PAPER 1

DISTANCE EDUCATION IN AFRICA

Tony Dodds and Solomon Inquai
International Extension College, Britain

CONTENTS

CHAPTER ONE

DIGEST

The subject of this paper is the experience of distance education in the Commonwealth countries of Africa. Their educational development, however, is not essentially different from that of the rest of the continent. Nor is their experience of distance education. Though most of the examples quoted are from the countries of the Commonwealth, there are occasional references to such developments in other countries as are thought to be particularly relevant to them.

The paper starts with a brief review of educational patterns of development in Africa as a whole. It goes on to trace the historical development of distance education programmes, particularly in Commonwealth countries, over the past two decades, and to pick out the main trends which have emerged. The first section ends with an analysis of the major problems it has faced and the gaps in its provision. The second section examines the experience of co-operation in distance education in Africa. It suggests, on the basis of this analysis, and of the conclusions of the first section, a framework for further and more fruitful co-operation in distance education between African countries as a whole, and, in particular, between the countries of the Commonwealth within Africa and, in a few respects, between Africa and the rest of the Commonwealth.

1.0 PATTERNS OF DEVELOPMENT

1.1 General Trends in Educational Development in Africa: Priorities, Needs and Problems

Most of the Commonwealth countries in Africa gained independence from Britain in the 1960's; only Zimbabwe was nearly 20 years behind. The educational pre-occupation in the immediate post-independence period of these states was to expand their base, and to ensure that more children could go to school. All the countries were committed to universal primary education (UPE) by 1980 in accordance with the Addis Ababa agreement of 1961. The most pressing demand, however, was to expand the number of places available at the secondary level so as to increase the pool of potential middle-level manpower available either for direct recruitment into the civil service or for further training. Requirements for high level manpower were met by establishing universities and polytechnics, and by sending an increasing number of their nationals abroad for further education and training, though this trend has begun to be reversed during the 1980s.

Commonwealth countries in Africa, in their attempt to achieve their educational goals of UPE, expanded secondary education and created institutions of higher learning. As a result they were soon spending an inordinate proportion of their recurrent budgets on education, ranging from 10% to 23%.

The most widespread result of this commitment to education has been the unprecedented physical expansion of education at primary level. Today, with the exception of one or two countries, the gross enrolment rate is very high, showing that most countries have reached or are about to reach UPE. The participation of women is about half of the total enrolment in nearly all the Commonwealth countries, (see table 1).

Secondary education, which in many countries, includes vocational, technical education and teacher training, has also made impressive progress. However, the expansion has not been able to keep pace with the ever growing demand for secondary school places which comes as a result of the expansion of primary education. The gross enrolment rate at this level varies markedly from country to country ranging from as low as 3% and 4% in Tanzania and Malawi to as high as 51% in Mauritius. However, for most countries, it is near or just above 20%.

All the Commonwealth countries have today more than one institution of higher education, either universities or polytechnics. Most of these have been developed in the post independence period. The gross participation rate at the tertiary level, however, is below 1%, which is miniscule by any standard. As a result, all the countries still fall far short of meeting their high level manpower targets, as is evident from the continuing need to recruit more expatriate staff, though there is evidence that this is now beginning to fall.

Impressive as this growth has been, it has various limitations which are outlined below:-

1. Despite the rapid numerical growth in enrolment at secondary and tertiary level, countries have not been able to cope with the demand for even more places. This is caused by the huge increase in the number of children completing primary education. As a result, the proportion of school leavers finding places in secondary school is declining. In Zambia, for instance, this has gone from as high as 31% in the early years of independence to around 20% in 1983. An important exception to this, as in other trends, is Zimbabwe. There, after independence in 1980, there was a simultaneous commitment to universal primary education and to universal, or near universal, lower secondary education. In 1985, over 80% of primary school leavers found places in secondary school. In general, however, educational expansion has a rolling effect: the expansion of secondary schools also brings more pressure for places at the tertiary level. Secondary and tertiary level education are expensive to establish and sustain. Many countries have come to realise that their economies cannot cope with continued expansion without severely undermining other services. Such constraints also work backwards: because places are limited at tertiary level, it is not possible to produce enough teachers to staff the secondary schools. The high cost of providing such services, moreover, combined with the lack of job opportunities to absorb secondary level graduates, has made some countries hesitate about further expansion at this stage.

TABLE 1

Gross Participation rate by level (1983)

COUNTRY	PRIMARY		SECONDARY		TERTIARY	COMMENT
	Enrolment as gross % of total age group	% of females in total enrolment	Enrolment as gross % of total age group	% of females in total enrolment	Enrolment as gross % of total age group	
Botswana	96	53	21	54	1.6	
Gambia	68	38	19	31	-	
Ghana	79	44	38	37	-	
Kenya	100	48	19	40	0.9	
Lesotho	110	57	19	60	-	1982 figures
Malawi	65	42	4	29	0.4	1982 figures
Mauritius	112	49	51	47	0.6	
Nigeria	98	-	-	-	2.5	1981 figures
Sierra Leone	45	-	14	-	0.6	1980 figures
Swaziland	111	50	43	50	-	
Uganda	57	43	8	33	0.6	1982 figures
Tanzania	87	49	3	35	0.4	
Zambia	94	47	17	36	1.6	
Zimbabwe	131	48	30	41	2.6	
Seychelles	-	49	-	50	-	

2. We have seen that after independence the initial preoccupation was with the physical expansion of education. This was often at the expense of its quality and relevance. Studies have indicated clearly that the quality of primary education in particular leaves much to be desired. This is a consequence of the low level of educational attainment of primary school teachers. Many countries in their bid for rapid expansion of primary schools have continued to recruit trainees with lower secondary, even primary education qualifications, and to employ school leavers directly in the teaching corps. Another major problem affecting quality at the primary level is the lack, or at least, the paucity, of books, audio-visual materials and other resources that could enhance teaching and learning. Children often do not even have a copy of the official text books, let alone access to any additional resources. While ways have been found to expand the teaching force and initial training facilities, there remains a serious lack of continuous in-service upgrading courses and the linking of such work to new curricula and the production of new materials.

3. Education has developed in an hierarchical pattern: it prepares students for its own next stage. There has been much talk about the relevance of education to life after school; indeed a few sector reviews have actually taken place, for example in Botswana, Sierra Leone, Zambia, Tanzania and Nigeria, to examine education from this point of view and to suggest reforms. Yet in most countries, education remains tied to the form if not the spirit inherited from the colonial days. Education at all levels is too general, its emphasis is on arts and social sciences, rather than on science and technology; agriculture and rural development and the upgrading and diversification of traditional rural skills have little place in formal education. The emphasis is on the urban orientated modern sector of the economy and on only a limited part of that. The number of places in secondary and tertiary education devoted to science and technology is severely limited. In the secondary school, over 90% of the students are pursuing general secondary education and the remainder are divided between teacher training and vocational and technical education, (see Table 2).

4. Finally, countries have a very limited capacity to provide for the training of personnel required for rural development. There are very few agricultural extension, health education and general adult education or non formal education workers in the field. They suffer from low level training, and there is almost no provision for in-service up-grading. Yet the bulk of the population in all African countries is rural, poor and practices subsistence agriculture. Resources for education directed at the rural adult population, are very much smaller however, than those provided for school education. As long as a very high proportion of today's children cannot progress beyond initial primary education which gives little preparation for life in rural areas, the dichotomy between urban and rural development will continue to grow. In such circumstances, adult education is

TABLE 2

Education at the Secondary Level (1983)

COUNTRY	Total Enrolment	% F	General	% of total	Teacher Training	% of total	Vocational	% of total	Remarks
Botswana	25 010	54	22 252	89	948	4	1 810	7	
Gambia	14 430	31	13 390	93	124	1	916	6	
Ghana	753 660	37	725 831	96	12 893	2	14 941	2	
Kenya	513 033	40	493 710	96	13 792	3	9 531	2	
Lesotho	28 717	60	27 799	97	-	-	918	3	No figures for teacher training
Malawi	21 646	29	19 832	92	1 300	5	514	2	
Mauritius	77 838	47	77 188	99	-	-	650	1	No figures for teacher training
Nigeria	1 826 629	-	1 526 947	84	242 190	13	57 492	3	
Seychelles	3 569	53	2 605	73	210	6	754	21	
Sierra Leone	63 157	-	60 285	96	1 959	3	914	1	
Swaziland	28 292	-	27 801	98	307	1	184	1	
Tanzania	81 787	35	71 219	87	9 404	11	1 164	1	
Uganda	145 387	33	132 051	91	9 157	6	4 181	3	
Zambia	110 729	36	104 859	95	3 554	3	2 316	2	
Zimbabwe	316 435	41	316 104	99.9	-	-	331	0.1	No breakdown except for 331 women following vocational course

vital to development. Both improved training for rural extension staff and adult educators and increased resources for the services they provide, are equally necessary.

