

Planning and Implementing Open Distance Learning Systems:



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Introduction

These profiles of open and distance learning provision from institutions in eleven African countries are based on papers developed by African distance educators for a workshop on planning and management in open and distance learning held in Capetown, South Africa, Dec. 9-12, 2002. The workshop was sponsored by the Commonwealth of Learning, World Bank and UNESCO, and facilitated by Richard Freeman, assisted by Asha Kanwar and Helen Lentell.

Participants were asked to address the challenges they face as well as the innovations and best practice they have introduced.

Each profile addresses the following topics:

1. Country context
2. Institutional Context
3. Planning and implementation issues

This report provides an edited version of these papers. Authors of the original papers each offered a somewhat different focus and reflection on the issues arising in their specific context. However, common themes arise

Common themes

The following common themes emerged from the papers.

Challenges

Challenges to establishing strong educational systems include:

- limited spaces in tertiary education of all types (university, technical, vocational, trades training) exclude large numbers of qualified applicants, making it difficult to expand the cohorts of tertiary-trained individuals, and limiting incentives for secondary school students to complete qualifications for tertiary education.
- loss of teachers due to HIV/AIDS makes it difficult to maintain primary and secondary school education, which in turn reduces opportunities to prepare learners for tertiary education.
- war, internal conflict and natural disasters have destroyed the social fabric, infrastructures and economies in many regions: rebuilding these basic systems takes priority and is a prerequisite for a functional educational system.

Challenges to developing and expanding ODL include:

- limited resources for funding ongoing operations of ODL programmes; uncertainty about continued viability of programmes;
- lack of long term overarching planning of ODL that involves all stakeholders; government, educational providers, learner populations, funders, NGOs, business and industry;
- pilot projects in ODL are not sustained or transformed into established programs because of lack of funding and lack of staffing, abandoning opportunities to build on project experience to meet identified learner needs;
- the advent of new technologies widens the disparity between the few educators and learners who have access to new technologies and the majority of educators and learners who do not, and investment in new technologies can deplete resources available for more broadly based ODL.

Strategies for addressing challenges

Many of the report authors recommended strategies to address these challenges. These strategies include:

Strategic planning by education decision makers and providers in order to:

- plan a coherent system that meets learners' needs at each stage of their education, and does not present insurmountable barriers, such as lack of opportunity to obtain required qualifications for admission to the next level of education.
- make the best use of available resources, ensuring that programmes, methods and technologies are appropriate, accessible and affordable for the intended participants.
- bring ODL into the mainstream so that it is considered a viable option for learners and a central activity of educational providers.

Cooperation and collaboration so that:

- resources and systems (such as learning centres, courses, technologies) are shared by educational providers whenever possible;
- investments in one part of ODL do not deplete resources required for an existing functional ODL system.

Developing technological know-how about all the technologies used for ODL, so that African educators can select, use, operate and maintain the technologies that are most appropriate for the context and learners.

Building on lessons learned from pilot projects so that successful projects can be expanded to full scale programmes, and identifying and analysing factors that prevent pilot projects from achieving their objectives, so that these can be addressed in future ODL initiatives.

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Botswana

Daniel R. Tau, Director, BODOCOL



1. COUNTRY CONTEXT

Botswana has a population of about 1.8 million and an area of about 582,000 square kilometres. It is culturally homogenous: about 80% of the population belongs to the same ethnic and linguistic group: most people speak Setswana as their indigenous language. English is widely used in business, government and post-primary education. Since obtaining independence in 1966, Botswana has maintained a stable democracy, diversified its economy based on mining (diamonds, copper, nickel, coal), tourism and agriculture, and has had rapid population growth and urbanisation.

1.1 Challenges in education

A stable government and an expanding economy have supported a steady growth in the education system and, since the 1977 National Policy on Education, a massive expansion in school places. The number of primary schools increased from 500 to 700, secondary schools from 23 to 230: two teacher training colleges were added, and vocational institutions introduced in major centres.

Between 1979 and 1991, enrolments in primary, secondary and the University of Botswana rose by 91%, 342% and 315% respectively. Currently, there are about 325,000 primary school students; 152,000 secondary school students, and about 24,000 students in tertiary education (comprising colleges of education and agriculture, vocational and technical training, and university).

The Ministry of Education is implementing a programme of ten years of basic education (7 years primary and 3 years junior secondary). In 2002, 52% of junior secondary school completers gained admission to senior secondary school: this is expected to increase to 100% by 2016. Education up to Senior Secondary level is currently free in Botswana.

The 1994 Revised National Policy in Education emphasized qualitative improvement of the education system, focusing on access and equity for both genders and all regions; effective preparation of students for life, citizenship and work, enhancement of the teaching profession, development of economically relevant training, effective management of the education system, and cost effective/cost sharing in financing of education.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

Before independence, an Elementary Teachers Training project operated from 1960 to 1965 and demonstrated the viability of distance education for teacher training. After independence, a successful ODL primary teacher education project from 1968-1973 which trained 700 teachers led to the establishment of Botswana Extension College, as the first government secondary level correspondence school. From 1977 to 1978, BEC, in collaboration with UNESCO and University of Botswana, also implemented a literacy programme that targetted about 250,000 adults and youth.

The Department of Non Formal Education, established in 1978, created a distance education unit to develop and provide distance education programmes that used print materials and learning centres. By 1993 the unit was unable to promptly respond to learners' needs, because it lacked resources, adequately trained staff, institutional and professional status, and relevant learning materials. In 1998, Botswana College of Open and Distance Learning (BOCODOL) was established as a semi-autonomous distance education college with the mandate of expanding education and training through distance learning.

BOCODOL and the University of Botswana are now the lead agencies in distance education provision in the country.

2.2 Current situation in BOCODOL

BOCODOL now has 90 full time staff and 700 part time staff (tutors and writers): its 10,000 learners are served by five regional centres and 50 community study centres. At the current rate of increase, enrolment is projected to reach 25,000 by 2008.

BOCODOL offers programmes in junior and senior secondary school equivalence. It has recently launched in-service programmes in management, professional and vocational subjects, such as English for Professional Purposes offered in partnership with the Botswana Police Services, and Small Business Management, offered in partnership with Botswana National Youth Council.

3. PLANNING AND IMPLEMENTATION ISSUES

At present, 48% of junior certificate completers cannot find places in senior secondary schools, and 70% of senior secondary completers cannot obtain places in tertiary education, which heightens the need for effective ODL provision.

Reaching remote learners is a challenge for BOCODOL, whose mandate is to overcome barriers to access and address limited access to secondary and tertiary education. BOCODOL depends on government funding, and must implement cost recovery measures. Another challenge involves changing attitudes to a more positive perception of ODL.

3.1 Options for addressing the issues and challenges

These strategies are proposed:

- widen access to programmes;
- integrate ICTs to enhance programme quality;
- strengthen and diversify learner support strategies;
- diversify programmes and move to higher education programmes that could be self-sustaining;
- strengthen partnerships with other ODL institutions to access best practice and collaborate on programme development and delivery. (BOCODOL is currently negotiating with Cambridge University to be a designated centre for offering post secondary vocational courses that address Botswana's manpower needs).

Ghana

Dr. Theophilus Aquinas Ossei-Anto,

Director, Institute for Educational Development and Extension,

University of Education, Winneba



1. COUNTRY CONTEXT

1.1 Challenges in education

At present, in Ghana, there are about 90,000 teachers at the basic level who do not have complete qualifications.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

Foreign based correspondence programmes were offered in Ghana for many decades. ODL was considered an option during 1986 discussions of tertiary reform, and university provision of distance education began during this era, although the Ministry of Education did not establish guidelines for distance education at that time.

University level ODL was used to increase access, to enable students to study while working and living at home, to relieve pressure on university residences and to enable adults to pursue additional academic areas or upgrade job qualifications while meeting work and family commitments.

2.2 Current situation in ODL

Current ODL providers include University of Ghana (UG), University of Cape Coast (UCC), University of Education Winneba (UEW), Kwame Nkrumah University of Science and Technology (KNUST), the Ghana Institute of Management and Public Administration (GIMPA), as well as the locations of the African Virtual University. KNUST offers programmes in technology subjects; UG offers humanities programmes, and UCC and UEW offer programmes in education. In the non formal sector, Ghanaian radio and television programmes have provided basic level educational programmes.

