are currently signing agreements on co-operative programmes in the areas of non-traditional and educational delivery systems, the application of communication technology, an approach to computer-based learning materials, a post

graduate degree training, an exchange of educational and scientific materials, and an exchange of personnel.

- 6.3 AIOU/UKOU: Since its foundation, the Allama Iqbal Open University has received regular assistance and advice from the UKOU, funded by the British Government. In the early days, this meant both long-term attachments of OU staff in Pakistan and short consultancies, as well as training visits for AIOU staff to Britain. Substantial though reduced support is still provided.
- 6.4 AIOU/IEC: the International Extension College was asked to assist AIOU in developing a Functional Education Project for Rural Areas. A staff member was seconded and regular additional consultancy provided throughout the pilot period. The programme has been run entirely by the university since 1985. In addition, AIOU staff have regularly attended the IEC/ULIE annual course in distance teaching since 1977.
- 6.5 Korea Air and Correspondence University/UKOU: There have been exchanges of academic staff since 1985, and a similar exchange is expected to take place in 1987.
- 6.6 STOU/Indira Gandhi Open University: Exchange visits have taken place between Universities since IGNOU was established.
- 6.7 CTVRU/World Bank-British Council: Assistance from the World Bank and the British Council has led to considerable involvement of British distance educators in supporting distance education in China. Most contact has been with the UKOU.
- 6.8 Visayas State College of Agriculture, Philippines and Massey University, New Zealand: Massey University has helped to establish a post-graduate programme in agricultural extension; this is described in the regional paper on islands in the South West Pacific.
- 6.9 OLI Canada/Universitas Terbuka, Indonesia: The Indonesian Open University (UT) has received assistance from various aid agencies and distance education experts from open universities and other institutions within and outside the region. A major project of support has been funded by the Canadian International Development Agency. It stretches over four years, with the expectation that Indonesia will develop its own management and technical capacity in distance education over that period. It involves UT and three Canadian institutions: the University of British Columbia, Simon Fraser Institute, and the Open Learning Institute. Components include:
  - \* Masters programmes in Canada for younger staff on distance education management;
  - \* assistance with developing the registration system;
  - \* development of the examination and testing system;
  - \* assistance with developing new programmes;

- \* ventures in sharing courses;
- \* specialised technical training, eg in editing, course design, computing and data processing;
- \* a feasibility study on the possibility of using OLI English as a second language materials at UT.

The link with OLI has led to contacts with USM, considerable sharing of experience between the three institutions, and possibilities of materials exchange between the two Asian institutions.

## 7.0 Regional initiatives in collaboration

### 7.1 DECASIA

The Distance Education Council for Asia was established as a regional association affiliated to International Council for Correspondence Education after the world conference in 1978. Initially, it seemed set to be dynamic and useful; but as several officers moved on to new jobs during their period of tenure, the Council lacked a stable leadership and never took off. An attempt is currently being made to establish a new grouping of Open Universities in Asia. Such an organisation could stimulate co-operation.

### 7.2 Asian Development Bank

Unesco's role in regional co-ordination has already been mentioned under training. More recently, the Asian Development Bank has expressed an interest in promoting the development of distance education in the region and in supporting collaboration. As witness to their seriousness, the ADB in co-operation with Unesco regional Office Bangkok and collaboration with STOU, Thailand, mounted a regional seminar on distance education in Asia in November 1986. This may lead to further substantial support from ADB to distance education in the Asia-Pacific region.

## III. POSSIBILITIES FOR NEW INITIATIVES

### 1.0 Planned initiatives

- 1.1 Unesco policy: As mentioned in the paper on the South West Pacific, the Regional Office for Unesco has already provided considerable support to promoting co-operation in distance education in the Asia and Pacific region, and intends to continue this over the next few years. Higher Education and distance education at other levels are treated separately.

Unesco is particularly concerned that distance education should be used to address certain large sectors of the population which are particularly in need of assistance:

- \* out-of-school children (here, distance education is seen as a mean to increase the teacher supply and improve the quality of teaching);
- \* the rural population;
- \* those migrating from rural areas to cities;

The four priorities for the next few years are:

- \* Universal primary education;
- \* Reduction of illiteracy;
- \* Strengthening the link between education and work;
- \* Assessing the implications of advances in technology, especially communications technology, and its usefulness for education.

Recently, Unesco has designated the Sukhothai Thammathirat Open University as the 'lead institution' in distance education in the region, and the University's Office of Documentation and Information is aiming to build up a resource collection in distance education.

## 1.2 The Asian Development Bank

The Asian Development Bank education division gives priority to supporting projects and providing technical assistance in the following areas:

- \* technical and vocational education at secondary and post-secondary levels;
- \* strengthening infrastructures through establishing resource centres, designing curricula, developing instructional materials, and promoting in-service training;
- \* strengthening science education at secondary level.