1.2 The Historical Development of Distance Education in Africa

In 1966, Lars-Olof Edstrom of Hermods-NKI, a large and well known Swedish correspondence institute, undertook a study on 'Correspondence Institutions in Ethopia, Kenya, Tanzania, Malawi, Zambia and Uganda: Experience, Needs and Interest'(1), for the Dag Hammarskjold Foundation. This was in preparation for a seminar to be held in Uppsala on the same subject which, in the event, turned out to be two seminars which were held in 1967 and 1968. These attracted participants from both East and West Africa and provided an important stimulus for the development of correspondence programmes in many Anglophone African countries. The seminars also led directly to the only serious continent-wide attempt to create a structure for co-operative activity in distance education, the African Association for Correspondence Education, (see below). Edstrom found that at that time, there were three public correspondence Colleges in the region: the Zambian National Correspondence College set up in 1964, the Correspondence Unit of the Co-operative Educational Centre, Moshi, Tanzania, also operating since 1964, and the Malawi Correspondence College, established in 1965. Several small experiments, however, had been held in Ethiopia and in Uganda, and in all six countries plans for national correspondence programmes were at various stages of elaboration.

In Commonwealth countries of West Africa, and Southern Africa outside the Republic of South Africa, there were no public correspondence programmes at that time, though a few francophone countries had, in the early '60s, begun to develop specialised teacher or civil servant training programmes by correspondence, modelled closely on, or actually attached to, metropolitan French public institutions. INADES, (Institut Africain pour le Developpement Economique et Sociale), had also been set up in 1962 in Abidjan with its unique programme of simple correspondence courses on basic agriculture for peasant farmers throughout francophone West Africa.

By then, however, throughout at least Anglophone Africa, correspondence courses from mainly metropolitan commercial correspondence colleges had a long history. Many of the first generation of independent Africa's teachers, senior civil servants and political leaders had struggled to obtain the necessary qualifications for advancement through Wolsey Hall, Rapid Results, Metropolitan College or British Tutorial College. There was a large and lucrative market in providing secondary education to adult Africans for whom no secondary school places had been available.

The mid 1960s, then marked the take-off point for public interest in correspondence education by African ministries of education and manpower development. The huge pressures for rapid educational expansion, and strictly limited budgets, forced planners to look for cheaper alternatives to the formal, traditional education systems. In

1966 we have seen, there were only 3 public correspondence programmes in Commonwealth African countries. (2) By 1977, there were already 12 (33 in Africa as a whole). In fact, only three Commonwealth countries in Africa, Gambia, Sierra Leone and the Seychelles do not now have public correspondence education programmes. These figures show the very rapid growth in Africa of one kind of distance education.

It is more difficult to give the precise figures for other forms of distance education programmes. Schools broadcasting closely modelled on the BBC in UK, was introduced into most Commonwealth countries immediately before or soon after independence. By 1966, all Commonwealth countries in Africa had schools broadcasting units except Botswana, Lesotho and Swaziland and several had developed agricultural or health information services, producing radio programmes, posters and informational booklets and, in a very few cases, films for use in mobile cinema vans, to support general adult education services.(3) Most of these projects either used distance media to enrich face-to-face classes in schools, or formed part of a general open information service rather than an element in a structured and organised educational programme.

There have been two exceptions to this generalisation. In 1973, the Mauritius College of the Air launched a series of multi-media programmes to raise the quality and increase the relevance of teaching in private secondary schools in Mauritius. Their programmes consisted of television series, radio series and correspondence-type materials for use in class with teachers as supervisers and leaders. There, and in a more recent development in Kenya, broadcasting has been used as the main teaching medium. The Radio Language Arts Programme in Kenya ran from 1980 to 1985 and used radio to provide improved English Language teaching in some primary schools. In this model, radio is the main teacher, and the teacher provides tutorial support to students. As a result, radio provides a carefully structured core to the whole course. To be effective, it must be used in its entirety. The Kenya programme grew out of experience with a similar approach used with maths teaching in Nicaragua, and a further development is likely to be launched soon in Lesotho applying the methodology to primary science teaching.

During the late 1960s and early 1970s there was an explosion in public secondary level correspondence education. Most programmes aimed initially to provide opportunities for working adults to obtain secondary school qualifications they had not had earlier in their lives, but many have expanded their programmes to primary school leavers and secondary school dropouts. Several programmes were aimed mainly at practising primary school teachers, to serve as upgrading courses. A few initial teacher training programmes, linked to sudden and massive moves towards universal primary education, have been set up in the late 1970s and early 1980s. Most programmes have, at some stage, added radio support series to their printed courses. Table 3 shows the chronological development of these programmes, their target audiences, purposes and media used.

This growth of public correspondence institutions inevitably affected the development of the commercial schools. In Tanzania and Zambia for example, governments, as they established their own colleges in the late '60s and early '70s, set out to restrict or even ban the import of correspondence courses from abroad. This was done through foreign exchange restrictions. Some foreign schools attempted, with varying degrees of success, to circumvent these restrictions by setting up locally-registered branches. In other countries, especially those without secondary-level government institutions such as Nigeria and Zimbabwe, indigenous commercial colleges grew up in the early '70s and early '80s respectively, to take the place of, or at least to compete with the external schools. Commercial colleges, both external and indigenous, have concentrated on courses appealing to the largest potential markets, namely those leading to secondary examinations or, in a few cases, business qualifications. In both Nigeria and Zimbabwe during the last 5 or 6 years, the governments have set up accreditation councils through which the courses, and the practices of commercial colleges can be inspected and, at least to some extent, controlled.

At the tertiary level, the development of distance education has been much slower and more spasmodic. Two universities, Zambia and Lagos, were established with a commitment to expand their coverage by correspondence education written into their constitutions. The University of Zambia did so almost immediately, in 1967. The University of Lagos set up its Correspondence and Open Studies Unit in 1975. The only other university degree programmes in Commonwealth Africa have just been launched by the University of Nairobi, in Kenya, in 1986 and, in a limited number of professional education degree and diploma courses, by the University of Zimbabwe. During the last few years however, pressure has begun to mount in several countries for example in Ghana, Tanzania and Zimbabwe, for more such programmes in response to the growing demand for more university places, the need in many countries to contemplate the foundation of new universities and the international glamour attached to the British Open University and others which have been modelled on it. As yet, however, independent Africa, unlike most other continents, has no exclusively distance teaching university, though a plan was launched for a Nigerian Open University which was abandoned for reasons of cost.

At the other end of the educational spectrum, distance teaching techniques have been widely used for nonformal education in Africa. As already stated, many countries set up Health and Agricultural Extension Information Departments producing films, radio series, pamphlets and posters during the '60s. In several a more organised and systematic use of distance media has been made in agricultural or health education. Radio Farm or Rural Forums programmes were launched in Ghana, Zambia and in Nigeria in the late '60s and, at least formally, such programmes survived to the end of the '70s. In Tanzania, after several small scale experiments in the late '60s, a series of mass radio study group campaigns were organised during the '70s on health education, nutrition and afforestation. A similar pattern was adopted in Botswana in the mid '70s and from 1982 to date the same methods have been used in Zambia for national co-operative

TABLE 3

Growth of Public Secondary Correspondence Education

Date of Launch	Country	Institution	TARGET AUDIENCE				PURPOSE			MEDIA USED		
			Working Adults	Teachers	Teacher Trainees	Young Adults	Sec. School Qualif-cation	Teacher Up-grading	Initial Teacher	Corres-pondence	Radio	Face-to-face
1964	Zambia	National Correspondence College	x			x	x			x	x	x
1965	Malawi	Correspondence College & Broad-casting Unit	x	x		x	x	x		x	x	x
1967	Nigeria	Ahmadu Bello University TISER		x				x		x		x
1968	Kenya	Univ.of Nairobi Inst.Adult Studies CCU	x	x			x	x		x	x	x
1968	Uganda	Makere Univ. Centre for Continuing Ed.	x	x			x	x		x	x	x
1968	Botswana	Francistown TTC		x				x		x		x
1970	Ghana	Univ.Ghana Inst Adult Ed CCU	x				x			x		
1971	Tanzania	Inst.Ad.Ed.Nat Corres.Inst	x		x		x		x	x		x
1972	Mauritius	College of Air	x	x			x	x		x	x	x
1972	Swaziland	Wm Pitcher TCC		x				x		x		x
1973	Botswana	Botswana Ex.Col	x			x	x			x	x	x
1974	Lesotho	Dis.Tch. Centre	x	x		x	x	x		x	x	x
1974	Swaziland	Int.Ed.Centre Emlalatini Dev. Centre	x			x	x			x	x	x
1977	Nigeria	Nat.Teach.Inst.		x	x			x	x	x		x
1981	Zimbabwe	ZINTEC (Zimb. In-serv.Teacher Ed. Centre			x				x	x		x

education campaigns.

