

Policies and Practice of Open and Distance Learning Models in the Sub-Saharan African Countries: A Literature Survey

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Abstract

As in any developing economy, the Sub-Saharan African countries think of education for all as major impetus behind fundamental change or transformation. This may explain the first three major emphases of the 2004 Millennium Development Goals (MDGs): (i) eradication of extreme poverty and hunger; (ii) achievement of universal primary education; and (iii) promotion of gender equality and women empowerment. Development economists and other concerned social scientists see transformation of the Sub-Saharan African countries as multi-dimensional in the sense that changes occur across various domains including political, cultural, social, economic, intellectual and technological domains. It is worthy of note that as at present, none of the Sub-Saharan African countries has, by policy implementation fulfilled the promise of providing education for all through the existing traditional or conventional education system. It was in search for alternative implementation agent for the educational policies in these countries that gave rise to the evolution of Open and Distance Learning (ODL) systems. Apart from quality issues, a major problem of interest has been those of the implementable policies and ethical practice of ODL models in the Sub-Saharan African countries. This paper aims at examining the current policies and practice of ODL models in the Sub-Saharan African countries, with a view to identifying the best practice for a sustainable educational system in these countries. The applicable method involves review of the literature on policies and practice of ODL models, with major emphasis on sponsored studies published in relevant journals, conference proceedings, and unpublished reports. Our analysis indicates that majority of sub-Saharan African countries have accepted the benefits of distance learning. They seek curriculum design that meet practical traditional needs. Major problems are lack of expertise in the practice of ODL models and lack of documentation. The following recommendations are in place: need to formulate policies on effective documentation and emphasis on trained manpower.

1. Introduction

As in any other developing continents of the world, sub-saharan African countries think of education for all as the major impetus behind any fundamental change or transformation. Economists and other social scientists are beginning to attribute poverty to lack of education or illiteracy. When we reflect on the first three major emphases of the 2004 Millennium Development Goals (MDGs), one would appreciate the importance attached to a literate population of the world. The major emphases as one may recall include: (i) eradication of extreme poverty; achievement of universal primary education; and, promotion of gender equality and women empowerment. It is assumed that the driving force in the achievement of these goals has to come from education.

Transformation in the sub-saharan African countries is seen as multi-dimensional, as possible changes occur across various domains, including political, cultural, social, economic, intellectual and technological domains (Association for the Development of Education in Africa (ADEA), 2002). This suggests that no structural changes in the form of transformation can occur without reference to the multi-dimensional nature of transformation in these countries. Educational policies are, therefore, expected to reflect the characteristics of transformation in the sub-saharan African countries.

The major agent for implementation of educational policies in the sub-saharan African countries has been noted as the traditional education system characterized by face-to-face interactions between teachers and learners, structured courses of study, fixed locations for learning, fixed time schedules, and a certification system. It has been argued however, that none of the sub-saharan African countries has by implementation fulfilled the promise of providing education for all through the traditional or conventional education system (ADEA, 2002).

It is the search for alternative implementation agent for the educational policies that gave rise to the evolution of Open and Distance Learning (ODL) system in the sub-saharan African countries. The increasing recognition of the role of open and distance learning was identified in the 2004 revised Nigeria's National policy on education. The revised national policy had specified the goals of distance education as follows (Ojokheta, 2010):

- i. To provide access to quality education and equity in educational opportunities.
- ii. To meet special needs of employers by mounting special certificate courses for their employees at their workplaces.
- iii. To encourage internationalization, especially of tertiary education curricula.
- iv. To ameliorate the effect of internal and external brain drain in tertiary institutions by utilizing Nigerian experts as teachers regardless of their locations or places of work.

Apart from other identifiable benefits, distance education can provide people that missed educational opportunity at one level or other an alternative means of recapturing lost educational opportunities characterized by flexibility, low costs, and convenience, without returning to the classroom. The overriding problem with the evolution of open and distance learning system in the sub-saharan Africa is in the policies and implementation strategies. As at the time of this presentation, there exists little or no formal research emphasizing the policies and practice of open and distance learning models in the sub-saharan African countries. It is therefore, the aim of this paper to explore the identified nature of policies and practice of Open and Distance learning in these African countries, with a view to developing a template for a universally acceptable and effective administration of open and distance learning education, as well as impact on the interest of scholars in policy and implementation studies that are useful in the practice of open and distance learning systems.

The remainder of this paper is organised as follows: section 2 presents our conceptual clarifications; section 3 explains the method or approach to this study; section 4 presents the survey of available literature on policies and practice of ODL models in the sub-saharan African countries; section 5 summarises our findings; and, in section 6, we present our conclusion and recommendations.

2. Conceptual Clarifications

We observe a general impression that many academicians in the conventional system of education appear to lack information on the meaning, usefulness, quality, and models of Open and Distance Learning systems. It is therefore informative to begin our discussions with the meaning, characteristics, and models of Open and Distance Learning systems.

2.1 Definitions of Open and Distance Learning

It appears we do not have at present a universally accepted definition of the term *open learning*. Some educationists argue that 'open' simply means open entry and access to learning opportunities and the removal of barriers to learning opportunities. Others argue that open learning can be substituted for flexible learning. Jeffries et al (1990), for example look at open learning as "any form of learning in which the provider enables individual learners exercise choice over any one or more of a number of aspects of learning".

