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DISTANCE EDUCATION, UNIVERSITIES AND GHANA IN CONTEXT

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Abstract

*Today's world thrives on knowledge-based economy, which in turn is catalyzed in all spheres by Information Communication Technologies (ICTs). We are, therefore, better placed now to keep abreast with the emerging trends in Education. As educators, we can use the cutting edges of ICTs to reach out effectively and efficiently to the many aspiring learners in the field any time and at any place, even when teachers and students are separated by time and space. This is the trust of **O**pen, **D**istance, and **F**lexible **E**ducation (**ODFE**). This article seeks to dwell on the basics of ODFE as practised by some selected institutions (universities) worldwide and zooms in to examine how Distance Education (DE) is currently perceived and operated in Ghana.*

Introductioin

There is no one clear definition for the term 'Distance Education'. Whereas some use it to cover some **forms of study**, others see it as an **education with physical constraints**. Yet still distance education is referred to by some as a **special methodology**, whilst some educationists view distance education as a **package of instructional methods**. Of late, there are attempts to classify distance education as an **operational system**.

Nonetheless, there are some underlying common denominators in the nature of distance eduation. **Firstly**, in distance education an institution teaches (and **not** the teacher as in traditional education). **Secondly**, in distance education the institution/organization aims to link learning materials to learning. This must be its central goal. **Thirdly**, there is a radical shift to the independence of the learner. **Fourthly**, management skills and life-work skills found at industrialized enterprises are vital in distance education. **Fifthly**, there is room for depersonalization for both tutor and learner.

Even though it was before the advent of new digital Information and Communication Technologies (ICTs), Keegan (1980) proposed that a comprehensive definition for distance education must include or reflect six basic characteristics:

- Separation of tutor and learner

- Influence of the educational organization (especially in the planning and preparation of learning materials)
- Use of technical media
- Provision of two-way communication
- Possibility of occasional seminars (tutorials, face-to-face meetings, etc)
- Participation in the most industrial form of education.

Despite local variations, Distance Education (DE) is presented mainly in three forms:

1. **choice of medium**, (print based, audio-based, video based and computer-based)
2. **institutional type**, (private, proprietary, correspondence schools) and
3. **didactic model**, (correspondence, single mode, dual mode, mixed mode, open, flexible, etc)

Even though **distance education** can be viewed as the summation of **distance teaching** and **distance learning**, it is **NOT** synonymous with all teaching-learning arrangements that are not traditional, nor should it be defined as the opposite of traditional (or conventional) education.

In the light of modern and emerging telecommunication technologies, distance education is actively taking on an important and imposing dimension – a means to **simultaneously** telecommunicate a **delivery of instruction** (or learning activities) from a non-classroom remote site to distant sites coupled with **live interactivity**, usually by means of audio, video or networked interaction between tutor and learner(s), or learner(s) and learner(s) (Barker, Frisbie and Patrick, 1995).

By means of modern and emerging ICTs, the growing interest in the field of distance education is rapidly shifting to the **ability** to set up and conduct live, real-time teaching-learning activities between a tutor and learner(s) even if they are in different rooms, different buildings, different towns/ cities, different countries or different continents. In this sense, and much like the traditional classroom setting, learners have the opportunity to seek on-the-spot clarification and/or immediate feedback from the tutor and fellow learner(s). Likewise, distance education learners are thus able to see, hear, communicate freely and interact socially with their tutors and peers.

Nonetheless, a clear distinction must be made between those DE programmes that have systems to promote "live" and "interactive" mutual exchanges of ideas between the tutor and learner(s) on the spot, and those that operate on delayed feedback [between tutor and learner(s)]. Furthermore, since all current spheres of life are being challenged and modified by the rapid advances in modern and emerging technologies, a more appropriate definition of DE must accommodate this reality and necessity.

Even though there is **diversity** in the philosophical and ordinary definitions for 'Distance Education' there is **convergence** of the arteries and veins that lead to (or away from) the heart of the basics and commonalities of distance education delivery modes, approaches and methodologies. Personally, I view distance education as an operating and enticing medium in which the tutor and the learner(s) build up an educational or academic relationship, and which promotes a free, intelligent, but sometimes challenging exchanges of ideas, beliefs, responses, feedback, experiences and opinions that should promote individual growth, social upliftment and nation building – irrespective of the time, place, frequency, convenience and modalities of such tutor-learning(s) interactions.

Admittedly, distance education is a concept difficult to define; but with the evolution of digital technologies, more and more educationists are becoming more intrigued with the meaning of distance education – a powerful opportunity to gain access to learning no matter where learners live or work, because of the opportunities for enhancing quality of learning especially with the possibilities for multi-modal and multi-media learning.