An important theme of this paper is the experience and potential of international co-operation in distance education. An interesting historical perspective to the development of distance education in Africa is therefore the role of international co-operation. This section of the paper opened with a reference to the two Dag Hammarskjold seminars on correspondence education in Africa in 1967 and 1968 and to their impact on the growth of correspondence programmes in the various countries represented. Most co-operation, however, has been bilateral technical co-operation between non-African and African institutions.

There were three important influences on the development of correspondence education in Africa in the '60s: America (inter-university co-operation with Ahmadu Bello University in Nigeria and with Nairobi University College in Kenya), Australasia (New Zealand assistance to Malawi and Uganda, and Australian participation in the early plans for university correspondence programmes in Zambia and Nigeria), and UNESCO (support to teacher education programmes in Botswana and Swaziland and some years later to the National Teachers Institute in Kaduna, Nigeria). During the same period, the BBC, and later CEDO and the British Council Media Department, had an important influence on the development of educational broadcasting in many countries. UNESCO supported the establishment of Radio Rural Forums in Ghana and Zambia. In the 1970s, Sweden provided assistance to establish the Tanzanian National Correspondence Institute, Denmark helped Swaziland set up the Swaziland International Education Centre, (now the Emlalatini Development Centre) and the International Extension College of the UK helped the governments of Mauritius, Botswana and Lesotho and the University of Lagos, Nigeria, to set up distance education programmes. Apart from the Lagos programme, which has been exclusively a university degree programme, all these programmes of the '70s have been multi-purpose units.

1.3 Trends in the Development of Distance Education

Individual programmes of distance education in each country have been set up in the particular circumstances of that country to cater for special needs. If we take the continent as a whole, however, or even the countries in the Commonwealth, it is possible to identify certain predominant trends. Many of these relate to the kind and level of education to which distance teaching techniques have been addressed; others to the nature of the techniques themselves and their organisation. After twenty years, it is also important to look for patterns of success and failure. In the light of the emphasis put in the first section on the economic constraints on educational development, moreover, we need to seek general indicators about the costs of such programmes. In this section, we attempt to trace such patterns.

a) **Secondary level courses**

The most obvious trend in distance education over the last twenty years in Africa has been the increasing emphasis on secondary education programmes: many of the programmes in Commonwealth Africa covered in the survey carried out for this project, involved courses leading to recognised secondary school qualifications.

To begin with, most such programmes have had as their target audience adult workers seeking qualifications to improve their career prospects. In many countries, however, the possibility of using such courses to provide chances for secondary education to the myriads of young primary school leavers who fail to get places in formal secondary schools has been recognised. Most such young people are unemployed. It is assumed, moreover, that they need more structured support and guidance in their studies than their adult counterparts. A pattern of supervised study-groups has therefore developed in Zambia, Malawi and Zimbabwe, in which students meet together with a supervisor, who is not a teacher, and study correspondence courses, if possible, supported by a radio series. As the discrepancy between the numbers of primary school leavers and available secondary school places grows as universal primary education becomes effective, so does the attractiveness of this system to politicians and planners looking for cheaper alternatives to traditional secondary schools. The exam results of such supervised study groups have, on the whole, been disappointing, however, to Ministries, parents and students compared either to formal secondary schools or individual adult correspondence students. For example, in Zambia, pass rates in Junior Certificate (JC) exams can be as low as 17%, though they have risen to 33% in some years.(4) In Malawi, statistics for 1985 show JC pass rates of 18% (5)

b) **Primary school teachers in-service upgrading**

The greatest successes for distance teaching in Africa can probably be found in teacher education programmes. Here also there have been two waves. First, programmes concentrated on untrained teachers who had been in service for several years, and who could not be taken out of the schools for training in formal teachers colleges without severe disruption. Wherever adequate staff resources have been allocated to the careful preparation of courses and the provision of occasional but regular tutorial services, such teachers have been able to reach the required standard for the appropriate certification as teachers. Equally important has been the recognition by governments that such certification should gain teachers the appropriate salary increments and promotions. In most such programmes, the emphasis has been on academic upgrading. The opportunity for serious in-service training in pedagogy has not been fully exploited.

The second wave of development has been in response to rapid programmes of universal primary education. Tanzania and Zimbabwe are the main examples in the Commonwealth. In both, distance education has been used to make it possible for new recruits to the teaching profession to be put straight into the classroom, after quite short

residential induction courses, as apprentice teachers. They have then learned their trade by studying correspondence courses and by regular face-to-face tutorial guidance and supervision. In these cases, a greater emphasis has been put on pedagogical and methodological training. The approach has made it possible to increase dramatically the numbers of primary school places in a very short time; it has provided effective training, comparing favourably with traditional in-college initial training, to large numbers of teachers; and it has done so significantly more cheaply than more traditional methods of teacher training.(6)

c) **Non formal education**

If teacher education provides distance education with its most consistant successes, non formal mass adult education campaigns are probably its most dramatic achievements. Such campaigns in Tanzania, Botswana and Zambia have dealt with political education, health and hygiene, agricultural practises, afforestation and the organisation of co-operatives. They have been built around radio education series which have been supported by printed study-guides, with report forms for feedback to the organisers, and, in some cases, by posters, flipcharts and picture charts. These media have been studied by groups of adults meeting regularly to listen, read and discuss the programmes and materials. The creation and support of many such groups has required large-scale organisation and mobilisation, involving, usually, many different institutions and ministries. The results have been very large numbers of rural adults in remote and scattered areas learning new skills, changing traditional attitudes and in some cases, dramatic changes of practice.

In Tanzania in the early '70s, more than two million adults participated in health education campaigns, out of an approximate adult population of probably seven or eight million; the tribal grazing lands campaign in Botswana in 1976 recruited approximately 55,000, or nearly 15% of the possible total adult population and, in Zambia, the co-operative education national study group campaigns of 1983 to 1985 attracted somewhere between 30,000 and 35,000 each year out of a potential adult rural audience of between one and two million.

d) **Extension worker training**

There have been two small but significant developments for distance education in East Africa during the last few years; the African Medical Research and Education Foundation in Nairobi has launched in-service training by correspondence for rural medical workers in Kenya and Uganda on a pattern not dissimilar from that used for teacher in-service training. Similarly, the Correspondence Course Unit of the University of Nairobi has developed a series of courses of training in adult education skills for adult education officers working in the recent literacy campaign. Several years ago, a short-lived highly specialised course on map reading for agricultural extension agents in Botswana was run by the then Botswana Extension College. These three

projects represent attempts to use distance education techniques to provide in-service training to rural extension staff and show its potential to give such training to people with a basic and vital responsibility for development, a potential which has yet to be widely realised.

e) **Distance education programmes for refugees**

During the last six years, several new projects have been established to bring increased education services to refugees. In many parts of Africa the number of refugees is growing. They are often mobile and unsettled. Their educational needs are sometimes different from those of the people in whose countries they have been forced to settle, and they inevitably impose an added financial and personnel burden on the already overstreched educational budgets of the host countries. Distance education is being used in order to provide, as economically as possible, for the special needs of refugees. In Commonwealth countries, the three main programmes are in Zambia for Namibian refugees settled there and in Angola, in Tanzania for South African refugees and in Dukwe in Botswana, for both Namibians and South Africans. In all three, the major emphasis has been on secondary level courses or at least, in the Zambia and Tanzania programmes, on courses which prepare students to start on secondary courses; elsewhere, however, similar techniques are being used to train refugee primary school teachers, in Somalia, and for non-formal education, in Sudan.

f) **Media trends**

We have seen that the heaviest emphasis in formal exam-oriented distance education programmes has been on the use of correspondence courses, while in non formal programmes, radio has predominated. However, over the years, particularly during the 1970s, attempts were made in most programmes to develop multi-media approaches:correspondence courses were supported with radio series, and, more recently, with audio-cassettes; radio forum or campaign programmes were supported by printed study guides, and by picture hand outs.

On the whole, however, there has been a much more limited use of the electronic media in Africa than in other parts of the world. The main reason for this is that most distance-students in Africa do not have access to the media which are available elsewhere. Most of rural Africa has no electricity; television is therefore limited to the towns. Computers and microcomputers are still extremely rare. Access to telephones is also limited, and in many countries the telephone network, such as it is, is overstretched and often doesn't work at all. There are even problems of access to and use of radios: batteries are expensive and in short supply and servicing facilities often are non-existent; and audio-cassette recorders are still too expensive for most students to own.