Most definitions of *distance education* appear to portray the possibility of communication between participants in a learning system across time and space through technologies. Perraton (1993) explains distance education as "an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learners". On the same token, Holmberg (1990) defines distance education as "the various forms of teaching and learning at all levels which are not under the continuous, immediate supervision of tutors present with their learners in lecture rooms". A combination of the two terms appears to have given rise to the currently operating term, open and distance learning.

Open and distance learning (ODL) has been defined in different ways and at different points in time: According to the Commonwealth of Learning (COL), ODL is a learner-oriented system that allows greater flexibility in learning while students continue with their regular work. ODL is founded in view of the physical limitations imposed by the traditional mode of delivery. In the words of the former Vice-Chancellor, National Open University of Nigeria, Jegede (2009), ODL provides education for all, promotes lifelong learning, and improves on the economies of scale in education management. These definitions have three things in common: flexibility, cost-effectiveness, and learner-centred. It can thus be said that at its best, Open and distance learning can be defined as a flexible, cost-effective, and learner-centred educational system. It is learner-centred as it aims at providing answers to academic questions and problems of learners, not the other way round.

Open and distance learning is characterized by the following societal expectations, among others (Van den and Schlusmans, 1989):

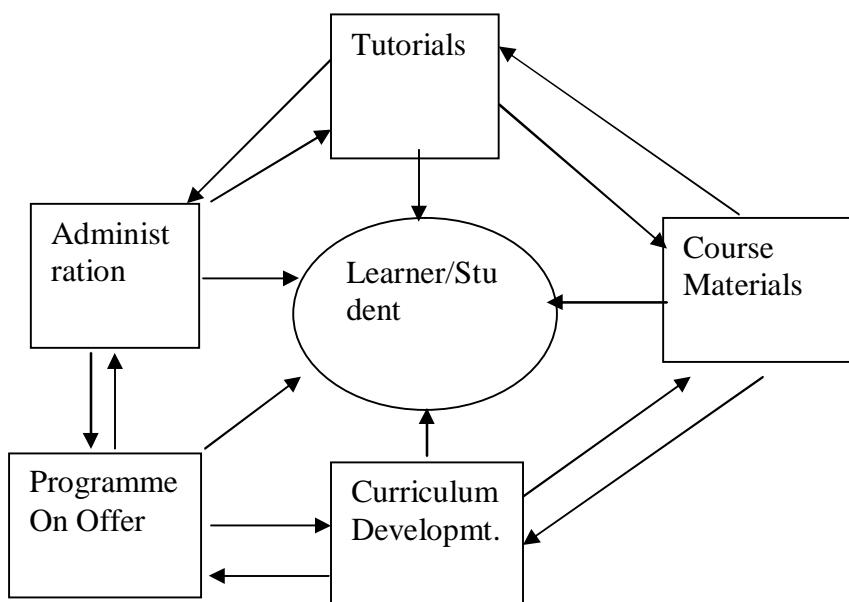
- Making education less expensive
- Enabling more people take part in cultural life
- Relieving the overcrowded traditional universities
- Enabling more people to study while working
- Encouraging lifelong learning
- Making people gain more qualifications to enable them survive in today's employment world
- Opening up access to university for students without formal entrance qualifications

2.2 Distinguishing Features of Open and Distance Learning

The basic distinguishing feature of an Open and Distance Learning institution and its academic programmes can be summarized as follows:

Apart from flexibility, easy access, and cost effectiveness, Open and Distance Learning programmes are learner/student-centred. They differ from those of the conventional university system where both instructional activities and course materials are lecturer-centred. It follows that academic programmes in an ODL institution seek to satisfy the needs of learners, not the other way round. You can now appreciate the importance of needs assessment in for ODL programmes. A simple model of the distinguishing feature of an ODL programme is illustrated in figure 1 below.

Figure 1: The Learner-Centred Model of an ODL Institution



Source: Onwe (2011) "Overview of ODL Systems"

All learning activities are conducted by the tutorial facilitator rather than the lecturer. Koul and Dzivmbo (2005) enumerates the major attributes of effective ODL tutors as follows:

- Must have reasonable subject expertise on the subject area. It would be extremely difficult to answer questions, analyse and solve problems related to specific subject issues where the tutor has limited knowledge about the subject issue. It is not advisable for a tutor who is economics specialist, for example, to run a tutorial session on a political science subject, as he or she may not be knowledgeable enough to give detailed answers to students' questions.
- Must be able to visualize or imagine the needs and the difficulties of the learners, and be ready to go extra mile in fulfilling and resolving them.
- Must keep scheduled interactive time with the learners. This point must be taken seriously by all tutorial facilitators. Unnecessary adjustments to schedules and tutor absence from scheduled contact times can discourage the students, and even encourage high drop out rates. This may also create the impression that the tutor is not serious and, hence, not capable of handling problems.
- Must be able to communicate with the tutorial participants. By so doing, the participants can give feedbacks on the study or course materials given to them. The feedbacks are necessary information on the review of such course materials.
- Must not teach, but must counsel the learners with a view to solving their academic problems and/or problems related to the particular course content.
- Must be familiar with the vision, mission, and objectives of the ODL institution concerned. The tutor must serve as the primary source of information on the institution's policies on admission, registration, examination, and contact schedules.