As a result of ODL initiatives, there is increased access to teacher training, resulting in better qualified teachers and higher admission rates at UEW and UCC. The development of distance education units in the universities has resulted in computer literacy among university staff, and production of good quality distance course materials.

The University of Education Winneba, (UEW) established the Institute of Educational Development and Extension (IEDE) in 1993: the mandate of its Distance Education Unit included implementing a distance-delivered B.Ed. programme. In 1998, the B.Ed. programme enrolled 196 students in its first cohort, and in 2000, accepted 102 students in the second cohort. Over 90% of these first cohorts have successfully completed the programme. However, because only qualified teachers are eligible for admission, the target population for the B.Ed is now very small. In 2002, UEW introduced a 3 year Diploma programme in Basic Education (DBE) aimed at improving academic and professional skills of basic teachers: there are 90,000 basic teachers in Ghana. About 1300 primary and junior

secondary teachers enrolled in the DBE in 2002, and an additional 3000 applied in early 2003. The programme provides print based study materials, monthly face to face tutorial sessions at seven regional study centres, a three-week on campus session at the end of the course, and opportunities for participants to apply their learning in their classrooms, in practical projects.

3. PLANNING AND IMPLEMENTATION ISSUES

Between 1997 and 2002, UEW could admit an average of only 32% of more than 38,000 qualified applicants for its onsite programmes. This highlights the need for expanded distance education provision.

At UEW, university lecturers prepare distance education courses: lack of financial incentives, computers and other resources delays the course development process. IEDE coordinates course development and administration. Lecturers are overburdened, resulting in slow production of courses, and limited choices in available ODL courses. Regional Study Centres are not well equipped and are minimally staffed, lacking office and communications equipment, secretarial staff and study resources. UEW is not funded for its ODL programmes, and operated its B.Ed. programme at a cost to UEW because it was intended to enable Training College tutors to further their education. DBE participants pay higher fees to cover a greater share of the programme cost.

Distance learners do not receive student loans that are available for on-campus students.

Currently, ODL at UEW is highly centralised: it is hoped that with expansion and increased resources, more administration and learner support can be offered at regional centres. Services that could be decentralised include student records, residential sessions and examinations.

3.1 Options for addressing the issues and challenges

Although there is no national body or legal framework regulating ODL in Ghana, the Ministry of Education is now trying to harmonise ODL systems in universities, encourage collaboration in materials development, management, support services, use of study centre facilities and programmes for teacher training. However, universities tend to regard the Ministry initiatives as intrusions on their freedom.

A proposed National Distance Education Council could handle quality assurance, facilitation of accreditation, certification of teachers and staff recruitment. In the interim, a group of stakeholders could coordinate distance education in Ghana.

The Ministry of Education is enabling linkages between the ODL providers and Ghana telecom, GBC TV, GBC Radio and the private sector, including the use of ICT facilities, publishing houses, print, electronic media, television, postal services and transportation.

Staff development, reward systems and payment for distance education staff are urgently needed.

Sources of funding for ODL should include central government, NGOs, district assemblies, development partners, benefactors of ODL, financial institutions and private companies.

The private sector could establish and support learning centres with books, computers, and telecentres, support media training for staff, provide scholarships and sponsorship, market ODL programmes and train tutors and technicians.

The universities should develop and deliver quality courses, support administrative, academic and social activities, develop positive attitudes to ODL in the wider community and integrate ODL into the academic system, rather than leaving it as a peripheral activity.

UEW IEDE is preparing to introduce audio and videoconferencing technologies into its ODL programmes, if it can obtain funding. IEDE is also willing to share its ODL expertise with other providers in Ghana.



Kenya

*From Report on African Virtual University by Dr. Magdallen N. Juma,
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1. COUNTRY CONTEXT

1.1 Challenges in education

There is a severe shortage of spaces in tertiary education: in 2001, of the 42,053 students who received the Kenya Certificate of Secondary Education, only 10, 966 could be admitted into Kenya's six public universities.

As of 1998, about 6000 Kenyans were studying abroad, which is costly for students and their families, and for Kenya.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

University of Nairobi established an Institute of Adult Studies (IAS) in 1973 to provide extra mural education for adults in secondary school certificate programmes, professional subjects, such as law, auditing, taxation, public and business administration through part time evening classes and short courses. The Radio Correspondence Unit, working with the Kenya Institute of Education, provided print and radio upgrading courses for unqualified teachers.

In the mid 1980s, the College of Adult and Distance Education, Faculty of External Degree Studies launched a distance-delivered External B. Ed. degree programme, based on the courses offered by Kenyatta University College, then part of University of Nairobi. The programme, which includes courses in teaching methodology and academic subjects, uses print materials, audio cassettes, and face to face tutoring at local extra-mural centres, and has had good completion rates. Its course materials have been used by other DE programmes in eastern and southern Africa.

Kenyatta University's School of Continuing Education started B.Ed. and M.Ed distance programmes in Primary Teacher Education in 1998, offered through short on-campus sessions during vacation periods. Other universities offer part-time programmes in education: these programmes are generally considered an opportunity to generate revenue for the institution.

3. PLANNING AND IMPLEMENTATION ISSUES

Many of the extra mural programmes offered in Kenya are not genuine distance education, because they require full time attendance , usually during vacation periods. These compressed programmes do not necessarily offer an equivalent experience to the regular university programmes.

The cost and availability of internet and satellite communications is limited in Kenya, due to telecom monopolies and regulations that prohibit the use of VSAT systems. At present, this limits the potential for using electronic technologies to support ODL.

Mauritius

Ms S. Hawoldar, Deputy Director, Mauritius College of the Air

1. COUNTRY CONTEXT

Mauritius is an island state with a population of about 1.16 million and an area of about 1865 square kilometres. It obtained independence in 1968, is a member of the Commonwealth and is currently a republic with a parliamentary democracy. As a small island state, it was designated as one of 38 vulnerable island states at the 1992 Earth Summit. Mauritius has a wide cultural and linguistic diversity: although English is the official language, French, many Asian languages, creole and bhojpuri are commonly used. The population is aging: demographic projections indicate 15% will be over 60 by the year 2025. Mauritius is ranked as a middle income developing country: its economy is based on agriculture, textiles, manufacturing, tourism, and offshore and financial services.

Mauritius' economy is changing from the first phase, based on labour intensive, low-tech industries, to more skill-intensive areas, such as communications, services, production of high-value commodities and data, and financial services: this has increased demand for an educated workforce equipped for these new roles.

1.1 Challenges in education

Mauritius has to balance two significant demands: the need to provide equality of opportunity and the need to meet requirements of a fast growing economy. The workforce needs to continue updating knowledge and skills. The 1998 National Information Technology Strategy indicated Mauritians will need to develop IT skills.

1.2 Potential opportunities afforded by ODL

Despite increased government investment in education, it is challenging to provide opportunities for further education. A backlog in training of teachers in private secondary schools is being addressed by providing training through ODL. Fewer than 20% of pre-school teachers have the required training. A UNICEF-supported programme, offered through Mauritius Institute of Education (MIE) and Mauritius College of the Air (MCA) is starting to address this need.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

Distance education provision in Mauritius began as early as 1865 with University of London External Programme courses, which provided print materials and opportunities to take examinations in Mauritius. Other British organisations offered correspondence education in the 1960s. The creation of Mauritius College of the Air (MCA) in 1971 began locally-based ODL, and MCA became a tertiary education institution in 1988. After a series of studies by ODL experts, the 1991 education master plan included provisions for ODL: three tertiary education institutions, University of Mauritius, the Mauritius Institute of Education and the Mahatma Gandhi Institute set up distance education units. As well, Mauritian enrolments in University of London programmes increased fourfold from 1994-1998.



2.2 Current situation in ODL

University of Mauritius has developed from a university focused on providing trained manpower for the development of Mauritius to an institution providing academic degree courses. It offers core modules in degree programmes through distance learning, and its ODL enrolment increased seven fold, from 646 to 4725, between 1994 and 1999. U of M also offers ODL programmes in collaboration with overseas institutions, such as Charles Sturt University.