Probably the most significant media development, however, and certainly the most peculiarly African development, has been the growth

of group study in preference to individual study. Most correspondence courses everywhere are studied mainly by individual students working at home in their own time. Similarly, most radio adult education series are listened to at home. This was also true of many African programmes when they started. Radio extension projects, however, rapidly adapted the forum approach from Canada and India, and the radio study group has provided the organisational focus for all the major distance education non formal campaigns. Malawi and Zambia invented the 'supervised study group' to provide structured learning conditions, guidance and supervision in formal course for the young adults who have become, increasingly, their main target audience. A similar development has taken place in Zimbabwe and, more recently, in the refugee education programmes for Namibians and South Africans. This development seems to have been stimulated mainly by the characteristics of the potential audience; in non-formal projects study groups have been used to help largely illiterate students to benefit more fully from the various distance media; in formal programmes they have been set up to cater for the youth of the students and the realisation that both their motivation and their study techniques would benefit from a structured support system.

g) **Institutional patterns**

Most correspondence programmes in Africa have been run by specialist institutions created for the purpose, or by specialist units so created but attached to existing education bodies. Three main types of institution have been set up. Government departments, usually within the Ministries of Education, have been established, for example, in Zambia and Malawi, in Botswana and more recently in Zimbabwe. Secondly, existing institutions, such as universities or co-operative colleges, have set up distance education or extension departments to run such programmes, drawing where possible on existing departments and academic personnel to write and teach courses; examples of this pattern can be found in the universities of Zambia, Lagos in Nigeria, Ghana and Nairobi in Kenya, and in the co-operative colleges of Tanzania and Zambia. A third pattern has been the creation of semi-autonomous or parastatal institutions, such as the Mauritius College of the Air, the Emlalatini Development Centre, (formerly the Swaziland International Education Centre), and the Lesotho Distance Teaching Centre, though the last has now become effectively a government department.

In most cases, whichever of those patterns has been followed, it has been found advantageous for the distance teaching institution to have its own printing facilities and, in some cases, to have radio or audio production facilities of its own. In all cases, however, where radio support has been used, the programmes have been transmitted by the public broadcasting institution. Most linked face-to-face tuition sessions have been provided by using existing institutions and facilities on an occasional basis. Tutorial and supervisory staff for both face-to-face and distance tutoring are usually employed on a part-time basis and are often permanent teaching staff of local educational institutions, including those used for study centres.

Two patterns of staff employment to write courses can be discerned: full-time subject specialists employed as course development officers, either permanently or on secondment; and part-time writers commissioned to write courses or parts of courses, in their spare time. The course writing workshop, in which teams of part-time writers are brought together for a short period of intensive writing has emerged as a successful method of producing courses quickly. Decisions about which method is used will often depend on the availability or shortage of qualified staff in the respective subjects.

Radio forum projects have usually been run from within the broadcasting corporation, with links, sometimes tenuous, with ministry extension departments. The radio campaigns, on the other hand, have usually been run by ad hoc committees, associating all ministries or institutions concerned in a co-ordinated campaign organisation for a limited period of time.

h) **The costs and effectiveness of distance education**

Very little detailed cost analysis has been done of distance education programmes in Africa. Any attempt to describe cost trends must therefore be highly tentative. The research on effectiveness is even less detailed.

Two programmes of distance education as support for inadequate teaching in schools, the Mauritius College of the Air secondary programme and the more recent Kenya Language Arts Primary Programme, have, however, both been analysed at quite early stages of their development. Both are programmes of additional services and do not eliminate any of the costs of existing programmes. Their costs must therefore be added to existing costs. It does seem, however, that for quite modest additional costs, comparable to those of good textbook materials and cheaper than additional private tutorial assistance, intensive distance teaching support programmes can significantly improve the quality and relevance of teaching in under-resourced schools and subsequently the number of students achieving satisfactory results in their examinations.(7)

In secondary level equivalency programmes, the evidence, though sparse, does seem to suggest that the costs per student, at least in programmes that have minimum enrolments of 10,000 students, are very much cheaper than those for in-school secondary students. This is true even where quite elaborate arrangements are made for supervised or supportive study groups, as in Zambia and Malawi, and is presumably even more so where no such arrangements are made. Perraton estimates for Zambia "that the cost per student at a supervised study centre is between about a quarter and a twentieth of the cost at a regular secondary school."(8) Murphy, in a recent World Bank report on the Malawi Correspondence College, reckons that the total cost (recurrent and capital) per student at an MCC supervised study centre is approximately 18% of the cost of a secondary school student. (9) At the same time, dropout and failure rates from such programmes are very much higher than for in-school programmes, at least partly because of

the comparative academic standards of students selected. Comparative costs of successful examination passes are therefore much closer to each other , though probably still just lower for distance students than for in-school students. Perraton concludes, for Zambia, that "if only 5 of each hundred students who start on their courses - or 14 at the higher estimate - pass their examination, then they will do so at a lower cost to Zambia than that of going to regular secondary school." He goes on to quote pass rates for Junior Certificate of between 17% and 33% and for GCE 'O' Level of between 5% and 50%.(10) Murphy, for Malawi, estimates that the cost per successful JC candidate through the MCC Study Centres is just over 90% of that of a successful secondary school JC candidate. He points out, however, "that MCC students are likely to have to learn more than secondary school students to pass as they do not perform as well in the primary school leaving exam."(11) It is at least questionable whether distance teaching programmes for small numbers of students can be both effective and cheap: to be effective, they almost certainly require some face-to-face and tutorial services and multi-media support, for example by radio; the former are expensive regardless of numbers, while the latter only become cheap if they are realising economies of scale.

In teacher education programmes, there is ample evidence of academic success. Where this success leads to salary increments, (and therefore a rise in government salary bills), and the numbers of students enrolled rises to several thousand, the programmes can be economic. Chale's comparative evaluation of Tanzanian UPE teacher trainees in-college and at-a-distance concludes "the net unit cost for the successful ... TTC trainee was T.Sh. 82,002 ... the net unit cost for a similarly successful ... TTD trainee was T.Sh. 21,603 ... The latter was therefore four times cheaper."(12) Where numbers remain small, (as in the Kenya programme in the years between 1968 and 1975), the costs do not seem to compare favourably with those of traditional training.(13)

We have no detailed analyses of university level costs from Africa. Subjective impressions of the two programmes that have been running for several years, however, would suggest that it is extremely difficult, though possible, to provide university degree programmes without large investment in higher quality materials production, regular face-to-face tutorial services, and a wide range of course options. Without such investment, programmes face limited success; with it, costs per student will be high unless overall enrolments are also very high - higher than seems feasible for most potential university programmes in many countries of Africa at present.

Most non formal education programmes are equally poorly documented as regards costs and effectiveness. The radio study group campaigns in Tanzania, Botswana and Zambia, have been evaluated, however. There is positive evidence of practical effectiveness and increases in knowledge; the costs, because of the very large numbers of participants, are very low. Almost certainly they achieve important educational effects at significantly lower costs than other more traditional forms of adult and extension education. In Zambia an

evaluation of the pilot co-operative education radio study group campaign in 1982 by Perraton, found that the cost per participant, in a campaign involving approximately 5,000 participants was Zambia Kwacha 12 (the equivalent of US $8.13 in 1977). That figure Perraton claimed was similar to the reported per participant cost of the Botswana campaigns but considerably higher than those reported for the Tanzanian campaigns. He compared this to the cost for a 5 day course at a farmers training centre in Zambia which, at that time, was Z.K. 40 (or the equivalent of US $26.83 at 1977 rates).(14) A recent evaluation, which will be available early in 1987, has been carried out of the National Study Group Campaign for 1985 run by the Zambian Co-operative College. In 1985, there were approximately 21,000 participants (the campaign was conducted in seven languages as compared to two for the pilot campaign),and the cost per participant is estimated by Warr to be Z.K. 16. If the 1982 figures are multiplied by 1.9 to allow for inflation, they would give the following comparison:

Cost per participant in campaign of 5,000	Z.K. 23.29
Cost per participant in campaign of 21,000	Z.K. 16.61
Cost per equivalent course in FTC	Z.K. 76.90.(15)

These comments about effectiveness and cost are based on a few detailed evaluation studies of distance education programmes in Africa. The conclusions and the definition of trends which has formed the basis of this section are inevitably therefore somewhat impressionistic and subjective.

1.4 Gaps and Failures in Distance Education as a Response to Needs

We have seen in the paragraphs above how distance education developed in Africa in general and the African countries of the Commonwealth in particular in the last two decades. We have also seen that their development was to some extent a consequence of an increased public awareness of the benefits of education, and the pressure that awareness exerted on the authorities. The public in Africa has become increasingly aware that job prospects, and therefore a better life, have become more and more related to educational qualifications, first at secondary level, and, more recently, at tertiary level.

Popular demand, however, is not for specific skill orientated or specialist education and training. The idea of hierarchical development of education in which primary schools prepare children for secondary education and secondary schools prepare pupils for university has been accepted. Popular demand seems to be for more of the same. This, at least, is how education authorities have interpreted the public demand for more education. They have set up public distance teaching institutions to provide more of the same. This section looks at some of the major gaps in provision and the problems faced by the programmes which have been offered.