2.3 Models and Types of Open and Distance Learning Systems

Several models of distance education have since been proposed for adaptation by various institutional and non-institutional educational administrators. We mention a few, as presented by Otto (2010) in the following discussions:

The Examination Preparation model

Though this model appears non-famous in the literature, its prerequisite is a university which limits itself to holding examinations and conferring degrees, and which abstains from teaching. The students or learners have to teach themselves. This model was institutionalized when the University of London Was founded in the mid 19th century for the benefit of those persons who could not afford to be enrolled at Oxford or Cambridge University.

The Correspondence Education Model

This is the oldest and most widely used model. It is a combination of the examination preparation model and a regular teaching by presenting written or print texts, and by assignments, their correction, and by a regular and ad hoc correspondence between the teaching institution and the students. The model is simple and relatively cost-effective to administer. It is used to a great extent by distance teaching Universities that are multi-media and open. The University of South Africa is a good a example of the universities that use this model.

The Multiple (mass) Media Model

This model emerged in the 1970s. It is characterized by a regular and integrated use of radio and television, together with print materials and the systematic support of the students by means of study centres. This model supported the movement toward open learning and open universities.

The Group Distance Education Model

This model is similar to that of the multi-media model, as radio and television are used as teaching media, especially for transporting lectures held by professors. But these lectures are received by groups of students (not individual students) attending obligatory classes where they follow the explanations of an instructor, discuss what they have heard and watched, do their assignments and take their tests. No special printed teaching material is developed and distributed, except for customary lecture notes. This model is prominent in China, Japan, and Korea.

The Autonomous Learner Model

This model provides for freedom **to** develop independent learning. In the model, the students do not only organise their learning themselves, but they also tackle the task of drawing the curricula. They set their own learning objectives and decide on strategies and media they want to apply. Here, the tradition of expository teaching does not apply. Instead, professors function as advisers and facilitators who meet the students regularly and through interviews. In these meetings, the students present, discuss and negotiate their objectives and plans.

The Network-Based Model

This model is presently emerging as part of the digital transformation of our work. It provides the possibility of working in a digitalized learning environment. Here, the students have access to even the remotest teaching programmes and data bases carrying relevant information. Thanks to the Black Berry innovation.

3. Method

This study is mainly descriptive, with major source of analytical information being a literature review of policies and practice of Open and Distance Learning (ODL) models in the sub-saharan African countries. The literature review consists of reports of sponsored studies that were published in journals and conference proceedings. Special attention is being paid to various aspects of the policy of ODL in the sub-saharan African countries, including:

1. Administration and Management.
2. Curriculum design.
3. Course materials production.
4. Learner support.
5. Quality assurance.
6. The use of Information Technology in distance education

4. Survey of Literature on Policies and Practice of Open and Distance Learning in the sub-saharan African countries.

It appears the existing research on open and distance learning has been lacking on the issues related to the policies and practice. As Perraton (1997) observes, most of the existing research on open and distance learning falls under one of five headings:

- i. Description: descriptive accounts of programmes and institutions. The bulk of literature on open and distance learning is essentially descriptive, discussing some combination of the management, students, teaching methods, and outcomes of a course or institution.
- ii. Audience studies: many studies of the audiences for open and distance learning, sometimes examining the performance of students in relation to identifiable variables.
- iii. Cost-effectiveness studies: much focus on higher education, comparing the cost of programmes of open and distance learning with those of conventional alternatives;
- iv. Methodology: descriptive studies of the various methods used in teaching, supporting and counseling of open and distance learning students.
- v. Social context: some recent works were concerned with the examination of social context of open and distance learning. This is the case in the industrialized countries.

Generalisations about existing research on open and distance learning can be numerous, but only three, as enumerated by Perraton (1997), are important for this study:

First, a considerable volume of literature is overwhelmingly concerned with details of the practice of open and distance learning and not with policies on open and distance learning. Many of these are descriptive rather than analytical. As a result, we are short of research findings that can guide policy makers.

Secondly, the literature is predominantly on higher education and about industrialized rather than developing countries. Third, many literature on the comparative effectiveness of open and distance learning methods still lack acceptability as the available findings appear debatable.

To bridge the gap between policy and practice issues on open and distance learning as they concern the developed and developing countries, the current paper identifies the existing literature with some focus on policies and practice of open and distance learning models in the sub-saharan African countries. Our literature emphasis will be on the policy and practice issues relating to major aspects of distance education in sub-saharan African countries, including:

- (i) management and administration; (ii) curriculum design; (iii) course materials production; (iv) quality assurance; (v) learner support; and, (vi) the use of information technology

In the background, we begin with the policy initiatives in open and distance learning in representative sub-saharan African countries, Nigeria and Mauritius. As can be observed, the two countries have similar visions on the ideal ODL institutions.