The Mauritius Institute of Education (MIE) is responsible for teacher training in Mauritius. It currently offers distance programmes leading to an Advanced Certificate in Education, or to an Early Childhood Education certificate. MIE also offers programmes in partnership with Napier University, Scotland and Edith Cowan University, Australia.

Mahatma Gandhi Institute began ODL programmes in 1995 and works with MIE to offer some components of the Advanced Certificate in Education programme.

Over 60 private providers, including academic and professional bodies from UK, India, Australia, Africa, Singapore and France, offer ODL programmes at certificate, diploma, degree and post graduate levels to over 4000 students. Many students do not receive sufficient support, and the National Accreditation and Equivalence Council (NAEC) is developing a code of practice for overseas institutions who wish to operate with local partners in Mauritius.

Mauritius College of the Air originally developed correspondence courses for professional and academic upgrading, using print, audio, video and occasional face to face sessions. Initially there were quite high dropout rates (about 30%) for A level programmes provided for in-service teachers, due to lack of preparation of participants, and staff for the demands of ODL, and lack of continuous assessment. After changes to the student recruiting process, assessment practices and staff development, dropout now ranges from 10 to 15%.

In 1995, MCA's mandate was revised and a distance education unit established to develop institutional capacity for distance education delivery, to offer adult and continuing education through ODL, and to serve those seeking access to the educational system. MCA now serves over 1200 distance learners annually and offers distance programmes in early childhood development, languages, cooperative studies, transport, marketing, and empowering women through self help, as well as courses towards degree programs in computer applications, tourism and commerce. Its nonformal IT course, developed in response to the NITSP recommendation, won a Commonwealth of Learning award in 1999.

MCA in collaboration with Napier University, Scotland, developed and offered a distance-delivered professional librarianship training to improve information services in schools and documentation centres: the programme leads to a Higher Certificate in Librarianship and Information Science. MCA also developed and offered a Certificate Programme in Librarianship and Information Science. Completion rates for both programmes have been between 80-90%.

To meet the needs of the cooperative sector, MCA offered an Advanced Diploma in Cooperative Studies for officers who can then provide grass roots training.

In 2000, MCA and MIE collaborated to offer training for pre-school teachers in a national programme supported by UNICEF.

Programmes in transport and marketing are offered in conjunction with UK institutions that

also accredit the qualifications. MCA is also working with a UK organisation to develop and offer a distance training programme for firefighters.

MCA has a partnership with Indira Gandhi National Open University to offer some of its degree programmes, and to provide a certificate programme for the empowerment of women.

MCA also provides English and French language development programmes and a course in French writing skills, and in 2003, will offer new competency based English language courses.

Although MCA offers a somewhat flexible admission process that considers work experience and a pre-enrolment interview, it is sometimes constrained by partners' more rigid admission criteria, by difficulties in assessing prior learning or work experience and by employers' demands for a recognised pathway to qualifications. Learners are offered study skills seminars, face to face tutorials, telephone tutoring, assessment and counselling.

To offer a range of courses economically, MCA tends to adapt and adopt existing distance education materials if they are relevant and appropriate. If nothing appropriate is available, MCA develops materials using a course team approach with staff from other institutions as subject experts. Print is the main medium, supplemented by audio or video tapes, and face to face sessions. Mauritius has increasing access to computers and the internet, and MCA is examining options for online courses.

3. PLANNING AND IMPLEMENTATION ISSUES

Although collaboration with overseas institutions has enabled MCA to provide a wide range of course offerings, and opportunities for international accreditation, ownership and accreditation has mostly rested with the overseas institutions. To meet the need for distance education to become part of Mauritius' national education and training base, part of the DE system must be owned locally, which requires more local partnerships and more local development of course materials. MCA has established local partnerships with MIE and government agencies and ministries. Institutional and system-wide cultural and bureaucratic barriers can impede collaboration, as can the prospect of giving up some autonomy, sharing plans and accepting criticism.

It is difficult to operate economically viable ODL by offering a large number of courses to a small population. Although using adopted courses can save costs, a relevant course is not always available, which means costly adaptation or complete development is required. MCA needs to offer DE courses on a cost recovery basis. In addition to government funding, MCA earns revenue from sale of its audio/video materials and from course fees. However, meeting demand by providing more courses adds costs, and the government grant has not increased.

3.1 Options for addressing issues and challenges

Institutions in Mauritius need to explore appropriate organisational structures to promote effective collaboration in ODL, to enable credit transfer, institutional commitment, functional contracts and good management of the process. Joint course development can save costs.

Although a number of MCA staff have completed graduate education in ODL, and MCA provides short-term inservice training for course authors and tutors, formal education in ODL practice is not readily affordable. More cost effective and flexible staff development should be available to enable DE staff to learn about a rapidly changing field, especially the use of ICTs in distance education, and marketing ODL, and other areas identified by needs analysis and performance appraisal.

Employers are required to pay a training levy to government, but ODL providers are not at present eligible to receive a share of this revenue. Enabling ODL providers to receive a share of training income would provide them with necessary operating funds.

If a national database on education and training needs was developed and produced information updates, educational providers would be in a better position to respond rapidly and efficiently.

Other recommended strategies:

- Promotion of distance education and development of public awareness of ODL.
- Joint development of distance education materials where feasible.
- Provision of high quality learner support service.
- Integration of ICTs in design, development, production, delivery and management of courses and programmes.

Mozambique

*Samuel Mondlane, Head, Department of Distance Education,
Ministry of Education*



1. COUNTRY CONTEXT

Mozambique has a population of 20 million, 70% of whom live in absolute poverty. The national literacy rate is estimated at 39.5%. Portuguese is the predominant European language. Although the country ranks among the lowest in human and economic development, it has made recent progress.

1.1 Challenges in education

Student numbers have increased significantly. At primary level, enrolments grew from 1.9 million to 2.5 million between 1998 and 2001. During the same period, secondary level enrolments grew by 8%. However, there are significant disparities based on gender and location. Only 57.5% of girls attend primary school, compared to 77.7% of boys, and female secondary school students are only 4.7% of student enrolment, while male secondary students are 6.4% of enrolment. In regions outside Maputo, participation is much lower and the gender gap much wider.

Another problem is slow progress through the system, and increasing attrition at each stage. A 2001 study showed that although 92% of 7 year olds entered school, only 67% completed the first five years of schooling, of whom only 25% went on to the next level of primary school. Slightly more than half of this cohort complete primary school. This means that very few students are eligible to proceed to secondary school, and those who do arrive have high repetition rates. However, Grade 7 graduation rates are expected to increase rapidly under the Education for All initiative, and there is strong pressure to prepare the secondary system for rapid expansion. At the secondary level, there is limited access, an outdated curriculum, and often, poor quality education.

Government education priorities are: to provide primary education for all, emphasising teacher training and gender equity; to increase access and quality of vocational and technical education; and adult literacy and informal education. The 2003 Education Sector Strategic Plan also aims to increase access to education at all levels; improve the quality of education; and develop the institutional and financial framework to sustain schools and students in the future.

Achieving these goals requires ODL at all levels of education for those who do not have access to conventional schools.

1.2 Potential opportunities afforded by ODL

ODL is considered a viable option for providing access to large numbers of young people and adults who want to complete secondary education, and to many who want to participate in tertiary education.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

The first post-independence ODL initiative was a 1983 teacher upgrading pilot project at the National Institute of Educational Development: the civil war disrupted the programme, although it is believed to have achieved some success.

The Ministry of Agriculture offered a print-based Agrarian Training Centre Program for agriculture extension workers, and courses in agricultural issues, management, maths and Portuguese language for ministry civil servants outside Maputo.

2.2 Current situation in ODL

The Institute of Teacher Upgrading (IAP) was established in 1988, and since 1996, it has offered an inservice programme for untrained teachers and those with incomplete qualifications. Participants have four years to complete the self-paced programme which uses print materials and local resource centres. Data from the year 2000 indicates that 46.2% of 3174 teachers who enrolled have completed, 6.4% failed, and 44.7% are still in the programme. Among women participants, there are more graduates (54.1% compared to 41.9%) and fewer failures (4.7% compared to 6.4%).