(a) **The absence of science subjects in secondary and tertiary education**

Most institutions of distance education in Africa offer junior and/or senior secondary courses. They follow the secondary school syllabuses religiously, and prepare their students to sit for the same examinations as those which are taken by school children. Distance teaching has hit a difficult snag from the start. How do you teach practical subjects or provide for student laboratory experience through distance teaching? There appear to be two options: find resources to provide students, scattered as they probably are over a wide area, with a network of facilities to carry out practical work as required by science and technology courses, or restrict distance teaching offerings to courses which have no such requirements. In other parts of the world, the first option has been successfully followed. In Africa, however, though in most countries the distance teaching institutions are public institutions, they have failed to achieve equal recognition with the conventional institutions. They have certainly not been given the resources to develop their own network of practical study facilities; nor have they usually been able to get access for their students to laboratory and workshop facilities in existing institutions.

As a result, the institutions concentrate on the second or narrower option. They avoid those courses which require practical work and a heavy investment in the provision for it. They choose courses which are relatively cheap to develop and run. Such courses are usually languages, social studies such as history, geography and religious knowledge, mathematics and, occasionally, human biology, or human and social biology as the only science offering. A few of the institutions have introduced business courses such as book-keeping, principles of accounts, commerce and economics. The pure sciences are notable by their absence in all the countries. Attempts to develop kits for science courses in Kenya were abandoned because they were too expensive. Courses like agriculture (Lesotho), and woodwork (Mauritius), were also abandoned or not made widely available because of the problems of making arrangements for the practical work that should accompany them.

There is one important and successful exception. In the Zimbabwe Science programme (ZIMSCI), self-study materials, including practical experiment kits for use in rural classrooms, have been developed for lower secondary classes where there are no qualified science teachers. In such cases the class teachers act as guides and supervisors, not as teachers.

Similarly, in tertiary distance education, the natural sciences have been largely avoided, with the notable exception of the University of Lagos, where a major initial purpose was to train secondary science teachers and where the B.Sc (Ed) was one of the first degree programmes offered. Science practical work, to match that covered in the internal B.Sc (Ed) has been offered through the regular local tutorial meetings at study centres in regional secondary and tertiary institutions and through the compulsory annual vacation courses held

on campus for all correspondence students.

(b) **The failure to provide adequate resources to promote quality programmes**

The failure to provide adequate resources goes far beyond the problem of access to laboratory and technical facilities. Even when colleges and institutions are publicly supported, they have not been treated equally with conventional institutions. This ambivalent attitude has had at least two negative consequences. First, they have been financially starved and have also had acute staff shortages, both in number and in quality. The authorities have not seen the great benefit that could have been derived both for the students of the institutions themselves, and for those in the conventional schools, had they allowed the distance teaching institutions the free rein for their development. For had distance teaching institutions been well endowed, and manned with the best available teachers, they could have helped to develop distance teaching materials, both for their own distance students and also to be used in schools to help to diversify and improve the quality of conventional education. The second consequence of distance teaching institutions not being recognised as equal partners in the educational system has been that their students have usually not had access to whatever facilities and resources were available in the regular secondary schools. In all the Commonwealth countries in Africa there does not seem to be a mechanism whereby for a little additional financial and manpower outlay, the use of the facilities in the secondary schools can be made available to students of distance teaching institutions. Those on whom much is being invested by the public remain the favoured group. The adults, or out-of-school youth who use their spare time, and their money to acquire an education while working, are not provided with equal facilities. Science and technical facilities are sadly limited in secondary schools throughout Africa, especially in rural areas, but one way of making such scarce resources go further would be to give access to them to students of distance teaching institutions as well as to their regular students.

(c) **Poor results in supervised study groups**

As we have seen, academic distance education has had a second phase, namely the extension of its services to young school leavers. Supervised study groups exist in Malawi, Zambia, and Zimbabwe. The scheme is a consequence of the governments' inability to cope with the explosion of the primary school population and the consequent increase in demand for secondary places. The supervised study group idea is conceptually sound. It starts from the premise: young children, fresh out of primary schools, do not have the discipline and motivation to pursue education on their own, through distance teaching. They need supervision, and peer-group support if they are to persist in their studies and succeed. Their work thus rests to a large extent on the government appointed supervisors or mentors.

The supervised study centres suffer from two main problems. The first is one they share with the directly enrolled individual adult students

of the distance teaching institutions, who follow the same courses. This is their limited choice of subjects; as we have seen, there is no opportunity to study the pure sciences, or professional, technical and vocational subjects. The second problem emanates from the quality of the supervisors and mentors employed. Most of these are either primary school teachers with no qualifications to help the students with their secondary level studies, or young students fresh from secondary schools with absolutely no experience in teaching. They are not given any training either in group dynamics or face-to-face tutoring or counselling. Many of them try to teach the lesson in the study guides and end up confusing the students. The location of many of the supervised study centres in primary schools, church and community halls, or in specially built centres automatically separates them from the secondary schools and the use of their resources. Thus, the failure to provide extra resources to distance teaching institutions both for individual adult students and for supervised study-groups, however much they are saving per student compared to formal secondary schools, has severely restricted their ability to provide high quality services and achieve the results they are capable of achieving.

(d) **Limited vocational, technical and professional courses**

Very few distance teaching institutions in Africa offer technical, vocational or professional courses, though such courses have been shown to be successful elsewhere, for example, in Australia, New Zealand, the Soviet Union and more recently, in the UK. Teacher education is the exception. Its success has not been spread to other vocations and professions. There are a few courses in business studies in co-operative management and in rural health worker training, but these are exceptions. Yet the need for trained staff in business management and administration to run both government and private organisations is immense because of the acute shortage of experienced middle and senior management personnel. The most experienced staff have usually had little advanced training. Most organisations can ill afford to send such staff on full-time training courses, especially those who work in rural areas or small provincial towns, because of the disruption of their services such absence would cause. Distance teaching programmes which offer training to such staff on-the-job would have the dual advantages of allowing them to go on working and of relating their training to their immediate working conditions. The same pattern of need for advanced on-the-job training and of the potential advantages of using distance teaching methods to provide it applies to other professions such as medical workers, accountants and social or community workers as well as to middle level technicians.

A significant exception to the lack of technical education at a distance in Commonwealth Africa, is the plan by the National Correspondence Institution in Dar es Salaam, Tanzania, to launch a series of technical vocational courses in such subjects as plumbing, motor mechanics, tailoring, masonry and electrical installation. These courses will be offered for the first time in July '87 and will, initially at least, be aimed at people already in employment. They

will prepare students to take national trade tests if they wish.

(e) **The problems of developing economic tertiary education programmes**

University level distance education programmes in Africa have not yet grown to maturity. No completely distance teaching university in the Open University model has yet been set up, despite the abortive plans for a Nigerian National Open University, shelved largely because of cost. The University of Nairobi programme has just enrolled its first 600 students. The University of Lagos Correspondence and Open Studies Institute had approximately 4,000 active students in the 1985/86 academic year and is beginning to produce several hundred graduates per year; but it still offers a limited range of degree programmes and has not been able to sustain a multi-media teaching system. The University of Zambia, though, nearly 20 years old, has suffered throughout its history from lack of specialised full-time distance teaching staff, and from inadequate resources to produce fully-fledged correspondence courses. It has had to suspend operations at various points and at its maximum it has had 650 correspondence students.

The problems are many: most university courses include a wide range of optional or elective courses, all of them, at that level requiring sophisticated course materials; to justify the expense of such course development there needs to be a large number of potential students, and in most African countries individually, the potential numbers for each course are often low; support services such as libraries for tertiary studies also need to be elaborate but are often sadly lacking outside major urban centres in Africa. Yet the need for more graduates, especially in subjects relevant to manpower shortages such as accountancy, management, all forms of engineering and veterinary science, is acute, as shown by the plans in many countries for new universities. What are needed, moreover, are graduates with long practical experience. Yet the cost of new traditional universities is prohibitive, and the effects on development of removing experienced middle level personnel who do not have degrees for three years full-time degree courses could be disastrous. This is a need which distance teaching should be able, but has so far failed, to fill.

(f) **Spasmodic programmes of non-formal education through distance teaching methods**

The vast majority of the population of Africa is in the rural areas. Most people have had little or no education. Development that does not take them into consideration cannot be expected to succeed. Many countries see the importance of providing adult and non formal education for rural development. Many, as we have seen, have also recognised the importance of the media for non formal education. Very few, however, have undertaken large-scale systematic and regular distance teaching programmes of this kind. Though the examples of radio study group campaigns which have been quoted have recorded significant successes, even the countries which ran them have not made them regular features of their non formal education programmes; and the examples have not been followed widely in the continent. Nowhere, except in Kenya, have those distance teaching techniques used

successfully for teacher education been adopted on a large scale for adult educator and extension officer training. Nowhere at all has such a training programme been linked systematically to regular large-scale, non formal education, media based campaigns. Yet such an approach seems to offer possibly the only chance of a wide impact on development through adult education.