After a national workshop on distance education, held at the COWAS secretariat in September 2000, in collaboration with the Commonwealth of Learning (COL), the Federal government of Nigeria developed a plan for a decade of distance education in Nigeria, with the following objectives in mind, among others (Association for the Development of Education in Africa, ADEA, 2002):

1. Enactment of a national policy on distance education, as a component of the national policy on education.
2. Establishment of a solid institutional framework for distance education in Nigeria, following a carefully conducted needs assessment studies.
3. Establishment of distance education as a core component of the Universal Basic Education (UBE) programme to jump-start the UBE delivery process.
4. Reopening of the National Open University of Nigeria to address access and equity issues in higher education.
5. Provision of higher education to a minimum of one million qualified candidates through the distance and open learning modes involving public and private sector participation, in areas of high manpower needs.
6. Establishment of a national open school (secondary) to address access and equity issues in secondary education.
7. Training of 20,000 distance education operators including course writers, support service providers, producers, managers, instructional designers and technicians.
8. Establishment of a virile ICT-driven distance education delivery system.

Apart from the reopening of the National Open University of Nigeria, the implementation of the planned actions on open and distance learning in Nigeria would be another area of inquiry.

Nevertheless, Nigeria has, through the National Universities Commission (NUC), accredited the following distance learning institutions, among others:

1. The National Open University of Nigeria (NOUN).
2. The Centre for Distance Learning (CDL), Obafemi Awolowo University.
3. The Distance Learning Institute (DLI) of the University of Lagos.
4. The Distance Learning Centre (DLC) of the University of Lagos.
5. The National Teachers' Institute (NTI), Kaduna.

These institutions have well-stated policies on the UNESCO's major components of distance education systems (Ojokheta, 2010): the mission; programmes and curricula; teaching and learning strategies; learning materials and resources; communication between teachers and learners; interaction between learners; support delivered locally; the delivery system; the student and tutor sub-system; staff and other experts; effective management and administration; the requirements of housing and equipments; and, evaluation.

The National Universities Commission observes, however, that a critical appraisal of the scope of the practice of open and distance learning at any level of education in Nigeria against the backdrop of the long-standing recognition of its potential for increasing access to education reveals some mismatch between policy and practice. With respect to open and distance learning education, the national policy specifies that the open and distance learning mode of education shall not be applicable to academic disciplines in a university that lacks capability for such discipline.

And, in view of the country's current technological and infrastructural challenges, the academic disciplines which may be offered by the open and distance mode within the short-to medium-term (2009 – 2015) would include (NUC): (i) Education; (ii) Administration/Management Sciences; (iii) Social Sciences; (iv) Arts/Humanities; (v) Sciences and Applied Sciences.

The available records indicate that the National Open University of Nigeria (NOUN) is currently the only uni-mode university mandated for Open and Distance Learning in the delivery of university education (NUC Guideline for ODL in Nigerian Universities). We summarise the operational policies of the National Open University of Nigeria as a representative ODL institution in Nigeria.

First, we note that the University Act of 1983 provides, among others, that the President of the Federal Republic of Nigeria is the visitor to the university. In addition, the university has a Council headed by the Pro-Chancellor, and the Council members are constituted by the visitor through the Honourable Minister of Education. Academic activities of the university are run through the university Senate, with the Vice-Chancellor as the chairman and all Professors, Deans, and Directors as members. The administrative machinery of the university is currently enhanced through Schools and Directorates including:

- School of Arts and Sciences
- School of Education
- School of Law
- School of Management Sciences
- School of Science and Technology
- Directorate of Academic Planning
- Directorate of Post-graduate Studies
- Directorate of Learner Support Services
- Directorate of Exams and Assessment
- Directorate of Instructional Resources Development
- Directorate of Access and General Studies
- Directorate of Information and Communication Technology

Other policy initiatives of the university are in the areas of (NOUN, 2006):

(i) instructional modes; (ii) instructional delivery; (iii) learner support services; and, (iv) quality assurance

The Instructional Modes

The instructional mode at the National Open University of Nigeria is by the distance learning strategies applicable to an open learning environment. The instructional mode has been designed to provide opportunity for Nigerian working people to acquire knowledge, skills and techniques relevant to their jobs and their future career prospects.

The Instructional Delivery

The NOUN's instructional delivery system is a model of the Indira Ghandi National Open University (IGNOU). The National Open University of Nigeria does not give lectures to students as in the conventional system. Instead, the university delivers instructions through specialized study materials on the basis of self learning. The instructional delivery is, at present, through the use Printed materials and CD-ROMs. Planned future delivery modes include: Audiotapes and Videotapes; Radio and Television Broadcasts; and, Computer-mediated Learning.