Other ODL initiatives include the primary school improvement programme, Community School Transformation and Open Education Systems, Secondary English Language Teaching, The Catholic Church ESAM project for Secondary Inservice Teacher Training, the Universidade Eduardo Mondlane/Ministry of Education SchoolNet Programme and the Acacia Telecentre Project to provide access to electronic communication for communities.

At the secondary level, the Ministry of Education has developed an out of school secondary education project in collaboration with the Commonwealth of Learning and with DFID funding. The project will establish a demonstration open school system in five districts in the northern province of Nampula, to meet the needs of out of school youth, and adults who have completed primary education but are unable to obtain places in secondary schools. As well, the project will serve women and girls who have dropped out of the education system for cultural, social or economic reasons. The program, to be launched in 2003, will provide an initial group of 250 learners with self-study materials: five local study centres will offer library and media access and support by specialist tutors. When it reaches full scale, the program will enrol 1000 learners.

2.3 Prospects for the future

New ODL programmes will be offered soon to meet training needs in communications, banking and civil service sectors.

3. PLANNING AND IMPLEMENTATION ISSUES

A national policy guiding ODL development in Mozambique needs to be clarified and refined.

It is not clear how many ODL projects are designed to respond to assessed needs of the target audience.

Of the projects listed above, only one, the IAP teacher training project, has gone to full scale implementation: the rest remained as small scale pilot projects on the periphery of the education system and have not influenced mainstream education.

Dependence on donor funds and expatriate staff makes projects vulnerable: the IAP project lagged behind schedule after the withdrawal of UNESCO funding and loss of key staff.

There are no enabling structures to coordinate open and distance learning programmes.

For teacher training through ODL, the main challenges are:

- the large numbers of unqualified and underqualified teachers in the system;
- the inadequate capacity of residential training;
- the inability of IAP programmes to deliver mass in-service training on schedule;
- the need for greater coordination of IAP and the Directorate of Teacher Education, and the low quality of Teacher Training Centres for Primary Education.

Other challenges for ODL in general include:

- developing strategies to address the lower enrolment and higher dropout rate of girls in secondary schools;
- identifying and training staff in ODL curriculum design, instructional design, editing, use of media, research and evaluation and other areas;
- developing a relevant secondary level programme that addresses identified needs, for example, life skills, while still meeting requirements for academic accreditation.

As well, limited use of English in Mozambique means distance education materials cannot be imported, but must be developed in country, which entails increased investment in time and money. Distance education staff are less able to benefit from English language conferences and training in ODL.

3.1 Options for addressing issues and challenges

The new out of school secondary project has more clearly defined administrative and management structures than previous projects, providing for staffing at provincial and district level; including an on site project administrator, supervisors at each learning centre, and specialist tutors. It will combine print, audio and video self instructional materials and field tutors to facilitate learning and assess assignments. Learning centre supervisors will provide counselling, record keeping and tutor supervision. Students will have access to study space, library resources, and media facilities for using radio, video and possibly computers for learning. Staff training and community awareness are intended to support acceptance of the programme and create a favourable environment for implementation. The project should serve as a robust model of effective ODL.

Other recommended strategies:

- Advocacy of ODL among key decision makers in government ministries should increase awareness of its potential.
- The existing ODL policy should be refined so that it has more focussed and manageable objectives, is able to deal with emerging issues, such as the priorities of the ESP, new developments in the secondary and teacher education sectors and the need to address gender and HIV issues.

- Developing a core of well trained staff requires cooperation from the leaders of all ODL institutional initiatives to ensure that appropriate people are identified, prepared and supported to take forward long term strategic development of the education service.
- The establishment of the Department of Distance Education (with DFID support) and of the National Institute for Distance Education (with World Bank funding) will build capacity to implement and sustain ODL programmes in Mozambique.

Nigeria

Professor Adewale Akinsola, Obafemi Awolow University, Nigeria

1. COUNTRY CONTEXT

Nigeria has a population of 120 million and a land area of 924000 square kilometres.

1.1 Challenges in education

The functional literacy rate is about 51%. Access to further education for qualified applicants is very limited: only 800,000 can obtain places in one of Nigeria's 50 universities or polytechnics. This means only 10 to 15% of qualified candidates can enrol in tertiary education.

1.2 Potential opportunities afforded by ODL

- Access to tertiary education is limited by shortage of spaces.
- There is a need for flexible education which allows students to continue earning an income, and which provides retraining and upgrading for employed people.
- Declining university funding has prompted a review of cost-effectiveness of current conventional teaching practice, and consideration of the potential of ODL for cost sharing and economies of scale.
- Joint ODL curriculum development could enhance the quality of education and enable the sharing of teaching resources, including instructional materials and infrastructure.
- ODL has the potential to provide student-centred learning, in response to changing demographics, attitudes and learning styles.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

ODL has been available in Nigeria for over 50 years, beginning with University of London correspondence courses. In 1976, the National Teachers' Institute began in Kaduna to offer teacher development, and universities have had satellite campuses and outreach programmes.

2.2 Current situation in ODL

The National Teachers' Institute provides courses for upgrading and certification of teachers, for both unqualified and qualified teachers. NTI uses self-instructional materials, and weekend and vacation contact sessions for tutorials, practical lessons and counselling: it has about 600 study centres country wide. NTI conducts research in educational development, formulates policies and initiates programmes to improve the quality and content of education. Over the past three decades, it has trained over 1.5 million learners to minimum teacher qualification and over 50,000 medium level NCE teachers. Its curriculum meets national standards and its programmes are accredited by government and/or external agencies.



Nigerian dual mode institutions offering ODL provide face to face sessions at study centres, supplemented by self-instructional materials, for courses leading to PG diplomas/certificates, MSc courses, and for sub-degree programmes. Satellite campus programmes were discontinued because of declining quality and non standardisation. Curriculum, study materials, assessment and examinations were the same as those provided to on campus students. Student fees supported the programmes and provided funding for some other university programmes.

Obafemi Awolow University offers ODL courses leading to B.Ed and to MBA degrees. MBA courses are taught face to face on weekends, the B.Ed is taught during holiday periods: both are supplemented by self-instructional print materials.

2.3 Prospects for the future

Obafemi Awolow University is building an electronic infrastructure for an elearning programme (networking, internet connectivity, website), and curriculum development is underway for four programmes, MBA; Masters in Technology Management, Masters in Financial Management and Banking, Masters in Geographic Information systems. The university is seeking partnerships with other institutions for joint curriculum development. As well, it is planning to offer distinctive African courses internationally: these are courses in African history and culture, African languages, African legal system, traditional herbal medicine, African business environment.

3. PLANNING AND IMPLEMENTATION ISSUES

Resistance to ODL is focused on both pedagogical and practical issues. Traditional academics are wary of new learning theories and practices. Academic organisational structures and reward systems, and conventional regulatory and accrediting practices impede ODL development.

Other challenges include:

- lack of professional expertise in curriculum development and assessment, and inability to benefit from formal and informal evaluation affect the quality of materials.
- limited opportunities for student-instructor and student-student interaction constrain good teaching/learning.
- the lure of new technology tends to undermine the need and ethical basis of authentic education.
- dependence on a cost-recovery model requires economies of scale, making it difficult to offer small market courses (e.g. MBA) or courses in rapidly changing subject areas.
- technology costs are difficult to manage and can run out of control.

3.1 Options for addressing issues and challenges

Institutional capacity is slowly developing in various campuses.

Infrastructure development, especially ICTs and internet technologies is underway.

Staff development in course design, content modularisation and ODL pedagogy is underway.

Sierra Leone

*E. D. A. Turay, Institute of Adult Education and Extra Mural Studies,
Fourah Bay College, University of Sierra Leone*



1. COUNTRY CONTEXT

Sierra Leone has a population of 5 million. Its society and economy were reduced to shambles during the ten year internecine war. It needs to develop its human resources as part of rebuilding the country, as soon as peace initiatives and availability of resources make this possible.