Generations of Distance learning

A number of scholars, cited in IITE (2000), have delineated the evolutionary stages of distance education generations as first, second and third. The primary ICT of the **first generation** distance education was written/printed learning materails distributed by post. That was the birth of correspondence courses from the end of the 19th century. After the invention of the radio (in the 1920s) and the TV(in the 1950s), these were employed to enhance the delivery of distance education, especially with the formation of print and local study groups.

Incidentally, it was during this era that the first ever single mode distance education institution in the world – the University of South Africa – was born.

The setting up of the Open University in the Great Britain in 1969 ushered in the **second generation** of distance education, where for the first time ever an integrated multiple-media appraoch was a large scale, still using the dominant ICT of print/ text medium. Both one-way and two-way communication began to play an important role in the DE learning environment and learner support system. These were in the form of print, broadcasts, audiotapes, correspondence tutoring, face-to-face tutorials, short residential courses, telephone, video and computer conferencing.

By the 1980s, there was already in place the **third generation** of distance education, which makes exhaustive use of ICTs that are interactive, electronic, and computer-based as the basis for effective distribution of information, as well as facilitating vibrant communication between tutor and learner(s) and learner(s) and learner(s) – by providing two-way sychronous and asynchronous communication. The ICTs promote video-conferencing, audio-conferening, e-mail and computer-based discussion forums either on their own, or are added to DE courses characteristic of the earlier generations.

The introduction of the world-wide-web (**www**) in 1993 transformed tremendously and significantly the teaching-learning function of DE, mainly because of the web's ability to facilitate interaction and interactivity through networking – by speeding up the rate of communication, as well as increasing the level of interactivity between tutor and learner(s) and learner(s) and learner(s).

In a nutshell, there is a lot of hyperbole and excitement about the employ and use of emerging and modern ICTs and their potential application in "open", "distance", and "flexible" education settings. It is important to understand that what defines distance education practice should **not** be the technology used, but the pedagogical or teaching-learning variables. Technologies change, but the fundamental issues to be considered about how people learn and how to teach them remain constant challenges. In other

words, the focus should be on teaching and learning and **not** on the technlogy for technology's sake.

To bridge the barriers of time and space, distance education must necessarily use a variety of ICTs to present the learning materials and provide for interaction. Without ICTs, distance education would not be possible, but because distance learning is a **planned** educational activity, this form of technology-mediated learning has **special educational requirements for the organizations involved** with distance education practice. Even though DE has traditinoally been structured according to one of two organizational types ("single-mode" and "dual-mode" distance education institutions), the pervasive advances in digital ICTs are resulting in a number of different variations in how the functions of distance teaching can be achieved over a distance, and new classification of institutions are now being proposed.

The Distance Education System

Until very recently distance education systems were either asynchronous or synchronous. However, one of the effects of the evolution of ICTs is an increasing range of opportunities for mixing the two appraoches. Consider, for example, the telephone which as a synchronous technology can also be used quite effectively in a supporting role in the generally asynchronous independent study. Again, the world-wide-web (www) is simultaneously an asynchronous and a synchronous communication technology. For instance, online chat forums, desktop video-conferencing, e-learning systems and internet based telephony are synchronous while the use of discussion forums, where learners post their messages at different times according to their own personal circumstances, is an example of where the **www** is used as a synchronous technology.

In most single-mode and dual-mode institutions **presenting the content of learning** is achieved by using asynchronous delivery methods, for example, printed study guides or electronic learnng materials that can be delivered on the www. However, synchronous technologies can also be appropriate, for example, live broadcasts of lectures that are distributed to remote sites.

DE systems provide for interaction (i.e. dialogue) by which tutors apply their skills to help each individual learner convert information into personal knowledge.

Examples include: a tutor providing detailed comments and feedback on a written assignment, e-mail communication, simulated discussion, telephone conversations, teleconferencing and videoconferencing and occasioanl face-to-face meetings. There are three types of interaction: **learner-content interaction** (where the learner interacts alone with the learning material in the form in which it has been presented); **learner-tutor interaction** (where learners engage in different forms of dialogue with the tutor); and **learner-learner interaction** (where learners interact with each other individually or in groups). The general rule is that in all distance education systems, it is important to look for ways of including all forms of interaction.

Selected Case Studies

How an institution is organizationally structured defines its financial resource distribution, administrative procedures, design, development and delivery procedures. For example, single-mode institutions offer **all** their courses using distance education methods. Dual-mode institutions offer **some** courses in traditional modes and **some** in distance education modes. Parallel institutions offer components of a particular course in **both** conventional modes and distance modes as components **of the same course.**

(a) Single mode institutions

Examples of single-mode institutions in the world include the Open University in the United Kingdom (**OUUK**), the University of South Africa (**UNISA**), the Open University of Tanzania (**OUT**), the Indira Gandhi National Open University (**IGNOU**) in India, and the Sukhothai Thammathirat Open University (**STOU**) in Thailand. They draw very large and dispersed learner populations in their respective countries, where higher education systems have been highly selective and make access difficult for the masses of the population; and where leaders are attempting to promote wider education as a political, social or economic objective. It is important to note that the size of a country and its national income do not directly affect whether a single-mode institution develops (IITE, 2000). Instead, generally it is the historical-political and socio-economic context of local settings that impacts whether a particular mode of institution develops.