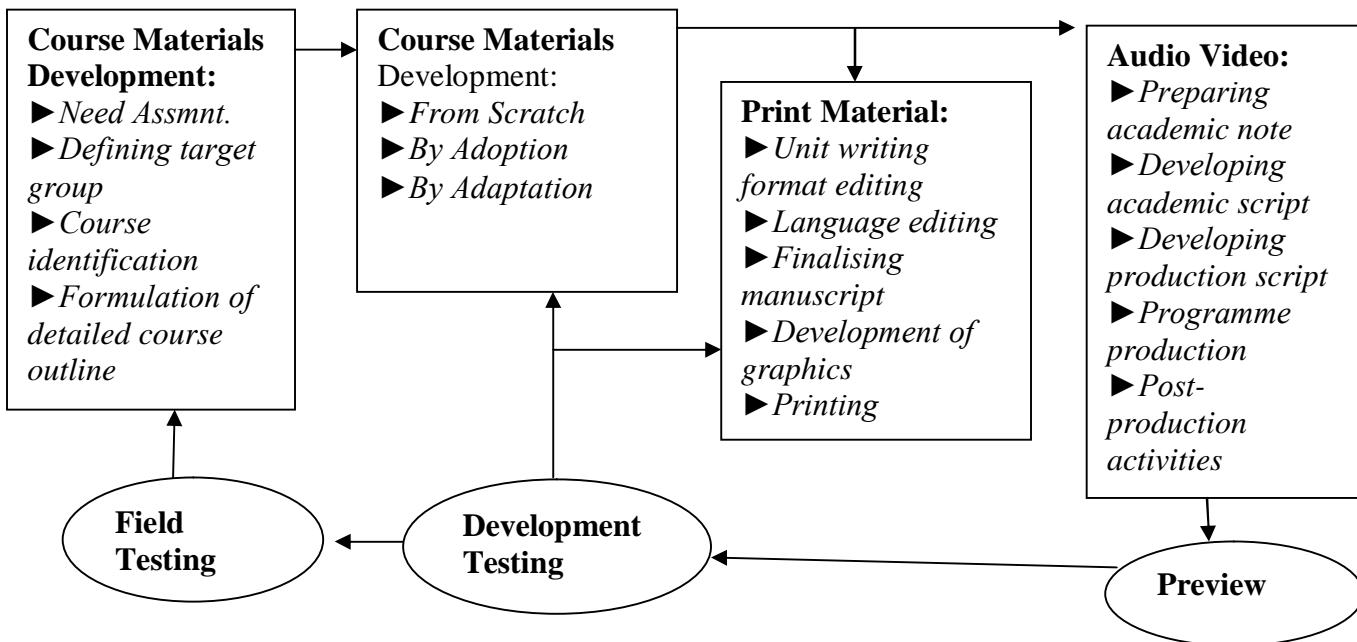
Learner Support Services

The learner support services are design to help learners study at home, their workplaces, and at their convenience. The university offers a range of support services. One of such support service is the tutor-marked assignments (TMAs), the grades of which are expected to be returned to learners with useful comments to guide student learning objectives. Other important support services are provision of tutorial sessions and counseling services at designated study centres across the country.

Quality Assurance

Quality service has been the watch-word at the National Open University of Nigeria. The University strictly adheres to academic quality requirements of the National University Commission (NUC). Academic quality is also assured through NOUN's collaboration with the Commonwealth of Learning (COL), the International Council for Distance Education (ICDE), the African Council of Distance Education (ACDE), and well-established distance and open universities of the United Kingdom, Hong Kong, India, Australia, South Africa, and the African Virtual University in Kenya. The quality assurance of programmes and courses at the NOUN is modeled according to the following course development procedure adopted from Indira Ghandi National Open University (IGNOU):

Figure 2: Quality Assurance of Programmes and Courses at NOUN



Source: NOUN Profile, 2006

Having highlighted the Nigerian policies on distance education, with special reference to the National Open University, we examine briefly the policy initiative of Mauritius. The government of Mauritius has a Master Plan for education 2000 and beyond, an official policy on education that defined the objectives of distance education as follows (ADEA, 2002):

- To improve access to education and skills for the employed, housewives, and school dropouts;
- To increase access to tertiary education in a variety of subjects; and,
- To upgrade teacher qualifications.

The master plan proposed an organizational structure based on a “consortia” model that is based on collaboration among academic institutions in the provision of academic inputs, namely, course contents, tutoring and lecturing. Coordination at the national level is ensured by the Distance Education Committee, chaired by the head of Tertiary Education Commission. The Mauritius policy initiatives regarding quality involves the introduction of a National Accreditation and Equivalence Council (NAEC) Act. All distance education providers in Mauritius are required to register with the NAEC who provides for the Code of Practice and Guidelines for Prospective Students of Distance education programmes offered by local and foreign institutions.

As majority of the literature concentrates on practice rather than ODL policies in sub-saharan African countries, our discussions will continue with the practice of Open and Distance Learning in respect of the aspects of distance education as presented earlier, including: management and administration; curriculum design; course materials production; quality assurance; learner support; and, the use of information technology.