1.1 Challenges in education

The literacy rate is estimated at between 25 and 35%, one of the lowest on the continent. About 40% of teachers in primary schools lack training and are unqualified. The government proposal of free primary schooling is expected to produce dramatic enrolment increases, which means all teachers are needed in place, and cannot be spared to study full time for their qualifications.

University of Sierra Leone in Freetown, the country's only university, has fewer than 6,000 students. Until the recent introduction of access courses, student numbers have been limited by rigid entry requirements.

1.2 Potential opportunities afforded by ODL

It is not practical or economically possible for unqualified teachers to attend college to acquire qualifications, so distance education is considered the best option for meeting these needs.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

Fourah Bay College (FBC), established in 1827 to train teachers and clergymen, won affiliation with Durham College in England by 1876, enabling West Africans to study for a university qualification.

2.2 Current situation in ODL

Now part of the University of Sierra Leone, FBC includes the Institute of Adult Education and Extra Mural Studies (INSTADEX). Since 1994, it has offered a distance-delivered Commonwealth Youth Programme (CYP) in Youth and Development Work. Based on a previous face to face programme, CYP is offered through partner institutions in Ghana, Zimbabwe, South Africa, and Tanzania. As a Partner Support Institution, University of Sierra Leone recruits students, provides tutor support, and manages the programme, reporting to the University of Ghana Centre for Distance Education and CYP Africa Centre in Lusaka, Zambia.

The Institute of Advanced Management and Technology (IAMTECH) began in 1991 as a private technical/vocational training institute, established affiliations with overseas ICT

training organisations to offer qualifications in ICT. In 1997, IAMTECH partnered with St. Clements University and after a year's disruption during the war, began in 1998 to offer degree programmes in building construction, ICT, and education. Since 1998, 75 students have enrolled, and 15 have graduated. Applicants must have 4 GCE O levels and have had 2 years of relevant employment. Students have print course materials, access to IAMTECH's internet facilities and local tutors.

The government has taken the first steps to provide ODL education courses for teachers in place. The programme was launched in September 2001 in one of the country's four regions, and has just under 1000 participants. As part of this initiative, COL and Foster Parents Plan have provided funding and support for training educators in distance education course development and practice.

3. PLANNING AND IMPLEMENTATION ISSUES

There is no government policy on ODL, and there is a general lack of understanding of the significance of distance learning.

Only 20 of 200 university teaching staff have had any training in distance learning. Tutor training is also a major problem, and tutors with little background in ODL tend to use lecture methods instead of ODL techniques. Distance learners are sometimes regarded as individuals who cannot deal with conventional tertiary education.

Distance education has not yet reached enough learners to be a significant means of providing access to effective educational opportunities or to provide evidence of broad appeal of ODL. There are 20 students at INSTADDEX, 75 at IAMTECH and less than 1000 in the primary teacher upgrading programme.

Distance education providers face a lack of resources, absence of facilities for supporting and monitoring ODL participants outside Freetown, and lack of reliable communication. Constant power cuts and lack of communications infrastructure throughout the country add to the challenge.

3.1 Options for addressing issues and challenges

A proposal for the first phase of a distance learning project at the University of Sierra Leone has been prepared and submitted for consideration by partners and funders. It is a modest effort to seek support for Sierra Leone's post war reconstruction effort in the field of education.

Swaziland

Mr. M. V. Zikalala, Principal, Emlalatini Development Centre.

1. COUNTRY CONTEXT

1.1 Challenges in education

The main challenges for education in Swaziland are:

- an increase of student numbers without an increase in resources and facilities;
- a large population of younger learners between the ages of 15 and 20;
- the HIV/AIDS pandemic has resulted in increasing numbers of children being out of school by the upper primary level;
- the formal school curriculum needs to be diversified;
- vocational and pre-vocational education needs to be more accessible and diversified.

1.2 Potential opportunities afforded by ODL

A 1977 government policy supported the use of distance education for teacher training, agriculture training, practical skills training for economic development, and management and supervisory development. A 1999 National Policy Statement on Education indicates support for adult basic education, distance learning as a means of providing lifelong learning, and the use of adult education and lifelong learning to meet the needs of target groups.

If expanded and updated, ODL could provide:

- upper primary education for children;
- secondary school education for adults;
- education and practical training related to income generation;
- in-service training for teachers.

Younger learners now make up a greater proportion of learners looking to ODL to access the education they need.

2. INSTITUTIONAL CONTEXT

The University of Swaziland established an Institute for Distance Education and since 1996 has offered diploma and degree courses mainly serving employed adults.

Ephesus House, established in 1970, initially provided secondary school education to South African adult refugees in Swaziland. By 1972, Ephesus became the Swaziland International Education Centre; by 1981, as the Emlalatini Development Centre (EDC), it continued to provide secondary school education to Swaziland residents. The EDC is a wholly Swaziland government institution. Programmes currently offered are in junior secondary education and in senior secondary education leading to GCE- O level and Higher



International General Certificate in Secondary Education (HIGCE)

Rural Education Centres, like Emlaladini Development Centre, operate under the Ministry of Education.

3. PLANNING AND IMPLEMENTATION ISSUES

For Emlaladini Development Centre, staffing limitations and lack of technical and physical resources make it difficult to respond to current and emerging needs for ODL: these include meeting the needs of younger learners, especially out of school children who need to complete primary and secondary school. It lacks a student services department, which constrains its ability to offer support for distance learners. The distance education curriculum is static and cannot address the needs of present learners. EDC does not have clear lines of communication with the Ministry of Education, which sometimes delays urgent decisions.

On the other hand, EDC has these advantages:

- modest funding by the Ministry of Education for distance education;
- links with DEASA (Distance Education of Southern Africa) and other organisations and institutions;
- the availability of a reliable and quick postal service;
- dedicated and hard working academic and support staff, who in spite of limited resources, try their best to make EDC programmes succeed. EDC has a low attrition rate of academic and support staff;
- a print shop which has been very functional, despite aging equipment;
- a slot in the national radio system SBIS, which enables EDC to broadcast some lessons over the air, although not all students can receive them, due to poor transmission in some parts of the country;
- print materials developed for distance education are also used by many schools in the conventional system.

The challenges for ODL in Swaziland in general include:

- limited government commitment to policy to support distance education. The most notable unfulfilled commitments are in staff development.
- some policy makers have a negative attitude towards the value and status of distance education, which prevents them from responding to distance education needs in a timely way.
- there are not enough subjects offered by distance education at all levels to provide students with enough choice to meet their needs, academic interests and abilities.

3.1 Options for addressing issues and challenges

EDC is undergoing restructuring. If funding is obtained, implementing the proposed Project Plan will result in the following improvements:

- infrastructure development: a new studio, additional offices and modernised print shop.
- strengthened Student Support Services Department.
- improved communication with Rural Education Centres and other strategic centres throughout the country, and the introduction of part time classes.
- improved communication between distance education providers and the Ministry of Education through the establishment of a distance education officer at the Ministry of Education.
- a functional staff development programme.
- diversified distance education curriculum that will better meet the needs of learners.

The outcome of this initiative would be improved programmes with better materials and course delivery; expanded provision of upper primary programmes, reaching a potential 10,000 out of school children; improved and expanded vocational programmes; introduction of ICT in course delivery and management; and improved training of distance educators at primary and secondary levels.

Tanzania

*Professor Ralph W. P. Masenge, Director of Research and Postgraduate Studies,
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1. COUNTRY CONTEXT

There are five public universities in Tanzania.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

Prior to independence, foreign correspondence colleges, such as the British Tutorial College, provided some distance courses to Tanzanians. After independence, the government encouraged the development of distance education provision.

2.2 Current situation in ODL

Moshi Cooperative College launched its Field of Extension programmes in 1964, offering distance education to staff of cooperative societies in math, economics, agriculture, and management.

In 1970, the Ministry of Education established the Distance Education Department in The Institute of Adult Education to offer basic education for adults with little formal education and to provide secondary level education, professional and job-related courses in labour law, auditing, and production management.

The Southern African Extension Unit was established in 1985 and offers distance courses in local government to district and town councillors, using print and audio materials supported by telephone contact.

The Ministry of Health began a distance program in Health and Sanitation in 1986 to provide education and training for people in the Lake Region near Lake Victoria about health and child care, water usage, treatment and management, and waste disposal.