(i) Open University in the United Kingdom (OUUK)

The Open University, established in 1969 as an independent and autonomous institution authorized to confer its own degrees and deliver professional training, aims to "open up" higher education to adults who want to study part-time at degree level or update their work skills in areas such as management, education, or health. The OUUK's key goal is to "open" education to people, places, methods and ideas. It operates a flexible system whereby no educational qualifications are required for admission to undergraduate courses, though students must be at least 18 years old and resident in any European Union country or any other country with which a formal agreement exists. It has partnership agreements with institutions in other parts of the world. Its enrolment is about 200,000 learners with over 150,000 undergraduates and more than 600 fulltime research degree students, with slightly more than 17,000 being outside the UK.

Courses are developed by special design teams, with first-year courses having as many as 25 full-time university and/or British Broadcasting Company (BBC) staff plus consultants and instructional designers and media experts working on them. The team designs a total integrated learning package comprising printed materails, home experiment kits, BBC television programs, audio and video cassetes and CD-ROMs, access to databases of materials, teaching strategies, and orientation and training programs for learners' tutors and counselors. The OUUK was the first distance teaching university to use an integrated mixed-media approach.

It operates a healthy Learner Support Services with a personal counselor being assigned to work with each learner for the duration of his/her learner career and for consulting on particular courses. In addtion, it has established thirteen regional administrative and nearly 300 study centers.

(ii) University of South Africa (UNISA)

It began as the University of the Cape of Good Hope in 1873, and in 1946 UNISA became an independent DE institution. It is the world's first single-mode distance education university and the most advanced of the DE systems in Africa. It offers diplomas, certificates and degrees at both the undergraduate and graduate levels in a variety of content areas, with the Faculty of Commerce attracting

the largest number of students. Like most open universities, UNISA aims to provide a "second chance" for university study for learners who are unable to get places at conventional face-to-face campuses, cannot afford the higher residential university fees, reside in remote areas and/or are unable to attend residential classes because of employment or other commitments.

No educational qualifications are required for admission to undergraduate courses. UNISA has approximately 160,000 degree and diploma learners and approximately 36,000 certificate and music learners. More than 80% of the learners are employed, with almost half of the learners over 30 and a quarter under 25. Low completion rates are a concern and to deal with this, about 14 years ago the organization began restructuring its course design and development processes.

Historically, individual academics have had responsibility for both authouring study guides and tutoring at UNISA. But in 1994 that began to change, as course development teams were set up and a limited number of local part-time tutors was introduced. The teaching is largely the responsibility of an academic faculty member who teaches a course consisting primarily of printed study guides and tutorial letters, which are dispersed to students throughout the country. Audiocassettes and videocassettes are used in some courses. Face-to-face discussion classes are presented once or twice a year for courses with large enrollments at five regional locations in South Africa. Videoconferences are used in place of discussion classes for courses with lower learner enrolments.

UNISA is characterised by a centralized management with respect to teaching and course design from the central location in Pretoria, but until 1994 learner support was limited to individual feedback on assignments in the absence of a decentralised system of tutorial support. Beginning in 1994, UNISA began to focus on quality improvements. The aim was to improve the quality of the courses and programs by using course development teams and the introduction of a limited system of tutorial support at regional study centers.

Although UNISA has made considerable progress with its transformation to a team development approach in the

design of its materials, more refinements and improvements are planned. Considerable effort has been applied to ridding the organization of the remnants of apartheid ideology in some of its courses and employment practices of the past. The development of sustainable ICT enhanced solutions for overcoming the problems of learner support in remote regions is a key strategic focus of the organization.

(iii) The Open University of Tanzania (OUT)

OUT, an independent free-standing institution, was established in 1993 to provide the people of Tanzania (among the poorest of the countries in Africa) a "second chance" to obtain higher education, since only about a third of qualified Tanzanians were admitted to conventional face-to-face universities. It provides both degree and non-degree programmes in a variety of content areas, including arts and social sciences, education, science, technology and environmental studies, and educational technology. Two of its degrees are intended mainly for teachers. In 1998 OUT had an enrolment of approximately 6000 learners. Though print is used as a basis, other technologies are applied in various forms of ICTs, including motion pictures, audio-systems, transmission systems including both satellite and radio, and newer digital ICTs that include telecommunications and computers.