Management and Administration

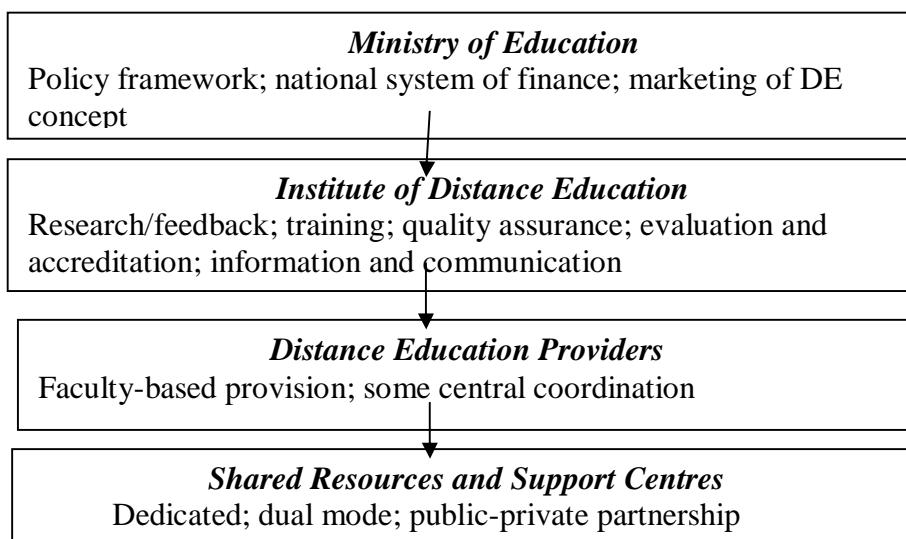
An important but often overlooked variable in the practice of open and distance learning models is the management, as well as, administration of the processes involved. It is worth noting that adoption of any model of distance education and open learning will depend on the ability to manage and administer such model. Looking at the principles, Umoru-Onuka and Otu (2001) view management and administration as a means of harnessing both human and material resources in an attempt to achieve an organisational goal. To recall our memories, management and administrative domain includes organizing, directing, coordinating, and utilizing resources entrepreneurially. We note that ODL managers and administrators should be familiar with what they manage and administer, and how to evaluate every component of an ODL programme to determine its effectiveness. The effectiveness of an ODL institution also depends upon the competence, commitment and quality of its staff. Staff appraisal systems are therefore recommendable and important aspect of effective management.

We have observed that there exists very little literature on specific management systems that sub-saharan African countries and institutions have put in place in order to facilitate effective implementation of ODL models. However, we discover few models and guidelines that have been put in place by Mozambique. The Mozambican model illustrates two important lessons of experience from an international practice of ODL. The important learning have been enumerated as:

- (i) The need for government to express its commitment in supporting ODL through the establishment of an enabling framework; and,
- (ii) The need to maximize the use of limited resources through a variety of collaborative relationships.

The draft framework for managing distance education in Mozambique is presented as follows:

Figure 3: Framework for Managing Distance Education



Source: ADEA, 2002

Curriculum Design

The practice of ODL requires a well-designed, culture-based curriculum and its contents. Many authors (Dhanarajan, 2001; Bertram, 2000; Darkwa and Mazibuko, 2000; and Barker and Dickson, 1996) suggest that distance education providers in sub-saharan African countries must overcome the challenge of cultural bias in the planning, organizing, development, and design of curriculum for distance learning programmes. It has also been suggested that the curriculum designers in the ODL system must bear in mind that such curriculum needs to be flexible enough to accommodate the needs and experiences of a range of people: urban and rural dwellers; the employed, self-employed and unemployed; and, learners of different linguistic groups (ADEA, 2002).

On the same token, Glennie (1996) argues for a learner-centred approach to curriculum design. In this way, distance education can respond to learners' diverse needs.

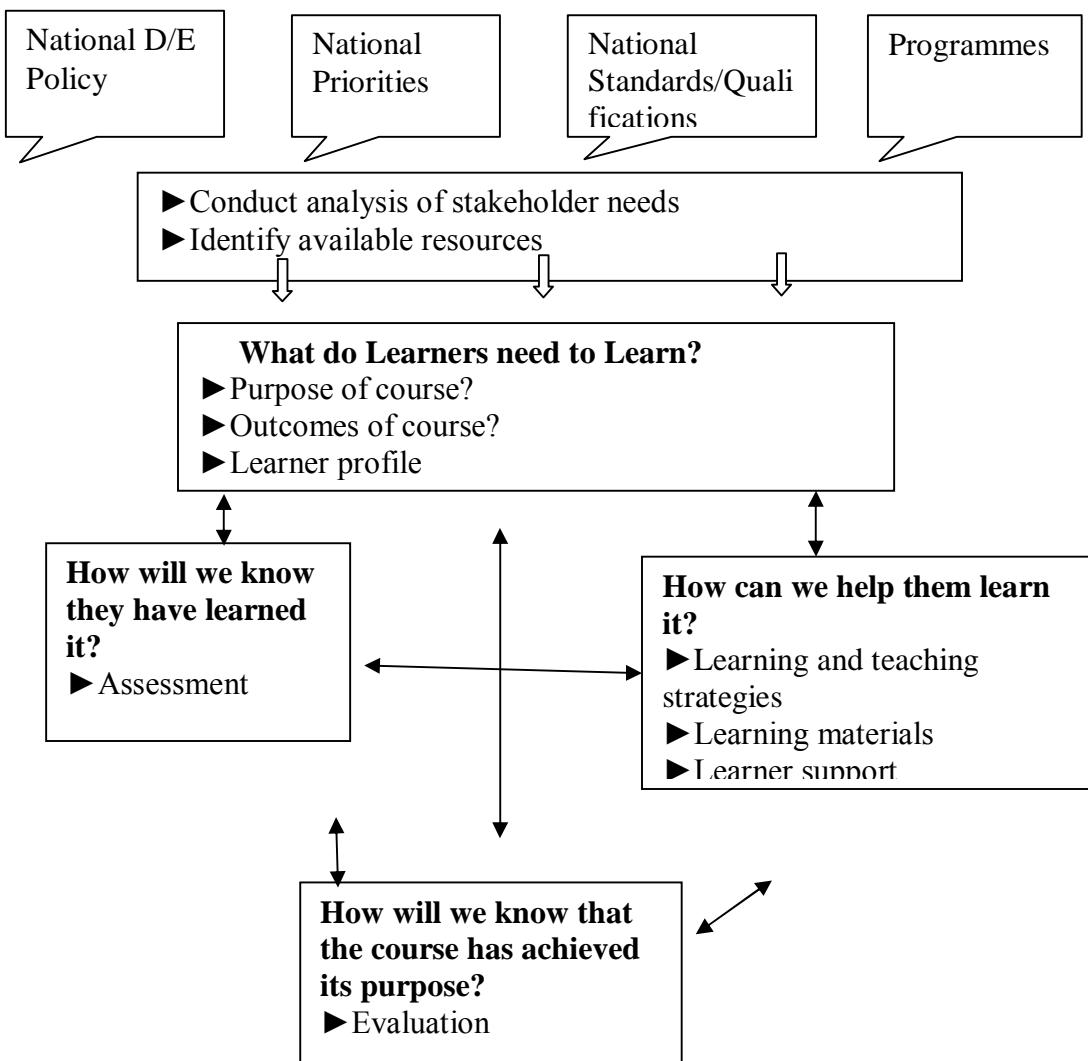
In the following examples, we examine three cases: (i) the steps taken by the African Medical Research Education Foundation (AMREF) in Uganda; (ii) the community outreach and curriculum content organised by Ghanaian community radio station; and, (iii) a course design model developed as part of a consultancy for Botswana College of Distance and Open Learning, BOCODOL (Randell, 2002).