(g) **Administrative and methodological problems**

We have already stressed the failure of governments to recognise the need for extra resources, in cash, personnel and facilities, in order to increase the success rate of distance education and thereby to multiply its economic advantages. Three particular blockages stand out, all caused, or at least aggravated, by lack of resources.

First, though many programmes in Africa have attempted to be multi-media programmes, they have failed to exploit the particular strengths of those media: most radio series which form part of distance teaching packages have failed to exploit radio's motivational and entertainment value and have often consisted largely of oral summaries, delivered as lectures, of the information already presented in the printed materials; very little attempt has been made to exploit printed visual materials to illustrate and to demonstrate the lessons being taught in words especially where these lessons concern practical skills; alternatives to slow and unreliable postal services as a means to speed up correspondence dialogue between students and tutors have been left largely unexplored. This first blockage probably results from the other two.

The second is the serious lack of in-service orientation and training opportunities for the professional and administrative staff of distance teaching institutions.

The third we noted at the end of the previous section, namely the failure of distance teaching institutions, with a few exceptions, notably the Lesotho Distance Teaching Centre, to build regular evaluation mechanisms, including cost analysis studies, into their courses, teaching methods and administrative procedures.

(h) **Supplies and maintenance problems**

The above six categories of failures in distance teaching in Africa arise largely from professional or planning problems. As we have collected information from or visited distance teaching programmes, however, one outstanding and apparently unsurmountable problem has been brought to our attention time after time. Distance teaching requires equipment and supplies in order to produce and reproduce its teaching materials. Many institutions have initially benefitted from overseas aid in setting up printing shops, or audio studios and in supplying paper, printing supplies and audio supplies. Most of them no longer attract such aid, their supplies regularly run out and their equipment breaks down or wears out. Foreign exchange is needed to restock or to maintain their production operations and foreign

exchange is not available. All over Africa there are efficient distance teaching institutions which are grinding to a halt or being driven to inefficiency and frustration because they cannot get paper to reprint units which are out of stock or because they cannot get simple spare parts to repair their machinery. Thus the initial investment, often high, is no longer contributing to the economies of scale and continuity which are distance teaching's greatest assets. The cost of maintaining production is not so high as the initial investment, but because it is in foreign exchange, it appears to be too high.

2.0 SECTION 2

2.1 A Review of Co-operation in Africa 1966 to 1986

Distance teaching in Africa is relatively new. The people working in distance teaching are usually drawn from conventional education. They do not have much professional knowledge about distance teaching. Course development can be a slow and time consuming exercise, especially if there are no examples to go by or no people with previous experience to do it. Distance teaching under certain circumstances, for example, when it is not warranted by the size of the potential student body, can be expensive or impractical and unjustifiable. These and similar considerations have led new institutions to seek help and advice where they can find it, and to explore ways of co-operating with existing distance teaching institutions, both locally and overseas.

Co-operation in distance teaching in Africa takes place at different levels and in divergent forms. It ranges from international co-operation to continent-wide, regional, sub-regional, and even local or in-country co-operation between two or more institutions. The form of co-operation also varies, from simple information exchange to the sharing of materials, joint course production and staff training. At the end of section 1.2, on the history of distance education in Africa, the major co-operative links between non-African institutions and African countries in helping to set up new institutions were described. In the following paragraphs we shall briefly review what other co-operation has taken place in Africa, examining the form this co-operation has taken and the level at which is has happened.

a) Information exchange

The easiest form of co-operation to organise is information exchange. Information on the effectiveness of the various educational methods and delivery systems used in distance teaching and their cost, and on changes and innovations in distance teaching, is of interest to new institutions in Africa. Practitioners of distance teaching, like all other professions, have always seen the necessity to keep up with developments the world over. At the international level, information exchange is facilitated by such bodies as the International Council for Correspondence Education, (ICCE), now the International Council for Distance Education, (ICDE), the International Extension College, (IEC), and by various publications of both a specialist and a

generalist nature, disseminating information on distance education. The ICDE convenes international conferences every 4 years, publishes the proceedings of such conferences, as well as a regular bulletin which is distributed to members and member institutions. The International Extension College publishes a newsletter About Distance Education (ADE), which is distributed free as well as a series of broadsheets and case studies to facilitate the exchange of practical information on particular distance education issues. Specialist journals, such as the Distance Education, published by the Australian and South Pacific External Studies Association, and Open Learning, formerly the UK Open University's Teaching at a Distance are also useful vehicles for information exchange at international level. There are also, of course, occasional articles on distance teaching appearing in general education journals. All such channels of information are open to African distance teaching institutions and their staff, both for contributing and for receiving information. While it has usually been possible to find sponsorship for senior officials of African distance teaching institutions to attend conferences and seminars of such organisations, it has proved much more difficult to ensure that they and their colleagues have access to the more regular, printed exchanges. A major problem with publications, for African countries, is their inability to subscribe or purchase them because of budgetary and foreign exchange restrictions. An important co-operative step forward would be to ensure that such barriers are broken down.

In Africa, a somewhat halting attempt has been made to create a continent-wide association to promote inter-African information exchange on distance education. The African Association for Correspondence Education, (AACE), now AADE, was set up in 1974 arising out of the information contacts made at the Dag Hammarskjold Foundation Seminars, and the work of the Economic Commission for Africa. It grew out of the first conference on Correspondence Education in Africa in Abidjan in 1971 and has itself, been responsible for three subsequent continent-wide conferences, in Nairobi in 1974, which was its own founding conference, in Addis Ababa in 1979 and in Harare in 1983. The main purpose of all of these has been information exchange. While the AACE has largely failed to create permanent and continuing information exchange mechanisms, or to develop more elaborate co-operative services, these conferences have been a major opportunity for professional exchange.

A more regular and, at least on a smaller scale, more successful exchange of information and professional expertise, has been the Distance Learning Association of Southern Africa, (DLA). Distance teaching institutions and staff of Botswana, Lesotho and Swaziland have now met regularly twice a year, since its foundation (as the Botswana, Lesotho, Swaziland Correspondence Committee) in 1972. At these meetings, all institutions present reports and discuss each others experience. The DLA also produces a regular newsletter.

In addition to its general information service, the IEC has tried to organise an information exchange on refugee education. In a recent conference, jointly organised by IEC and World University Services-UK

Committee (WUS-UK), a start was made on the exchange of information on the educational needs of refugees and the available provisions. There has, so far, been a particular concentration by IEC on African refugee communities. Another example of information exchange on a particular kind of education, is the service of the International Co-operative Alliance on Co-operative Education. This has been carried out internationally through publications, such as its CEMAS (Co-operative Education Materials Advisory Service) publications, and in East and Central Africa through a series of sub-regional seminars and workshops organised between 1977 and 1980 by the ICA Regional Office in Arusha for East, Central and Southern Africa.

b) **Materials sharing and joint course production**

Another form of co-operation is the sharing of teaching materials. Many institutions in Africa, Europe and North America, have been ready to make their materials available, especially to a public institution, free of charge or for a nominal fee, either in the form of a single copy of a course for local reproduction or through bulk purchase.

When the IEC was helping to launch the Mauritius College of the Air, the Botswana Extension College (now Department of Non-formal Education) and the Lesotho Distance Teaching Centre course materials were made available from its sister college in the UK, the National Extension College (NEC), for use as a stop-gap measure until the new colleges were able to develop and produce their own "O" Levels materials. Courses from Zambia from the Zambia National Correspondence College, were also made available on the same basis. When the first course in mathematics was being developed for Namibians, by the Namibian Extension Unit (NEU), the Botswana, Lesotho and Swaziland basic mathematics course was used as a basis, and was adapted for use by the NEU. Similarly, the IEC and the Commonwealth Secretariat have arranged for NEU materials to be made available as models for the South African Extension Unit in Tanzania. The IEC has also facilitated the sharing of materials between the Sudan Extension Unit, which it developed to cater for refugees in the Sudan, and the institutions in Lesotho and Botswana, the NEU in Zambia, and the NEC in the UK.

Materials sharing has three distinct uses. The first is as a source of information on content and style of presentation for training potential course writers. The IEC has often used materials in this way in its in-country training programmes. The second is to make foreign courses available to students as a stop-gap measure until such time as a country is ready to produce its own courses. The third use is to provide such courses possibly with minor adaptions, to students on a regular basis where numbers do not warrant the development of special local courses. For example, the NEU and SEU are using this approach with their "O" level students.

However, materials sharing is not without problems. Good course materials are developed for use by a particular student audience. They are not easy for other students to use without some modification or adaptation. The difficulty might be the language, for example,

where courses are prepared for native speakers rather than second-language students, or the content and examples which are usually country specific.