There are 21 OUT's regional centers in different parts of the Tanzania. A regional resident tutor or director, who is an overseer of all educational matters in the region, heads each center. In addition, a number of smaller units are established in the local districts, where learners organize their own study groups. Throughout its years of operations OUT has made it a priority to cooperate with other educational institutions both in and outside of Tanzania, especially focusing on the national library network, science laboratories, and information services. It has experimented with evolving ICTs and alternative sources of energy, and plan to continue these experiments in an effort to make the distance learning opportunities accessible to more people, including people doing time in Tanzania's jails – as a result of which a male inmate of Ukonga Prison in 2007 became the first prisoner ever in Tanzania to be awarded a degree [and for that a Law degree] by the Open University of Tanzania (Daily Graphic, 5th November 2007, p.5).

(b) Dual-mode institutions

In dual-mode institutions, distance education is integrated into the structure of a conventional teaching system. Both the conventional and distance learners may have same tutors, follow the same course syllabus and take the same or similar examinations. In fact, "resident" learners sometimes use the same materials that were developed with the distance learners in mind. In the dual-mode institutions tutors usually undertake many of the functions that are undertaken by teams in the single-mode institution. In major dual-mode institutions, distance education is managed and administered in a special unit separate from the traditional instruction. In comparison to the single-mode institution, distance education in a dual-mode institution usually is performed on a relatively small scale. With respect to costs, many of the course development and overhead monies come out of resources allocated to the resident-based programs (IITE, 2000). Just as there are many single-mode institutions in different parts of the world, there are many dual-mode institutions around the globe. Examples include the University Sains Malaysia (**USM**) in Malaysia and the University of Zambia in Africa.

(i) University Sains Malaysia (USM)

For many years USM was the only dual-mode university in Malaysia, until the government decided to move other universities in the same direction. USM's distance education programms were launched in 1971 and were experimental until 1982, when it became a permanent part of the greater university. It still maintains, however, a separate faculty. USM has a government-endorsed monopoly on adult distance education, because Malaysia believes that is the best way to get a high-cost benefit where financial, infrastructural and human resources are limited. USM offers degree programs across a range of academic areas.

USM develops courses and programs following a five-step method (i.e. plan, develop, produce, evaluate and revise). A Centre for Educational Technology (CET) produces all of the multi-media programs. Not only print is used but also radio, audio and videocassettes. Many learners are required to attend annually a three-week residential school, where they have access to tutors and instructional technologists and other academics, and to live on campus for their final year of study

for their bachelor's degrees. Having existed for only twenty-seven years, USM provides a model for countries or regions that have a relatively small population and small number of universities from which to draw resources for distance education programmes.

(ii) University of Zambia (Zambia)

The University of Zambia was founded in 1967 with distance education written into its charter. Distance education provides opportunity for learners in education, humanities, and social science in a country where the overall enrollment in higher education is about 3.4%. Zambia uses distance program as a way into and out of conventional face-to-face study. There are about 32 courses in three programs, with the largest programme in education.

In 1967 the distance program began with 152 learners and now has over 1,500 learners. Significantly, pass rates are high and dropout rates low. This is an achievement, given the weak economy and limited resources available for distance education. Nonetheless, radio programmes supporting courses were abandoned in 1967.

In Zambia, DE has low status and there is little teacher training in this area. Hence, or otherwise, only limited tutorial support is provided, depending primarily on the voluntary commitment of staff in various units and/or departments of the university. Part of the reason for this is that the Directorate of Education has no administrative authority of control over various providers of learner services and can do nothing if effective services are not provided.

Distance Education in Ghana for Certificate 'A' Teachers

Distance learning is **not** new to Ghanaian educators. "Foreign-based correspondence colleges were the talk and practice in years gone by" (Ossei-Anto, 2002, p.1). According to Ossei-Anto:

> *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 Institutie 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 (2003a, p.9).

As a result of the economic and political mismanagement of educational policies and practices in Ghana **in the 60s, 70's and early 80's – that led to the brain drain and dearth of qualified Ghanaian teachers in the** classrooms, as well as the near collapse of the entire educational system and management – the concept of distance education was conceived to meet one of the challenges of the reforms of the tertiary education system as far back as 1986 and the university provision of distance education began during this era. Sadly enough, according to Ossei-Anto (2003b) "the Ministry of Education did not offer nor set any guidelines for the articulation of distance education mechanism in the education sector" (p. 132). The universities took advantage of this open gap to claim they were using DE as a means to:

- affording learners the opportunity to work and study whilst at home
- releasing pressure on residential accommodation
- allowing adults to divert into other academic areas of interest
- creating an off-campus channel
- increasing access
- sharing cost
- opening up the field for upgrading and updating
- meeting family or job or social or educational commitment simultaneously.

[As a result of the ODL initiatives there is now 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 also resulted in computer literacy among university staff and production of good quality distance education course materials].