The *curriculum design by AMREF* was basically for training health workers in Uganda, using a distance education model. Basically, the AMREF programme was designed for a wide range of workers in the field of health, and the curriculum was made suitable to the health workers' work situation. The AMREF curriculum was developed in workshops by workers based in areas identified through district needs assessments.

The *National Functional Literacy programme in Ghana* uses a distance learning model based on broad curriculum areas. The curriculum design process is based on face-to-face meetings with people to discuss issues relevant to their livelihood, such as issues of health, sanitation, culture, functional literacy, and the environment.

Finally, the Botswana curriculum design model is summarised in figure 4 below.

Figure 4: Curriculum Design in Botswana



Source: ADEA, 2002

The remainder of the discussions will summarise available literature experiences of the sub-saharan African countries' practice of ODL models in the areas of course material production, quality assurance, learner support, and the use of information technology.

Course Materials Production in Uganda

The production of written course materials in Uganda takes a unique process. Dzimbo (2001) notes that production of study materials and delivery in Uganda is the responsibility of the Institute of Adult and Continuing Education (IACE). At the Institute, the finished manuscript is given to a reviewer on a diskette and then returned to the writer with comments. The revised manuscript is passed on to an editor for typesetting and formatting, after which the printing takes place. Distribution of the printed course material is the responsibility of the material development section, which operates a Book Bank with a librarian who catalogues and prepares lending cards for the course materials.

Juma and Okebukola (2001) note that Makerere University production procedure provide a good example of the general process in the development and production of course materials in an ODL environment. Bhuye (2000) provides a summary of course materials production at the Makerere University:

- The production process starts with writers submitting their completed manuscript to the tutor in charge of materials development.
- Having proofread and corrected the first draft of the manuscript, the typist prepares the manuscript for dispatch to the editor.
- The editor checks the language and illustrations and makes recommendations.
- At the next stage, the manuscript is typeset and the illustrations are posted in. After copy editing, the corrections are entered and the final proofreading is done.
- A few copies are photocopied, loose bound and piloted among students. Corrections are incorporated and the final printing takes place. The study units are then distributed to students.

Quality Assurance in Kenya

Quality assurance has been a very critical issue in the practice of ODL all over the world. The world appears not yet certain on the quality of degrees obtained through the open and distance learning mode of education. It is therefore important for ODL operators to take quality issues as important as any other variables that determine the success of their operations. We have observed the National Open University's model of quality assurance. Let us examine the model at the University of Nairobi in Kenya. At the University of Kenya, quality is measured from two perspectives: input and output. Okumbe (2001) observes that the *quality of distance learning programmes from the input perspective* can be maintained by:

- i. Ensuring that the curriculum for distance learners has been thoroughly discussed, improved and accepted by the various academic organs, including the country's highest academic organ and the University senates;
- ii. Finding out whether the lecturers who were recruited to teach either on a full-time or part-time basis have reputable academic credentials and professional track records;
- iii. Determining students' academic and professional admission criteria that are equal or comparable to internationally acceptable university standards;
- iv. Ensuring that teaching and learning materials have been properly peer reviewed and edited to enhance quality; and,
- v. Building guidance and counseling programmes into the teaching and learning activities to ensure that students stay and complete their programmes.

Quality assurance from the output perspective is ensured by:

- (i) Strengthening and enhancing external moderation strategies of examinations to maintain international university standards;
- (ii) Ensuring proper external moderation of examination scripts and grades;
- (iii) Soliciting the views and feedback from the employers of the distance learning graduates; and,
- (iv) Strengthening guidance and counseling programmes to enhance completion/graduation rates.

Okumbe (2001) also observes that the extent to which quality is achieved is measured through performance or quality indicators. The quality indicators in the distance learning programmes at the University of Nairobi were enumerated as:

- (i) High completion rates;
- (ii) Appreciable rate of admission of distance learning graduates into higher degree programmes at the University of Nairobi and others;
- (iii) Impressive popularity of the distance learning study materials in local and foreign universities;
- (iv) High employment rates of the graduates; and,
- (v) The rate at which experts in distance learning programmes have been used as resource persons in universities outside the country.