A potentially more rewarding and productive form of co-operation is therefore the joint production of course materials for students in more than one country. This should be especially useful for countries that follow a common syllabus, and for courses for which individual countries do not have a large enough potential student body to enable them to produce courses on their own. The only example of such co-operation in Commonwealth countries, however, was a joint project by Lesotho, Botswana and Swaziland to produce both the junior secondary (JC) level courses and "O" Level courses. The three countries themselves arranged a system of joint copyright for all the courses they produced at the JC level. The Commonwealth Secretariat financed an "O" Level joint courses development programme which helped to produce four courses and is an example of a highly successful project at the sub-region level. Problems arose even in so limited a project and the Swaziland institution decided to withdraw, thereby cutting by a third the number of courses eventually produced.

c) **Joint programme development**

A more elaborate form of co-operation in course development is when various countries come together to plan, produce and administer a distance teaching programme jointly. There are very few examples of such projects in Africa, as elsewhere. There have however, been at least three such programmes, all of them small scale, for highly specialised groups and concerned with professional personnel development. In West Africa, in the early 1970s, modern mathematics of an agreed form was being introduced in the four Anglophone countries, Liberia, Ghana, Nigeria, and Sierra Leone, in co-operation with the West African Examinations Council. There was an immediate need to train teachers to teach modern maths, but the training college tutors were themselves still uninitiated. A correspondence programme was therefore developed at Cape Coast University in Ghana and taught to all maths tutors in teacher training colleges in the four countries, linked to travelling super-tutors and national seminars. A second project which is still running is the African Curriculum Programme run from Kenyatta University for the East and Central African Region. In this, senior curriculum development officers from all countries undergo an advanced post-graduate course, partly by correspondence and partly by residential seminars. A third example is still being prepared but is soon due to be launched. This is a joint youth officer training scheme to be run by the Commonwealth Youth Programme, Africa Centre, in Lusaka, for Botswana, Zambia and Kenya. This will also be a correspondence course linked to national seminars. There is no evidence available to show how economic or effective such programmes are.

(d) **Co-operation in staff development**

As we said in Section 1, a major problem for distance teaching in Africa has been the lack of professional training. No individual

country has expertise in this kind of training when they first start distance teaching programmes. Even today, no countries in Africa have more than a few such institutions. The number of staff requiring training in any one country, at any one time, is small, but this does not diminish their need for such training. Three categories of staff need training: part-time and full-time teaching staff, including writers, student counsellors, correspondence tutors and face-to-face tutors; and administrative staff such as printers, artists, layout specialists and records officers; and senior management and production staff such as heads of institutions, editors and audio-producers. The need, and its recognition by all concerned, has led to four kinds of training. The first has been short training workshops for one institution or one country, run internally. In the early days of a new institution, such training has often been carried out with external assistance: the Swedish International Development Agency (SIDA) ran a training workshop for staff of the Tanzanian National Correspondence Institution in 1970; the IEC has run several such workshops in countries where it has assisted in the creation of new institutions, for example in Mauritius, Botswana, Lesotho, Nigeria and Sudan. Secondly, several sub-regional training workshops of a similar nature have been and continue to be held, for example in Kenya, with German assistance, in Zambia, in Nigeria and through the Distance Learning Association of Southern Africa. Thirdly, various study tours and training attachments of staff from one institution to another organisation in another country have been arranged, though usually on a spasmodic and bilateral basis. Most of the programmes listed so far have been once-only occasions organised to meet a specific need. Fourthly, a few international and more intensive and systematic training programmes have been held, which African distance educators have been able to attend. The Dag Hammarskjold Foundation Seminars were the first. Australia has also held occasional courses of this kind. The University of Wisconsin in America runs regular post-graduate programmes in distance education. The IEC, in the UK, through the University of London Institute of Education, has now held ten annual short courses on distance education and is starting its ninth annual MA Level options course on distance teaching, 138 participants from Africa have attended the former, and 22 the latter. There have been discussions, between universities in both East and West Africa about launching regular regional or sub-regional professional training courses, but, as yet, no courses.

2.2 Conclusions and some Proposals for New Co-operative Initiatives in Distance Teaching in Commonwealth Africa

(a) Conclusions

This paper so far has highlighted three common failures of education systems in Africa to meet crucial development needs. First are the gaps in the development of scientific, technical and vocational training structures. This arises partly from the lack of educational status and attractiveness and also of resultant job opportunities for students and parents of such training, where it exists. Secondly, there have been bottlenecks, for economic reasons in the expansion of

post-secondary education opportunities, especially in subjects which are likely to lead to appropriate employment, to keep up with the expansion of demand arising from increased numbers emerging from primary and secondary schools. And thirdly, and in the opinion of the writers, most disturbing, have been the failures to develop mass adult and non-formal education programmes. Such programmes would provide education for economic and social change on a wide scale not only to the generation of adults for whom primary and secondary education was hardly available at all, but also for today's millions of young adults whose formal education was cut off before it had made them functionally literate and numerate and failed to equip them with employable skills.

Our survey of trends in distance teaching has shown that that also has failed to address itself seriously in most countries to these major failures of the education system as a whole. More of the same, through distance teaching substitutes and parallels, has proved to be easier and more readily acceptable to educationalists, parents, and potential students. Naturally, therefore, attempts at co-operation have also concentrated on the whole on the most common and successful programmes. We have seen many examples of successful small-scale international, or at least bilateral co-operation in setting up new projects of distance education. Most of these have been between an African and a non-African institution or government. And most have led to secondary school or teacher training programmes.

We therefore turn to possibilities for new initiatives in cooperation. International co-operation is, in itself, expensive. Its major justification, at a time of continent-wide budget stringency, is if it can facilitate programmes which will help to break, economically, Africa's central educational blockages. A second main purpose must be the improvement in the efficiency and relevance of existing distance teaching programmes and a third must be to help institutions to introduce innovative pattern-breaking courses. We take these three as the first principles of our proposals. A fourth is that new initiatives should build on existing structures wherever possible, rather than creating new and grandiose international institutions. A final principle is that such new educational initiatives should be linked wherever possible to regional or sub-regional policy initiatives, enunciated by international African groupings, which are realisable, and which lend themselves to implementation through education - or at least, whose implementation can be forwarded by education.

(b) **Joint and Shared Programme and Course Development**

We have noted that there have been very few examples to date of successful joint development of programmes. We have also suggested that shared course development offers the most practical form of co-operation. We believe that the limited experience there has been suggests that this is more feasible at sub-regional level than on a larger scale. There are several examples of sub-regional syllabus development and a few of successful sub-regional joint examination and certification.

We suggest that the following criteria should be used in choosing courses for common development by several countries:

- the existence of common syllabuses, or agreement of the need for common syllabuses

- the existence in one of the countries concerned of strength and experience in that particular subject area which could be developed

- subjects or courses where the numbers of potential students in any one country would be too small to encourage national initiatives but where the cumulative numbers in all countries concerned would produce economies of scale

- subjects where all national policies and understanding and approaches in the region are compatible

We list four kinds of programmes where such co-operative programme development is possible and would be highly beneficial:

i) **Science, technology and vocational courses**

We have stressed how few distance teaching courses in these subjects there are. Yet it is possible to teach such courses at-a-distance. Development of course materials is expensive, yet syllabuses are common. Joint course development including materials, practical kits and practical experiment teaching strategies would cut down the cost through economies of scale. It is likely that junior and senior secondary science courses would be fertile ground for such co-operative development, as would technician training courses, at City and Guilds or Higher National Certificate level or the equivalent. Such programmes could draw on the ZIMSCI experience, for example, for secondary science courses, and the developmental experience of the National Correspondence Institution in Dar es Salaam for technical vocational courses.

ii) **Post secondary, middle and high level person power training programmes**

One cause noted earlier for the comparative failure to develop tertiary distance teaching programmes in Africa has been the small numbers required at tertiary level by one country in any one professional subject. Each such subject, at that level, however, usually requires a wide range of courses and supplementary materials which are therefore expensive to produce to an acceptable quality. At sub-regional level, on the other hand, the numbers needed in each subject are likely to be large enough to realise economies of scale in the production of such materials. The curriculum requirements, moreover, are likely to be almost the same, and a modular approach to course development would make it possible to cover minor national differences. There are also, at this level, certain subjects where common training at sub-regional level, linked to common standards and

common professional and technical conventions and practises would in itself, positively facilitate sub-regional economic and social co-operation. Such subjects include accountancy, banking, customs and excise administration, civil engineering, transport and communications technology, and language training for interpreters and translaters in Africa's international languages. It is reported that a major stumbling block faced by such programmes as the Preferential Trade Area, SADCC and ECOWAS is the diversity of legal and technical practices.