(i) Current Ghana's "Disturbing" DE Situation

Despite these modest achievements, there are serious issues and challenges facing higher education in Ghana especially, with the implementation of DE. **Firstly,**

the six public universities [UG, KNUST, UCC, UEW, the University for Development Studies (UDS), and the University of Mines at Tarkwa (UMaT)] can still not cope up, year by year, with the teeming numbers of qualified Ghana applicants seeking admission to pursue various courses and programmes of study. This has led, of late, to a proliferation of private universities and other tertiary institutions (at least 24 in number, at the last count in September 2007) each clamouring and wanting to widen the access for successful high school graduates to pursue degree courses but at a higher cost than that prevailing in the public universities. Even with this development and competition, many qualified applicants are still "denied" admission on account of non-availability of, and/or restricted, hostel facilities and classroom accommodation. It is estimated that each public university has, on the average, 12,000 students pursuing undergraduate face-to-face programmes of study alone, whilst the corresponding number for the private ones is roughly 3,500.

Secondly, because of the acute staff shortage at the university-level (due primarily to unattractive conditions on service) the gross enrollment ratio is very high for the public universities with the value of 1:80 (tutor:learners) in some cases.

Thirdly, even though the public universities are gradually changing gear to be dual-mode in nature and in practice (especially UEW and UCC), a lot of barriers and constraints are in their way. Notably amongst this is the lack of financial support and commitment by the Ghana Government towards meeting the desire of the universities to improve upon existing infrastructure and capitalize on the "extended arms" of distance education (especially ICT-enhanced ODL) to reach out, and especially, to the over 120,000 teachers at the basic level who do not have complete qualifications, but "21,788 serving untrained teachers ... and 11,000 serving certificate teachers [of the number] were eagerly undergoing training through distance education" (Nyarko, 2007) to upgrade their skills and professional competencies.

Fourthly, Ghana – the first Sub-Saharan African country to gain independence – is at the cross roads as far as meeting its national needs for professional teachers to man her educational systems is concerned. Ghana, the country that not so long ago could conveniently "export"

some of its trained teachers to other African countries, now stands in need of competent teachers at all levels of the educational ladder. The annual turn-out of teachers emanating from the conventional teacher-training institutions is woefully inadequate to fill the yawning vacuum and/or dearth of teachers. [The straw of survival now seems to be in the domain of ODFL, propelled into fruition by the employ, use and application of modern and emerging Information and Communication Technologies (Dede, 1996; Kirkwood, 1998; Mushi, 2001; and Daniel & Mackintosh, in press)].

Fifthly, desperate as the situation is, various stakeholders – notably the Ministry of Education, Science and Sports (MOESS), the Ghana Education Service (GES), UEW and UCC – are independently supporting, mounting, or running diverse and various distance education programmes and systems to "arrest" the teacher developmental problems.

Sixthly, the universities rely predominantly on print materials for their distance education learners. This is usually supplemented by monthly tutorial sessions. The DE books produced are very simple, easy to read, very interesting and attractive. Owing to the fact that the universities operate the dual mode system, the courses belong to the academic departments per se. Consequently, notwithstanding the inherent difficulties, it is the responsibility of the tutors in the various academic departments, whose courses are offered under the DE programme, to write the course materials themselves. This is to ensure parity of esteem. However, the various DE units respectively and independently coordinate the material development – from editing to importation of graphics and/or illustrations to final proof-reading to publication.

Seventhly, there is a very slow pace of material development. This is one of the greatest problems that universities' DE programmes face. Three main factors account for this. In the first place, as already stated above, the study materials are written by the university tutors who are full time academic staff of the universities – combining the

writing of DE materials with their normal load of teaching, research, community service, and assessing students. This makes it very difficult for these tutors to have enough time to write the required materials and/or to meet deadlines. This hampers the smooth pacing of the DE programme.

To speed up the pace of writing, UEW, UCC and UG have introduced what is called retreat or conference writing. By this approach a number of writers are taken away from their busy schedules and camped at a quiet place outside the university townships for about a fortnight during which they concentrate only on the writing of their courses. This approach somehow is yet to yield the desired/significant results.

The second cause of the slow pace of material development is lack of adequate reward for authors of distance education study materials.

The tutors believe that the levels of remuneration for writing these materials are too low. Because of this they easily leave the writing to attend to other higher income ventures.

Another motivational issue is the payment of royalties to writers. As at present the tutors are not too happy with the practice in which once they are paid for writing the materials, such materials automatically become the property of the university in question. This makes the tutors get no other further financial rewards by way of royalties. To overcome the problem of lack of motivation, some substantial increments in the writing fees have been made (since January 2003), whilst the issue of royalties is still under discussion at UEW, UCC and UG.

The third factor is that most of the authors do not have access to computers for word processing and so their drafts are handed in a hand-written form. Writing and re-writing before getting a neat draft can be time consuming. As a solution to this problem the universities are assisting tutors to acquire personal computers on hire-purchase. In addition, the public universities are doing their best to get all necessary help in equipping the various departments and each University's ICT centre with computers and internet facilties.