In its current review, the ADB is interested in distance education as a cost-effective method of increasing access to education and improving quality.

The ADB will be preparing a new education sector policy paper during 1987 and it is likely that, as a result of the November 1986 seminar, this will include recommendations concerning the development of distance education in the region. These are likely to relate to sharing of information, staff training, promotion of research, and the greater use of new technology, including use of satellite and computer-based communications. Consideration may be given to the idea of establishing a regional centre for distance education.

### 1.3 AMIC

In recognition of the need for staff training in distance education in Asia, AMIC in collaboration with OLI, Canada and the International Extension College is running a seminar in mid 1987 which will explore in depth with senior management of distance teaching institutions their needs for staff training, and will result in a full and detailed long-term plan for training of producers of all kinds of course materials in the region.

### 1.4 The Open Universities

The Open Universities in Asia are in the process of forming a new association. Its objectives are not yet known.

## 2.0 Proposals for consideration\*

### 2.1 A regional centre

There is a strong expression of a need for a regional centre for distance education, which would collect and distribute information, hold resources, co-ordinate and provide training and promote research. It is possible that an organisation within the region may establish such a centre, but this could take some time. Meanwhile, a mechanism is needed to tap for the benefit of others the expertise and resources which are already available in the continent.

### 2.2 Strengthening distance education in science and technology

Suggestions for this have ranged from generalisations to specific ideas such as trying out mobile laboratories or experiment units, or encouraging greater exchange of materials between institutions. In fact, the Commonwealth countries in the region include two institutions which are particularly strong in science teaching, the Sri Lanka Open University and the Universiti Sains Malaysia, and some work has already been done on extending possibilities for exchange (see II 1.5.2). The next stage could be an action research project to develop techniques for improving science and technical education at a distance.

### 2.3 Strengthening regional and student support services

Many Asian distance education systems use a model of distance education which relies little on individual correspondence tuition but concentrates rather on study centres. There is considerable scope for the use of communication technologies to improve services in study

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\* The proposals included in sections 2.1, 2.4 and 2.5 may be put to ADB, and liaison with its Education Sector director is recommended during any discussion of these matters.

centres; and some interest in this has been expressed within the region. For example, the Sri Lankan Ministry of Education would welcome initiatives to help develop regional services in education. The telephone system has good coverage nationally with direct dialling. Sri Lanka has already made some studies of the potential of teleconferencing, and is interested in developing this and also investigating the potential of computer communications.

#### 2.4 Extending communications by satellite

There is considerable interest in the region in the use of satellites to support distance education. This is linked with a concern that most distance education opportunities in the region do not reach the most disadvantaged groups, such as rural women or people in remote areas. Plans are being developed for substantial feasibility studies which should specify the most appropriate forms of satellite-based distance education and identify the nature of technical assistance required to establish and maintain such systems. Meanwhile, there is scope for pilot projects in satellite use in the region.

#### 2.5 Developing resources for television for distance education

It is expected that the studies in 2.4 will suggest the establishment of a video training and production centre. If such a centre were to produce a hundred acceptable video programmes a year, initial estimates suggest start-up costs of US\$ 10,000,000 and annual running costs of US\$ 20,000,000 (estimates by ADB and Development Education Communications Unit, Ahmedabad).

#### 2.6 Strengthening the private sector

The Open College model of distance education has been successful in Hong Kong and has now been adapted for Malaysia. There is scope for further initiatives, probably in Asia initially in the private sector, with Singapore and Brunei as possible candidates. (There are of course other candidates for such an initiative elsewhere in the world, including some in the state sector.) Either of the existing services could assist with expansion elsewhere, with modest assistance needed to publicise the service and start it up. Appendix 2 to this paper contains a proposal for a possible Commonwealth initiative to provide a similar service internationally.

#### 2.7 Strengthening research

A specific contribution to strengthening Open Universities in the region would be to encourage further research projects, as the IDRC-funded project comes to an end and new proposals are developed. A second phase of research could also extend to non-university sectors, establishing a network and following procedures as described in I 1.5.1.

## 2.8 Training

2.8.1 Training of staff for distance education is widely recognised as a major need. While there are some international training programmes available (see I 2.1 and 2.3) and some bilateral training projects (see I 2.2 and 3), there is a need for much more training, including locally based courses. Section II 1.3 describes plans for identifying training needs, developing a programme, and preparing costed proposals.

Such a programme will need training material, and there is a case for a world survey of existing materials and the development of a bank of materials, including some commissioned where none exist at present. Such a project could be linked with the AMIC/IEC/OLI training project.

2.8.2 Some countries want local training facilities for senior professionals; for example, Sri Lanka has no facilities for university training of educational technologists.

2.8.3 Finally, inter-institutional visits are seen as an important component of or alternative to formal training.

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