The Open University of Tanzania began operations in 1993 as a single-mode distance education institution. OUT now has 52 full time and 156 part time staff, and offers 37 academic programs at certificate, diploma, degree and post-graduate levels, and in 2002 served about 10,700 students, including 450 postgraduate students. OUT offers more flexible admission than the conventional universities, by providing a foundation course for those without minimum entry requirements, by offering multiple admission dates, and by not imposing any upper age restrictions on admissions. OUT uses print, broadcasting, and face to face sessions, and has a network of 21 Regional Centres and 69 local study centres across the country. Regional Centres provide administrative services (registration, study materials, examinations) and counselling for students. In addition to developing 100 of its own courses, OUT uses adapted course materials from Indira Ghandi National Open University, The University of Abuja, and the University of South Africa.

3. PLANNING AND IMPLEMENTATION ISSUES

Poverty affects both the educational institutions and their students. Few students can afford tuition, and government funding to education is limited. At OUT, limited funds result in:

- a serious shortage of study materials because the institution cannot afford to copy, print or buy materials, or commission the writing of new courses;
- problems in paying part time academic staff who are the majority of OUT staff;
- problems in paying for essential services, such as supervision of practicals, field work, teaching practice, examinations; operation of face to face sessions at Regional Centres.



Uganda

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1. COUNTRY CONTEXT

Uganda has a population of 24 million, of whom 80% live in rural areas, and an area of 241,000 square km. Although it has good soil and a climate for two planting seasons, the country is impoverished from the after-effects of two decades of armed conflict that caused loss of life, devastated the countryside, disrupted social patterns, and destroyed essential infrastructure. There are few telephone connections and limited electricity supply.

1.1 Challenges in education

A high rate of population growth and low incomes prevent many people from getting a basic education. Only 10% of primary school leavers proceed to secondary school, and from secondary school, only 2% go on to university. The introduction of Universal Primary Education (UPE) in 1997 has dramatically increased primary school enrolments to an estimated 6 million in 2001. The implications of this expansion for secondary and tertiary education and teacher training explain the context for distance education in Uganda.

1.2 Potential opportunities afforded by ODL

In 2000, a study showed that Northern Uganda needs 140,000 teachers to serve the UPE program, but there were only 79,000 teachers available. The Ministry of Education plans to train teachers through distance education.

Many working people want to upgrade their skills and qualifications as structural adjustment policies threaten their jobs or demand more qualifications. Distance education can enable them to continue working while studying.

Although there has been an increase in participation in secondary education since 1980, there is limited access to higher education. Distance education programmes have been developed to increase access to higher education, although there is a great need for more places and more courses.

2. INSTITUTIONAL CONTEXT

Current situation in ODL

There are a number of providers and programs in Uganda.

- Kyambogo University offers a Distance Diploma in Primary Education and a Certificate in Distance Education.
- Ministry of Education provides in service training for untrained teachers through the Teacher Development and Management Systems Project for primary school teachers.
- Hospice Uganda offers a Diploma in Palliative Medicine.
- Other ODL providers include African Virtual University, based at Makerere University, The Global Distance Learning Programme, Ministry of Health

Continuing Distance Education Programmes, World Link and School Net, and Community Centres operated by IDRC.

The Department of Distance Education in the Institute of Adult and Continuing Education at Makerere University has offered distance programmes since 1991, and currently has 4000 students enrolled in a B. Ed. programme, 3830 students in a B.Com programme and 71 students in a B.Sc. programme. The Institute has 8 outreach centres staffed by resident tutors and programme organisers; three in northern Uganda, two in eastern Uganda, two in western Uganda, and one in central Uganda. The academic schools and faculties (education, business and science) provide course writers and reviewers, and provide for ongoing assessment and examinations. So far, 4000 have graduated from these programmes.

The programmes are provided primarily through print study materials, supplemented by audiotapes, face to face sessions, self directed learning and student study groups.

Enrolment has increased from 300 in 1991 to over 8000 in 2002; over 40 titles of study materials has been developed. Distance learners now represent 30% of the total enrolment. The ODL infrastructure is developing slowly: the use of ICTs for course development; a book bank to enable students to borrow study materials and texts; and staff development through postgraduate education. After 10 years, the external programme is considered part of university programmes and has established its credibility. The university's introduction of e-learning should strengthen its technological infrastructure and distance education capacity.

3. PLANNING AND IMPLEMENTATION ISSUES

Makerere University's ODL programmes face these constraints:

- limited funds and staffing, which translates into limited resources for learners;
- programme pacing that is tied to on-site courses and does not meet distance learners' needs; and
- limited institutional support for ODL.

Because of increased enrolments and limited funds, it is not possible to provide distance learners with their own set of study materials: they can borrow study materials for only two weeks, which is inconvenient and makes the programme schedule inflexible. Services are centralised, and there are limited resources in regional centres, which means students must travel to Kampala for support. The requirement to attend face to face sessions presents problems for learners who must be at work.

Most of the ODL programme tuition revenue has to be forwarded to the university administration. At the same time, all programmes except the BSc are expected to be self-sustaining, leaving little operating funds for materials production, learner support, staff development or capital investment in the ODL infrastructure.

All ODL providers face the challenges posed by limited infrastructure. More than 50% of Uganda lacks telephone services, electricity supply and postal services. This means that it is not possible to use other media besides print, such as ICT, in open and distance learning. Print is also a costly medium, which means it is not possible to produce course books without donor funding. Training, expertise and additional resources are needed to make it possible to use ICT as well for distance education.

A shortage of staff experienced in ODL management and tutoring affects delivery methods and support for learners. Although ODL programmes are growing, capacity is not keeping

pace. There is a need to provide ODL training for tutors, local resource persons, programme administrators and support staff.

There is a need for well-established resource centres at districts with relevant reference and study materials, learning facilities and equipment, information materials, and fast, efficient communications.

The lack of a culture of cooperation among educational institutions and within the University of Makerere means that there are missed opportunities to share facilities, equipment, material and human resources for open and distance learning. As well, a lack of collaboration among ODL providers means that there is a lack of leadership, policy development and planning. Limited awareness of the potential of ODL among institutional leaders means that ODL is regarded as of secondary importance. The Uganda National Association of Open and Distance Learning (UNADOL) serves as a forum for networking and collaboration, but lacks the funds to research the requirements of an efficient open and distance learning programme.

The department of higher education in the Ministry of Education lacks the mandate and trained staffing to deal with distance education in the country, to create an authority in charge of standards, and to identify training needs, resource persons and trainees for courses.

Both institutions and the government need to develop clear policies on provision and participation in ODL.

3.1 Options for addressing issues and challenges

The following strategies are recommended:

- Creating greater awareness of ODL among leaders in higher education and the Ministry.
- Sensitising educational institutions and the community on their complementary roles to help develop ODL programmes efficiently.
- Fostering cooperation and collaboration among ODL providers, promoting the shared use of resources and facilities, such as computers with internet access currently available in schools and institutions.
- Making the private sector aware of distance education and attracting them to invest in the field.
- Strengthening UNADOL as an umbrella organisation by providing funding and a secretariat for UNADOL so that it can function well in guiding and planning ODL policy.

Zambia

*Dickson Chishimba Nkossa, Directorate of Distance Education
University of Zambia*



1. COUNTRY CONTEXT

Inadequate opportunities for education and training for indigenous Africans during the pre-independence period in Zambia resulted in a severe shortage of human resources, which constituted a major constraint on Zambia's development after gaining independence in 1964.

After independence, rapid expansion of Zambia's economic and industrial activities, and the shortage of trained or skilled people meant that Zambians with inadequate or low formal qualifications were recruited into positions into the public service. On the job training was a temporary solution, but open and distance learning was the longer term approach to providing opportunities to learn while working.

1.1 Challenges in education

The challenges in developing a strong education system in Zambia are:

- about 80% of Zambians are too poor to support their school going children, which means that many children do not attend school.
- government is unable to adequately fund schools; parents are unable to pay school fees.
- limited school places, especially in urban areas, restricts access to education.
- lack of qualified teachers, lack of learning and teaching materials, poor infrastructure (buildings and roads) result in poor learning conditions
- teachers' situation is affected by high HIV/AIDS death rate among teachers; poor conditions of service, high poverty levels among public sector workers in Zambia.
- the persistent drought means the government has to give priority to providing emergency relief to those suffering from starvation: there are no resources left for education.