Eigthly, to support the distance students, the universities have separately set up their own Regional Study Centres in different parts of the country, particularly at the regional capitals. These are where the learners meet their tutors for the monthly tutorials and also to collect their course books. These centrers are manned by Regional Study Centre Coordinators, and **part**-time tutors who are employed by the universities. The normal assignment turnaround time is at least one month. This is owing to fact that there is a rather unreliable postal system in Ghana, especially in the rural areas, so marked assignments are not returned to the learners by post, but they are rather given back to the learners when they come in to the centres for the next tutorials.

Ashamedly, the study centres have **not** been fully equipped with the needed facilities; they lack such solid infrastructure, and basic facilities as ofice equipment - tables, desks, telephones, computers, scanners and photocopiers - needed for the day-to-day administrative work. Because of this, the universities operate a highly centralised model where DE learners' records are kept at one place (i.e. at the main campuses of the various universities) rather than at the centres where they converge monthly for tutorials.

Ninthly, Distance Education (DE) receives very limited funding in Ghana from the central government. Since the public universities operate the dual mode system, DE has no separate budgetary allocation. Virtually, everything goes in to "cater for" the conventional (face-to-face) learners and their programmes. In other words, DE has no line budget. The only provision made for DE is that each public university is given only 2% extra of its total subvention from the Government to support its DE programme.

Tenthly, the financial problems are worsened by the fact that currently, virtually all the DE programmes which the universities are mounting are not based on any economic considerations. The programmes have therefore not been cost-effective. No proper costing of study materials, day-to-day administration and learner support system are being done. The main thrust for DE in Ghana, at the moment, apperars to be to upgrade the knowledge of learners than to generate income. Regrettably, this has led to the situation whereby DE learners pay only token fees which do not cover even half of the cost of production of the print materials.

(ii) The ICT-way forward for technology-enhanced DE for Ghana

As a DE practitioner, it is my vision and outmost conviction that Ghanaian universities fully use/ integrate ICTs and multimedia into their distance education programmes. To begin with, each public university must submit proposals for the modernization of its Distance Education Unit to the respective University's Strategic Planning Committee for consideration and approval. It is also my prayer that, in the not too distant future, there will be born on the Ghanaian scene a distinctive, innovative mega-university that will operate at the cutting edge of the information and communication technology revolution to the educational needs of Ghana in the 21st century and beyond. Until that happens, there is more work for the existing universities to do and more importantly, employing modern methods and techniques of on-line distance education delivery in all their courses and programmes to meet challenges of education in Ghana. To be able to deliver quality mass distance education, and to promote healthy manpower development in Ghana, public universities must seek out ways and means of securing financial support to acquire and effectively use/ employ modern and emerging ICTs to enhance and sustain viable, indigenous, pedagogical revolutions in the delivery and adaptation of ODFL methods and systems, as well as expand and diversify the programmes and make ODFL cost effective.

The entire educational sector must engage on a number of initiatives and bold ventures in the domain of ICT enhancements.

Firstly, without delay – and with no excuses whatsoever – the universities must employ ICT – enhanced ODL strategies and must tread the bold path to infuse Information and Communication Technologies into their curricula. The persistent and pervasive influence that ICTs have on organizations, has brought about drastic changes in work culture, which have very important implications for higher education. For example, ICTs have influenced the type of skills learners in higher education institutions have to develop as well as the facilities and learning modes opened to them. Other far reaching implications that ICTs have on higher education are summarized as follows:

- transformating the management and administration of higher education institutions;

- transforming the degree to which, and the way in which, higher education institutions interact with external organizations;

- organisating and supporting teaching and learning programmes, particularly, the development of educational materials;

- increasing access to quality higher education through online and open, distance and flexible learning systems.

Secondly, all tertiary institutions' academic and administrative staff should be developed to possess the following expertise:

- knowledge in the use of relevant educational software packages and ICT systems and the development of instructional and learning material for online delivery.
- ability to evaluate the impact of the use/employ of ICTs on teaching and learning with the view to devising effective and efficient ways of using ICT resources to achieve learning and instructional objective.
- in-depth knowledge of where in the curriculum the multimedia (especially network) applications would be desirable and effective
- appreciation of emerging technologies and ICTs and their influence on social values.

These qualities can be appropriately addressed through electronic transmission of information and interactive computer-based learning environment. ICT usage, as an all-pervasive phenomenon, does not only call for a restructuring of the university's curriculum but it demands that staff, so concerned, change their old ways of managing the business of education, especailly distance education delivery methods.