Learner Support in Namibia

The Centre for External Studies (CES) at the University of Namibia (UNAM) attempts to meet the needs distance education students through (ADEA, 2002):

- (i) Face-to-Face class attendance
- (ii) Provision of audio tapes for language courses; and,
- (iii) Establishment of study centres for face-to-face contacts and counseling.

Learner Support in Zambia

The Zambian National Correspondence College (NCC) provides learner support through the student advisory office that handles students' administrative queries and makes available tutors that assess students' assignments and give students some encouraging feedbacks.

The College also makes available "learner friendly" teaching materials, written in language that makes as assessable as possible for independent study, with exercises that encourage self-assessment.

Learner Support in Mauritius

The Mauritius College of the Air (MCA) emphasise learning programmes that ensure that distance learners progress satisfactorily through their academic programmes. Its learner support services include:

- (i) Induction;
- (ii) Face-to-face meetings with tutors at intervals of five weeks;
- (iii) Postal correspondence through tutor-marked assignments;
- (iv) Phone tutorials;
- (v) Counselling;
- (vi) Mock examinations;
- (vii) Audio conferencing; and,
- (viii) Peer group meetings.

Learner Support in Ghana

The Ghanian Non-formal Education Division use, in its learner support services:

- (i) Class attendance;
- (ii) Use of radio programmes that complement the face-to-face teaching. The radio programmes are broadcast simultaneously with the classes to enable learners and their facilitators listen and discuss the contents of the programme.

Learner Support in Uganda

Dzimbo (2001) observes that the learner support system at Makerere University is yet to be fully developed. His research indicates that distance education learners at the university are primarily supported through face-to-face sessions and print-based materials. The university believes that face-to-face sessions are critical as they create a platform that allows interaction between students, and between students and tutors/lecturers, for mutual benefit.

Use of Information Technology in Botswana

According to ADEA (2002), Botswana has an impressive technological infrastructure and a national policy to integrate the use of information and communication technologies (ICTs) in education. All schools in Botswana have at least two computers.

Use of Information Technology in South Africa

The use of information technology is strongly supported by the South African government, through its policy and other initiatives. ADEA (2002) notes that the University of South Africa (UNISA), the oldest distance education institution in the world, has moved towards building a “virtual university”, with its bold steps to test the use of technology. The university has been making progress in the areas of:

- (i) Web-based virtual university, named student on line (SOL). This enables the university acquire an opportunity to use modern communication and education technologies in its administration, education and training services for the convenience of staff and students.
- (ii) Interactive tele-and video-conferencing.
- (iii) Audio-visual aids, designed to help blind students through audio versions of the study materials.

5. Findings

The major findings in this survey are summarised as follows:

First, we observed that very little literature exists in the management systems put in place by the distance education institutions in the sub-saharan African countries.

Second, there are some evidence that sub-saharan African countries' distance education institutions seek curriculum designs that meet national needs. However, there exists limited documented evidence on the systems and processes that have been put in place to ensure quality in the curriculum design processes.

Third, there is limited number of documentations on the processes distance education institutions go through in the development and production of course materials. In addition, many of the distance education institutions in the sub-saharan Africa face some critical shortfalls in the capacity for course design and production.

Fourth, there exists a normal practice in distance education quality assurance processes that replicate the academic verification processes found in the conventional system of education in sub-saharan African countries.

Fifth, learner support remains the backbone of distance education delivery in sub-saharan African countries. There exists a growing need to build learner support into distance education programmes, especially for learners in the tertiary institutions. However, the literature on learner support systems appears so descriptive that it does not give insight on how distance education providers in the sub-saharan African countries address the impact and value of learner support initiatives.

Finally, though various sub-saharan African countries have been found experimenting with the use of third and fourth generation technologies, such experiments appear to be limited to few institutions and information computer technologies with limited scope. The use of ICTs in teaching and learning in sub-saharan Africa is seriously hampered by lack of expertise, lack of infrastructure, and a largely technologically illiterate user-group.

6. Conclusion and Recommendations

There is no doubt that the potential lessons to be learned from this literature survey. We have observed that sub-saharan African countries, like any other developing countries, are still battling with inability to achieve the goal of education for all, even though education is one of the major prerequisites for economic development. Attempts to close the literacy gap have led to the new emphasis on open and distance learning in the sub-saharan Africa. The literature reveals six major variables determining the effectiveness of Open and Distance Learning models in the sub-saharan African countries: management and administration; curriculum design; course materials development and production; quality assurance; learner support services; and, the use of information technology. The literature evidence indicate that sub-saharan African countries are yet to have positive progresses on these variables.

Based on these observations and our findings, we recommend as follows:

First, is serious attempts to recruit and train administrators and academic staff with specific emphasis on open and distance learning; secondly, distance education institutions in sub-saharan Africa are in serious need of record keeping, as this will go a long way in assisting researchers on the policy, practices, and administration of ODL models for the achievement educational goals; and finally, the sub-saharan African countries need to embrace forward looking policies on new generation applications of ICT in teaching and learning.

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