2. INSTITUTIONAL CONTEXT

2.1 Background/prior experience

As early as the 1940s, some Zambians participated in ODL offered from outside the country through commercial correspondence colleges in Britain and South Africa.

When the University of Zambia was instituted in 1966, it introduced open and distance learning to expand formal and non-formal education. Other Zambian institutions offering ODL include the National Correspondence College, the Educational Broadcasting Services, the Nkrumah Teachers' College, the Copperbelt Secondary Teachers' College, National In-Service Teachers' College, the Copperbelt University, and the Zambian Open University.

2.2 Current situation in ODL

The Educational Broadcasting System of the Ministry of Education has offered educational radio, television and audio-visual services for school aged children and teachers since the early 1960s. Current programmes for Grades 1 to 4 use interactive radio techniques to engage students and their teachers. EBS programmes also enable teachers to learn new skills and approaches.

The Ministry of Community Development and Social Services offers literacy radio programmes in English and seven main Zambian languages.

Zambia Cooperative College offers correspondence courses and educational radio programmes on cooperative education, basic business topics, society management, and cooperative consumer shop management. The Ministry of Agriculture provides Radio Farm Fora on agriculture topics for rural populations, which raises awareness as well as providing information. Other ministries and institutions provide radio programmes on health, nutrition, environment, youth skill training.

National Correspondence College in Luanshya was established in 1964 to provide secondary school education to:

- teachers with professional qualifications needing academic qualifications;
- adults requiring secondary education certificates for further training and for responsible jobs;
- primary school leavers who could not obtain places in secondary school.

NCC currently serves an estimated 30,000 directly enrolled students, mainly adults, studying at junior and senior secondary levels, and approximately 21,000 recent primary school leavers studying under the supervision of seconded teachers using NCC materials, at open secondary centres in all nine provinces of Zambia. NCC learners can complete junior and senior school leaving certificate, and GCE “O” levels.

Teacher training colleges involved in ODL are the Nkrumah Teachers’ College, (NTC) the Copperbelt Secondary Teachers’ College, (COSETCO) National In-Service Teachers’ College (NISTCOL).

Since 1998, the three teachers’ colleges have added ODL provision to generate income for the colleges and meet the high demand for college places from school leavers and primary school teachers needing a secondary teachers’ diploma.

Each college enrolls between 60 and 100 distance learners in the first year of the programme (compared to about 150 and 200 on site learners.) Distance learners pursue the same programme offered on site, but have three years to complete, instead of two years for on site learners. At NTC and COSETCO, distance learners attend month-long face to face sessions at the end of each of three terms, but receive little or no distance learning materials for independent study. NISTCOL provides distance learning diplomas in primary and secondary teaching. Students in the primary diploma program attend only one on site session, use study modules and other resources, and during supervised teaching practice receive visits from college and UZ lecturers and Ministry of Education Teacher Education Department staff.

The Zambia Teacher Education Course offered since 2000 by ten Primary Teachers’ Colleges is a two year programme; the first year at college and the second in the field.

During the second year, students pursue distance learning using modules in six study areas, and receive mentoring from experienced local teachers, Teacher Resource Centre coordinators and Ministry of Education staff.

Teachers with college certificates or diplomas can pursue an ODL degree programme at the University of Zambia: this arrangement provides a link between teachers' colleges and the University of Zambia.

Copperbelt University, established in 1987, introduced ODL in 1999 with a project-based certificate course in entrepreneurship that uses printed study materials. Also, a 2-year Secondary Teachers' Course, which combines distance education and three-week residential sessions, enables primary school teachers to upgrade their qualifications. In its first year of operation the programme enrolled 130 first year students and in its second year, selected 150 students from 500 applicants. There are plans to expand the courses available in the teachers' programme, in both teaching subject areas and in educational theory and practice. As well, Copperbelt plans to offer an ODL degree course in Human Resources Management in 2003, and to introduce a degree course in electrical power engineering in the future. These programmes will also use a combination of short residential sessions and distance learning materials.

Zambian Open University, expected to begin operations in 2003, will be the first local and private university in Zambia to offer ODL programmes. Planned as a single mode ODL institution, it plans to offer B.A., B.Ed and LL.B degree programmes for school leavers and non-school leavers.

University of Zambia has included ODL in its mandate since its inception in 1966, and has both the organisational structure and policy framework to support its ODL initiatives. ODL curriculum development, teaching and assessment are handled by full time teaching staff who also teach on site, and a separate administrative unit, the Directorate of Distance Education, coordinates and administers distance learning courses.

The Directorate handles administrative tasks related to enrolling students and managing student records; coordination and management of student support services; professional support for distance teaching staff, especially in materials development; production and distribution of course materials; arranging residential schools; administering examinations; and liaison with schools and faculties within the university about distance education matters. The Directorate is at the same level as schools or faculties, but has additional autonomy because it is self-financing: it uses tuition fees from distance students to meet all its financial obligations, including payments to lecturers for preparing materials, teaching, marking, and examinations. Senior staff have academic appointments; some staff and tutors have obtained further qualifications in distance education. Professional development is provided for Directorate staff, academic staff involved in distance education, and resident tutors.

Distance education policies are managed by a committee that includes the Deputy Vice Chancellor, the Director of Distance Education, Deans and directors of the library, computer centre, and registrar. Department heads and the Distance Education Directorate deal with operational issues, such as materials development, student services, examinations. Resident tutors from the School of Education provide learner services in the provincial centres.

University of Zambia offers first and second year courses in B. A., B. Ed, and B.A. in Library and Information Studies programmes: students must complete third and four year courses through full time study on site. The Diploma in Adult Education is the only programme offered entirely through distance teaching by the school of education.

The University of Zambia is introducing ICT into distance education: at present, ICT facilities are primarily used for email between provincial centres and the DDE, and from learners to the DDE. DDE also coordinates a COLLIT literacy programme that uses computers at literacy centres.

3. PLANNING AND IMPLEMENTATION ISSUES

The Ministry of Education identified general challenges in ODL provision in a 1996 report as uncoordinated planning, serious underfunding, a lack of skilled personnel, inadequate materials for teaching and learning, and lack of transport. A lack of a clear national policy on ODL compounds the problem.

Non formal distance education through radio and television are constrained by widespread poverty and the limited communications infrastructure.

With the prevalent economic hardships and hunger, most Zambians cannot buy even a small radio or television or radio set...(to receive to educational programmes). Even the few who own such equipment may be too busy looking for food or extra money in order to supplement their income. Some may not have the money to buy radio batteries. Sometimes the problem is compounded by general poor radio and television reception, especially in remote parts of the country.

Copperbelt University is only in its third year of offering ODL programmes and faces challenges of inadequate infrastructure, lack of equipment for printing study materials, lack of ICT facilities and delays in the postal system. There are plans to address these issues by negotiating a special priority arrangement with the postal system, and by obtaining ICT equipment and linking with district and provincial institutions so that materials can be sent to provincial centres electronically for distance students to download.

Tertiary level ODL programmes offered by Copperbelt University of Zambia, NTC, COSETCO are not completely open, because they require prior qualifications from prospective students, and participation in residential sessions. The University of Zambia also has strict enrolment deadlines and assignment deadlines.

At the University of Zambia, low staffing levels among teaching staff with full on-site teaching loads make it challenging to devote sufficient time to distance students as well. Increased enrolments of distance learners (more than doubling, from 371 to 888 from 1997 to 2001) adds to the challenge. As well, the university can accept only 360 of 2580 distance learning applicants in 2002-2003. Within the university, the DDE has no direct administrative control over teaching staff or other units that provide support services, which makes it difficult to ensure quality, timeliness and thoroughness of materials development, examination preparation, or distance teaching. The slowness of the postal service and poor roads delay delivery of course materials to learners.

Science subjects which require a lab component are not offered by ODL in Zambia, because of the lack of laboratory facilities that are accessible to distance learners. Students who have studied science to the diploma level must switch to arts or social sciences in order to complete a degree.