Thirdly, Ghana universities must move away from merely purchasing hardware and software to an integrated information system environment that ensures the provision of quality and focused user services for its members (teachers, learners and administrators) and external statutory collaborating bodies. This envisaged academic system calls for the provision of a networked environment. A universal

connectivity that ensures that every end-user in a distributed processing site can access information on-line is very crucial here. This would provide the infrastructure that could serve as the basis for teaching and learning to take place in a multimedia environment. Members of the various university communities would also build meaningful partnerships among themselves by sharing information resources on the University's LANs and WANs.

Fourthly, the infusion of Information Technology into the university's curriculum will enhance teaching and learning outcomes and improve the management information systems of the University. Technology-mediated learning packages, such as learner-centered curriculum and electronic collaboration will have to be deployed on the network to engage the learners. This would enhance the levels of interactions of faculty with learners, while learners have a more personalized learning experience.

Faced with dwindling funding for tertiary education in Ghana, the ever-increasing learner population, demand on severely limited resources and the need to address the demands of our distance education programme and the information-based workplace, the objectives of the university to embark on the building an ICT infrastructure should include the following:

- The infusion of Information Communication Technology into the University Curriculum to enhance teaching and learning outcomes and improve the management information systems of the university.
- The deployment of computer-mediated learning packages on the network to engage the learner in order that the learner may take greater responsibility for his/her learning.
- The provision of ICT facilties and enhanced delivery systems for the University's Distance Education programme in partnership with collaborators in the televommunication industry and the African Virtual University. Without a doubt, ODFL programmes hold the long term solution to the quest of the teeming youth of this country for higher education

The use of ineter-campus network and the Internet connectivity to provide on-line services to enhance inter-university (within and outside Ghana) collaboration in the areas of research, shared library and human resources and dissemination of relevant knowledge and information amongst members of the academia of Ghana and elsewhere.

- The adequate preparation of university's products in ICT application in eduaction in anticipation of the inevitable introduction of computer studies and information-based activities into the pre-tertiary education curricula. The need for teachers at all levels to be computer literate cannot be over emphasized. The introduction of computer education into all pre-tertiary educational institutions in Ghana is long overdue.

Fifthly, university-trained products (especially teachers for the basicand secondary schools as well as the Teacher Training Colleges) are the key to preparing the Ghanaian youth for the information society into which global forces are thrusting us. The necessary computer-literate teachers to implement such necessary innovations in the school system need to be at home with the technology and train appropriately now, before the day of implementation dawns on us. UEW and UCC, in particular, have a duty to organize ICT workshops, in-service training and short-term courses for Ghanaian teachers to orientate them to face the impending changes in the school curriculum, since the country must make the necessary internal adjustments that must include a broad based educational policy to make ICT accessible to every child.

Sixthly, there is the need for well-trained system analysts and a core of ICT literate staff to initiate and sustain Information Management System training for all categories of the university staff on each university campus. Such training could center on the automation of data storage; retrieval and management; decision support sysetms, databases for academic

registration, payment of fees, and processing of results and transcripts. The need for the Finance Section, Students' Affairs office, the Library, Academic departments and the Registrar's outfit to collaborate their activities on-line need not be over emphasized. This would make university administration and managment more effective and efficient.

Seventhly, it must always be remembered that the most successful approach is that successful users of ICTs select a mix of technologies, carefully blending them with each chosen according to specific strengths to meet particular challenges (Vanbuel, 2002).

The African Continent Context

African educators, universities in Africa, African governments and the African Union should re-visit their stands and inclinations as a view towards fostering a united, unique, robust DE system for the African continent. The choice and/ or employ of an appropriate and suitable instructional technology for ODFL for Africa depend on many key factors that must be weighed out carefully beforehand. These factors include the followings:

- Learner-centredness and independence;
- Reliability of the equipment;
- Projected interactivity between tutor-learner(s) and learner(s)-learner(s);
- Organizational support infrastructure;
- Ease and compatibility of use of the technology involved;
- Cost effectiveness (to the institution,as well as to the learner);
- Ready availability and accessibility to the technology; and
- Synchronicity and asynchronicity of instructions to be delivered.

Each of the current variables of the learning technologies seem to me to be short of meeting the robust African demand to bring quality education to all who may want to avail themselves of the opportunity.

We know in Africa our potential learners are all over the place – as farmers, as teachers, as workers, as artisans, as traditional rulers, as students etc. We also know that the bulk are the rural (and at times, remote) places where they are "denied" essential services like electricity and accessible roads.

So my question is: What African teaching technology variable(s) should we derive to meet the African needs? Let us dream our dreams today, for they may germinate into realities tomorrow.

To motivate and bring DE closer to ODFL learners on the African continent, there is the need to dwell on the "work-ethics-and-life ethics" model. This will help to make them translate easily into the learning mood from their working/home mood, and not see Distance Education as something odd; but rather have the feeling and inclination that learning is just like working or just like one of those necessary "chores" of everyday life situations.