All such cases of middle and high level professional, technical and administrative training programmes, could and would fit in with recognised priority person-power development needs.

We would therefore suggest that the following range of professional and vocational courses could provide an immediate example of joint course development at post-secondary level:

- middle and senior management administration courses (building, for example, on the Arusha-based East and Southern Africa Management Institute in Tanzania* and/or on the COSIT Administration degree courses of the University of Lagos).

- diplomat training (using the Dar es Salaam international diplomat training programme as the base)

- transport and communications engineering and technician training (eg,civil engineering, railways engineering, telecommunications training etc).

- accountancy, international law, banking, customs and excise officer training (initial and inservice upgrading)

- senior educational administration and planning, curriculum development training etc (based on the Kenyatta University African Curriculum Training Programme).

- language training courses for various levels of officials, administrators, interpreters, translaters, engineers, etc, in eg, English, French, Portuguese, Swahili, etc.

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* The East and Southern African Management Institute (ESAMI), based in Arusha in Tanzania is a good example of a co-operative training programme on a sub-regional basis. Because of problems of cost, mainly arising from diverging national exchange rates and general regional devaluation against international currencies, this programme has begun to face recruitment problems for its residential courses. Its senior management has begun to explore distance teaching alternatives.

iii) Middle-level adult education, extension and development officer training programmes

The failure to exploit distance teaching techniques for non formal and adult education - or at least the failure to replicate in many countries and on a large enough scale to have a major impact on development the dramatic successes of a few countries in this field - has already been noted. It is at the level of basic, non formal adult education that new initiatives could have their widest impact on the largest number of people and in ways which could bring about the most significant changes in people's quality of life. Such initiatives could be effectively linked to major policy drives by regional and sub-regional political organisations. Mass adult education programmes however could not be launched internationally, in our opinion, because of the vital need to relate materials and delivery networks to local experience and conditions. The role for international initiatives should be large scale training of extension and development workers in adult education and communications techniques and in the effective use of distance teaching methods for their work. It is significant that several of the examples of co-operation in distance teaching which we have reviewed are in this field of training, though most are on a small and limited scale, such as AMREF's health worker training in East Africa, CYPAC's proposed youth officer training course and sub-regional interchange, through the International Co-operative Alliance on co-operative education.

Our proposals here would be as follows:

- agricultural extension officer training courses in adult education and communication
- rural health worker training
- adult education officer training
- co-operative education officer training
- the extension of CYPAC Youth Officer training

Such training would concentrate on adult education and communication techniques. It would need to be modular to allow for it to be fitted together with individual country or area specialities or needs. It would mainly leave technical (health practices, agricultural techniques, co-operative practices and so on), to internal training institutions though it could help them to produce such local training by distance teaching. It would also be possible, however, to link such a programme from time to time to major regional or sub-regional campaigns such as the OAU's recent and urgent commitment to increased food production to prevent future famines in Africa or to attempts to launch major international campaigns of disease prevention.

iv) **Sub-regional information campaigns**

There are some mass adult education campaigns which would lend themselves to a sub-regional co-operative approach, however. These would exclusively be on subjects where changes of popular attitudes to regional and sub-regional co-operative initiatives are vital for those initiatives to succeed. Such subjects as attitudes to inter-African or sub-regional trade, preference for non-African imported goods, rather than products of neighbouring countries, the importance of protecting African industrial products and breaking existing trade patterns and the potential of inter-African co-operation in overcoming major agricultural shortages or health hazards could be treated in this way to considerable advantage.

(c) **Information exchange, co-operative training and professional development in distance education**

The two most regular forms of inter-African co-operation in distance education to date have been a series of continent-wide information exchange conferences, run mainly by the AACE and sub-regional staff training seminars. Both activities are seen as fruitful areas for further development, but it has been difficult to raise funds for and set up an infrastructure to sustain such activities on a regular basis. A third essential service for the improvement of distance education is research and evaluation. We have experienced and noted how little systematic and regular research and evaluation there has been in Africa, as elsewhere. Without it, information exchange must remain superficial and staff training subjective.

We therefore propose a series of initiatives to facilitate and regularise programmes of professional development in distance education in Africa. Most of these would, once again, consist of sub-regional programmes, though in this respect, it would be important to ensure co-ordination and liaison between the sub-regional programmes.

i) **Programmes of distance education and staff training**

- regular, short, skill-training courses and workshops, eg, for editors, student advisors, audio production staff, etc (sub-regional

- annual/biennial medium-length senior staff in-service training programmes, (sub-regional) including trainer training seminars

- access to post graduate courses in distance education (regional or intercontinental)

ii) **Sub-regional centres for research and evaluation in distance education**

Two such centres would be required, one for East, Central and Southern Africa, and one for West Africa. They should probably be attached to existing distance education programmes with experience of research and evaluation. Their main role would be to commission and supervise

research and evaluation studies on distance education in the countries in their sub-region to ensure a systematic coverage of such programmes. They could, however, also be approached by individual institutions in their sub-region to carry out specific research and evaluation studies for them. There would obviously be considerable value if some such studies were comparative, examining similar programmes in the sub-region and comparing results between the sub-regions.

iii) **Regular information exchange and occasional continent-wide professional conferences and seminars**

In our opinion, these are the only services, apart from liaison between the other programmes already proposed, which it would be feasible to run on a continent-wide basis. The information exchange would need to be able to collect information and course samples from distance education programmes throughout the Commonwealth countries in Africa. More importantly, and with greater difficulty, it would have to ensure that the information and samples so collected were made available to other programmes in the network in a way which could be shown to be useful to the development of their own programmes. Such an information centre would also be the base from which information from outside Africa could be made available to African institutions, including access regularly to foreign professional journals and publications. It would also form a natural base from which occasional future continent-wide conferences on distance education could be run.

(d) **Organisational possibilities and cautions**

We do not propose here detailed organisational structures through which the programmes and initiatives we have suggested should be implemented. We conclude, however, with a few guidelines for the development of such structures which would, we think, make it more likely that the proposals would be acceptable to the various and sometimes conflicting interests of the parties and countries concerned.

First, we repeat what we have said before: these initiatives can and should mainly be built on existing institutions; for example, training in distance teaching could be attached, for East, Central and Southern Africa to the College of Adult and Distance Education of the University of Nairobi, which has for many years, offered some such services, informally, to other countries in that area; tertiary-level training in management and administration could be developed for West Africa, based on the existing programmes in that subject run by the Correspondence and Open Studies Institute of the University of Lagos and for East, Central and Southern Africa on ESAMI in Arusha; research and evaluation services for East, Central and Southern Africa could be built onto the long-established Research Unit of the Lesotho Distance Teaching Centre; and so on. Such a model would need to ensure that all countries were eventually involved both as providers and as users of such courses and services and that no countries dominated the system. Similarly in most countries, the student support and tutorial services

required for co-operative course projects could be attached, at a price, to existing local distance teaching networks, 'rather than creating whole new international infra-structures'.

Secondly, we believe that quite modest sub-regional secretariats, with built-in liaison channels to national institutions and especially to those selected to run the programmes arising from such new Commonwealth sub-regional initiatives, would be all that would be needed to monitor, publicize internationally and handle sub-regional financial negotiations arising from such programmes. Such secretariats, moreover, would be able to handle all the projects proposed, whether they be professional development projects in distance teaching, or person-power training programmes.

Specifically the roles of such sub-regional secretariats would be:

- to identify regional personnel development needs
- to identify existing national institutional strengths on which to build regional programmes
- to co-ordinate fund-raising and financing for such sub-regional programmes
- to commission national institutions to develop sub-regional programmes and to coordinate sub-regional curriculum committees
- to provide support to such programmes
- to organise and/or commission comprehensive research and evaluation projects
- to provide liaison between sub-region and sub-region, between national institutions and between national and sub-regional programmes

Thirdly, it follows that we see a very limited role, and therefore an even more limited institutional structure, for continent-wide Commonwealth programmes. Intercontinental and pan-Commonwealth activities would be extremely few, and mainly limited to information exchange, the promotion and support of a continent-wide association and occasional examples of technical co-operation.

A fourth guideline is perhaps the most difficult. It would be highly desirable if any of the initiatives proposed, while being Commonwealth co-operative initiatives could, in the medium and longterm, be open also to non-Commonwealth African countries in the respective sub-regions. Presumably such expansion would have to be separately financed from the original Commonwealth initiatives.

Our final suggestion is that for the somewhat diverse and disparate co-operative initiatives to stand a chance of acceptance either to the Commonwealth as a whole - and therefore to be able to attract the necessary funds - or to the individual Commonwealth countries in

Africa, it would be essential to have some core programmes which had large and dramatic objectives, such as the joint training of extension workers to run anti-famine food production campaigns. Such projects would give the whole programme an international credibility without which it would be extremely difficult to launch and even more difficult to maintain its individual parts.

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