The use of ICTs has its own challenges, including:

- lack of equipment care and maintenance, especially in rural provincial centres;
- limited access for students, because there are few computers available and few opportunities for students to learn how to use them;

- high telephone costs for dial-up internet access;
- limitations in University of Zambia's internet link, and limited bandwidth availability.

3.1 Options for addressing issues and challenges

ICT problems can be addressed by increased investment in improving the ICT infrastructure, and providing adequate equipment for students at provincial centres; safe and proper storage of equipment , training staff involved in ODL in the use of ICTs, providing distance students with computer skills and strengthening University of Zambia's internet link.

Expanding the perception of ODL so that it is regarded as offering more than second-chance learning opportunities would help to establish ODL as a mainstream option for obtaining secondary and tertiary education.

African Virtual University

*Dr. Magdalen N. Juma, Interim Deputy Chief Executive,
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1. AFRICAN CONTEXT

Across the African continent, it is unlikely that tertiary education can be expanded to address unmet needs for tertiary education and improve accessibility solely through face to face on campus provision. Developing the primary education sector depends on having adequate educational opportunities in the secondary and tertiary sector.

2. INSTITUTIONAL CONTEXT

There are limited opportunities for tertiary education in African countries, because of inadequate capacity, reduced government funding, school fees, and increasing numbers of secondary school enrollments.

These limitations are particularly serious in science, computer sciences and engineering; meeting this need will enable African graduates to contribute to bridging the digital divide.

2.1 Background/prior experience

The African Virtual University was established as a technology-based distance education network to increase access to tertiary education by providing quality courses from African and global resources to learners at multiple sites, using internet and satellite technologies. It aims to achieve this by building capacity by:

- strengthening tertiary institutions by improving connectivity at host universities, providing training to African tertiary institution staff in developing teaching materials for distance delivery, and enabling institutions to improve financial sustainability through delivery of distance education;
- providing training in engineering, computer science, IT and business, enabling Africans to bridge the digital divide.

During the first phase of its development from 1997-1999, the AVU concept was developed with World Bank support.

During 1999-2002, 31 African Virtual University learning centres were established in 17 African countries, working in partnership with 34 African universities and other university partners from Canada, USA, France, Ireland and Australia to provide programmes to 23,000 Africans in journalism, business studies, computer science, languages, and to assess the needs for quality access to tertiary education.

During this phase, AVU used live and videotaped instruction, supported by textbooks, a digital library and course notes, from leading universities, and transmitted courses via satellite from AVU's hub located in Maryland, USA. Students interacted with their instructors and other students by phone, email, discussion forums and fax. At the Kenyatta University site, enrolments reached almost 3000 by the year 2000, primarily in computer programming, computer systems management and maintenance. Certificate courses accounted for 45.6% of AVU enrolments. This pilot phase was intended to build technical capacity, test the model of delivery and create awareness of AVU.

2.2 Current situation in ODL

After the pilot phase, leaders of African partner institutions agreed to:

- proceed to the operational phase, establishing AVU as a sustainable independent organisation under African leadership;
- increase participation of African academics in content development and delivery;
- expand the programme to include full undergraduate degree programmes in computer science, computer engineering and electrical engineering; and
- strengthen the capacity of participating institutions through enhanced internet connectivity, laboratory facilities and digital library.

The African partners also determined that:

- AVU's technology-based model was feasible;
- government and partner institutions were willing to pay for AVU;
- partners would assume leadership of AVU and plan for self-sustainability;
- AVU educational products must be sensitive to the socio-cultural reality of Africa and supported by a strong organisational infrastructure using efficient, flexible and affordable systems for distribution and interaction.
- in view of distance and academic and cultural differences between Africa and North American and European partners, programs, policies, procedures and technology models should be pilot tested in the African context before full scale implementation.

AVU is now established as an independent non-profit organisation with headquarters in Nairobi and supporting offices in Washington.

AVU has enhanced computer capacity in universities by providing computer courses to university staff and other professionals, and by providing 25 computers to each AVU partner site.

2.3 Prospects for the future

Plans for the period from 2002-2007 are to:

- expand AVU to 150 learning centres in 50 African countries,
- introduce four-year degree programmes in computer science and business studies in both French and English, and
- establish AVU's own communications infrastructure, including a hub, studio and VSAT facilities at its Nairobi headquarters.

3. PLANNING AND IMPLEMENTATION ISSUES

The following issues have constrained AVU's continued development:

- The process of securing international accreditation of curriculum, teaching methods and delivery modes takes between five and ten years. African

universities were unwilling to enrol students in AVU unless there was a clear pathway to accreditation of the student award. Without ensured accreditation, AVU was unable to define start dates for degree programs.

- African partner institutions were concerned that AVU represented competition, rather than a means of improving access and capacity, so they did not demonstrate required levels of commitment to AVU.
- Costs of developing satellite-broadcast degree programmes became prohibitive, at approximately \$12,000 for 12 hours of instruction per week per course.
- Rapid advances in internet provision and online courses threatened the AVU's satellite-based approach to provision.
- AVU has had difficulties in collecting fees from partner institutions, due to its initial status as a World Bank project, then as an NGO, and its lack of a legal and operational framework for obtaining partnership payments.

The New Partnership for Africa Development initiative, focusing on education, defines the need for an African virtual university that is Pan African in outlook, offers an internationally accepted curricula, and has the flexibility to adapt to the different context of African countries. This initiative reinforces AVU's need to reconsider its original operational model.

As a result of these challenges, AVU commissioned a strategic review to address AVU's role in delivering degree programmes, establish funding for sustainability; recommend products, technical infrastructure and an implementation schedule, and advise on the organisational and management structure.

The strategic review recommended that AVU reposition itself as “the architect of a network connecting universities with curricular content; enhancing the links among universities, technical providers, donors, students, faculty, and content providers to help enhance and expand tertiary education in sub-Saharan Africa.”

AVU accepted these recommendations, deciding for the short term to move from a role as direct provider of accredited educational programmes to serve as a facilitator of an educational network linking student need to university supply. AVU will help universities by identifying educational programme needs, locating appropriate content sources, implementing the necessary technical infrastructure, and facilitating (but not owning) the contract and fulfillment process.

Communications costs and system limitations make it difficult to transmit web pages over the internet in Kenya. AVU hopes to use VSAT capacity to deliver content to other AVU sites. ISP costs are also very high in Kenya. Government regulators, universities, industries and NGOs, as stakeholders, will need to be involved in addressing these communications challenges.

3.1 Options for addressing issues and challenges

AVU defines its clients as students, the business community, teachers and faculty.

Under its new operating model, AVU will:

- provide accredited degree, diploma and certificate programmes critical to sustainable development but not adequately provided by existing institutions;

- offer an enhanced digital library with journal and ebooks to support educational programmes; provide technical support services to African universities to enhance their capacity to access educational resources;
- offer an educational portal to serve as outreach to the broader educational community.

As a provider, AVU will offer short courses and graduate programmes for private and public sector clients. AVU will explore, with UNESCO, options for meeting urgent needs for teacher training in Africa. It will use video, online materials and packaged materials, supported by email discussion and onsite sessions at local learning centres.

As a facilitator, AVU will provide technology, technical support, network management and negotiation of cost-effective deals for African institutions. At first, the programme will originate from an overseas institution: African institutions will enrol students and provide local support. A lead African partner that works closely with the international institution will take over accreditation and operation of the programme after skill transfer is complete.

AVU will enable African institutions to develop expertise in instructional design and delivery so they can convert their locally based programmes into ICT enhanced formats for easy dissemination and marketing.

AVU is facilitating the development of a modular Computer Science programme that enables students to complete diplomas that can be applied towards a degree. The programme is scheduled to begin in 2003, with six participating institutions. By 2005, AVU hopes to offer programmes in teacher training and health worker training.

AVU plans to increase opportunities in Computer Science and Engineering, and provide cost-effective work-related programmes in management and computer training to business and the public sector. As well, AVU is providing a pre-university programme (using broadcast, tapes, print and tutorials) that enables women to upgrade their science skills and improve their chances of participating in computer science and engineering courses.