Let us remember that the majority of African learners enrol in DE courses because of one of these reasons:

- Accesibility and flexibility
- Collaboration with other learners who live far apart
- Collaboration with learners of diverse backgrounds and greater learning
- Academic and/or job advancement; and
- Affordability

The African Continent online study guide should not be only in the English language, but in the notable African languages as well (for example in Kiswahili, Hausa, Zulu and may be Akan). This will make the pre-course instructions very clear to Africans all over the continent. [I will further recommend that the guidelines for each course also be translated to the popular languages for each country by a team responsible for African DE in that country]

Africa should also do less of the "bragging" of DE in this or that country and team up to set up an African DE Quality Assurance Guidelines and/or Team with the primary aim of ensuring that Africa's DE (country by country) is of the superb, first class standards.

Designers of quality African-context DE course(s) must give systematic consideration(s) to the mix of media and learner support necessary to meet the objectives of the course. To me this must be upfront – right from the planning stages. Can we truthfully admit that we have been doing this in our respective African countries? One big problem we have is that our learner support system is nothing to write home about. In fact it is

there only on paper – limited to a poorly-organised monthly tutorial "gathering" for the DE leerners to "explain" the difficult concepts and phenomena in their course books to them.

Properly-designed learner support must provide the opportunity to share learning, ideas, and problems with other learners or teacher, trainer, tutor or mentor and to receive help and information about progress in return. Properly designed DE must go hand in hand with properly designed learner support. If we are to make a show case of an indigenous, well-thought-out, African DE system then we have to strive to have a meaningful (I mean a really meaningful learner support system), culturally supported and healthy learner support system for our African brothers, sisters, fathers, mothers, children, friends and enemies (alike) – one that can stand the force of the Nile at Jinja (Uganda) – one that can withstand the shock and re-organisation that UNISA is going through (to correct the erors of the past).

Since Africans are close-knit by nature, is it not possible for us to use and/or rely on spouses and other family members (albeit, perhaps the entire village/ community) as the core learner support team for an ODFL student – even if such members of the close and extended family are not enrolled in the DE programme?

Let us be anxious to design a really vibrant and supportive "Learner support system" for mother Africa – one that will match the objectives of an African distance education the world's number one. It must be the world's number one!

African can succeed. Africa must succeed. That depends on only you and me and nobody else! Let us hereby resolve to be highly motivated to scale over this hurdle smoothly (Mushi , 2001) . Let us then break off the bonds of fear and cowardice, and lets put on the belt of innovation!

Conclusion

There is now an **accumulated wealth of experience** in Distance Education (DE) in Africa and abroad. We know what **works** and what **doesn't**. We know what **constraints** we face in Sub Saharan Africa (SSA) and some of the possible solutions including:

- Proper national policy frameworks (educational, ICT, broadcasting, copyright)

- Adequate budgetrary allocations (finance, cost effectiveness)
- Timely and appropriate training (a critical mass of Distance Educators & students)
- Decentralized support structures (for distance teaching and distance learning)

DE has changed and **modern ICTs have significantly influenced** what we used to call DE and helped overcome some of the well-known constraints such as:

- Interactivity
- Inability to do labs,

leading to what we now call the **4th and 5th** generation models of DE, especially convergence models (distributed learning or mixed mode learning). DE is no longer something for the Department of adult learning and teacher education but should be an **integral part of higher education** as in SSA to address urgent access and quality needs.Even well-established universities in advanced countries (e.g. USA) are using DE in the form of online learning and **mixed mode of distributed learning**, even where DE takes place on campus.

There is an increasing **convergence** of conventional education and DE. So perhaps we need to opt for dual mode rather than set up dedicated open universities. DE cannot flourish without the **overall development within a country** and so all relevant ministries must collaborate with the Ministry of Education to improve access to education at all levels.

There is a growing world trend and an overwhelming demand for higher education. Hence, each Ghanaian university should get **serious** about developing appropriate strategic and implementation plans that will help mainstream DE and ICTs into day-to-day life, as a way of doing business, training and capacity building, identifying sources of funds required etc. It is, therefore, time to seriously engage the Government of Ghana in **constructive dialogue** as to what is needed to make DE and ICTs work better. For example:

- Special funds for capacity development and learning
- DE needs adequate upfront investments, before Ghana can reap the rewards of DE
- Making tertiary education more affordable and more available.

It is time to come together to **figure out how the problems** that have prevented scaling and mainstreaming can be overcome, instead of talking and talking and talking about them all the time.

This should be the **decade of action** and tertiary institutions (in Ghana and Africa) should set goals with measurable achievements. **If tertiary institutions accept DE and ICTs as an integral part of their operations**, then perhaps the budgets will start reflecting this and DE development will **not** always be starved of funds (e.g. the mixed mode at the University of Mauritius where all 1st year students have to take DE courses as a way of handling access constraints).

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