

# **Opportunities for Knowledge Transfer Through Open and Distance Learning in Sub-Saharan Africa**

By

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## ABSTRACT

Most countries in Africa South of the Sahara have some of the lowest enrolment rates in secondary and higher education. This is due to the higher cost of attaining such education coupled by the poverty and low income in the societies of this region. Recent efforts by the private sector, have increased access in terms of programmes and enrolment. Increasingly, higher education is reaching even those deep in rural areas, thanks to the distance education initiatives being launched widely in sub-Saharan Africa. Distance education is affordable, and flexible to the needs of the working class, as well as to the disabled and female learners.

The rise of the internet and the globalization of knowledge has given rise to centres and peripheries of knowledge. The centres are in developed countries and appear to be growing stronger at the expense of the peripheries, in poor countries. With the evolution of English as a global language for scientific scholarly work, coupled with ICT, opportunities exist for cross-border knowledge transfer through collaborative efforts between universities in the centre, and those in the periphery. Such opportunities can best be realized through open and distance learning, particularly using electronic media through e-Learning platforms. Open and distance learning offers the best opportunity for massification of higher education in sub-Saharan Africa needed to generate the required masses of experts for socio-economic turnover. Collaboration through cross-border initiatives with universities in developed countries will accelerate the pace of knowledge transfer to the region, thus stimulating the growth of the nearly stagnant economies of sub-Saharan Africa.

## INTRODUCTION

Self instructional texts meant for distance learning, date back as early as the 18<sup>th</sup> century. It has been reported (Chabaan, 1996), that distance teaching at university level was available at the University of London as far back as 1856. Since then, distance learning has grown to become one of the largest providers of higher education around the world.

Distance learning is characterized by the quasi-permanent separation of the teacher and learner through most of the learning period, as opposed to conventional face to face education. The learner must have self-drive, assisted by easy to follow learning materials. A combination of print, audio, video, digital media, has today made self learning all so much easier. A strong two-way communication between the learner and the teacher is needed for ensuring that both maintain some kind of dialogue, and this has been made simpler in todays information age.

The primary advantage of distance learning is its capability to overcome participation barriers that would normally arise due to remote location of the learner, constraints of employment, family responsibilities, and physical disability. Distance learning also appears to have opened new opportunities for second chance learning to those, who could not attend first chance. Many students of distance learning are much older, and mature people, who realize at a later stage in life, a need to improve their academic qualifications in order to rise to higher ranks in their career. Most second chance learners are people who at their time, did not have secondary school qualifications required for enrolment in conventional universities. Most Open and Distance learning institutions have now in place, foundational programmes, that enable such learners to enroll for degree programmes.

Open and distance learning (ODL), is now becoming an important avenue for recurrent learning, as it facilitates adaptation to changes in technology for those already in the work place. ODL offers professional development programmes in rapidly changing areas such as medicine and engineering, to enable the learner cope with new technologies in their fields.

## KNOWLEDGE AS CATALYST FOR DEVELOPMENT

With no doubt, knowledge is the catalyst for socio-economic development. The ability of humans to make efficient use of resources around, was determined by available knowledge on technologies and methods of converting the resources in products or services. The various levels of socio development that humanity traversed, are synonymous to the magnitude and level of knowledge those

societies had. The present state of underdevelopment in most sub-Saharan countries may dully be attributed to lack of knowledge, since most of these countries are endowed with rich natural resources. It is therefore without doubt, that Asmal (2004) referred to knowledge as the wellspring of economic and social development. The knowledge centre, being human brains and skilled hands, continue to be the major driving force for development. Thus it has been observed, that the knowledge economy, demographic shifts, mobility of the labour force, and increased trade in services are the main factors driving nations to place more importance on developing and recruiting human capital or brain power through international education initiatives. The most successful countries are those that were able to recruit the brightest students and scholars from other countries, thereby increasing their scientific, technological, and economic competitiveness.

In today's environment of globalisation, there now seem to be no boundary for knowledge transfer, with human capital remaining very mobile, and restricted only by the economics of supply and demand. Fast developments in science, technology and innovation have created knowledge based economies and has also accelerated the speed of globalization (Knight, 2004). The emerging economies of India and China are characterized by fast increase in academic output in terms of graduates and research, spurred by cross border education initiatives. It has been reported (The Economist, Sep 8th 2005), that the higher education enrolment rate in China, which was about 2-3% in the 1980s had risen to 17% by 2003. The number of doctoral students jumped from 14,500 in 1998 to 48,700 in 2003. It is also reported that the number of people attending universities in India, almost doubled in the 1990s from 4.9 million to 9.4 million.

In order to capitalize on knowledge, numbers of experts in any field is critical. A certain critical mass of trained manpower is always needed to bring about innovation that eventually spins off new enterprises. Most African educational systems were intended to be units for generation manpower required for the functioning of the civil and public service. Care was taken to keep the figure of graduates low, so that only those needed to fill existing vacancies were trained. As a result, the tendency was for universities to train job seekers! Towards the early 1980's, with increasing numbers of graduates trotting streets to seek for employment, some universities began to re-orient their programmes, aiming at equipping the graduates with entrepreneurial skills. Thus training was now to be focused on training job creators, rather than job seekers. To provide for the large numbers of knowledgeable people, African countries have embarked on a massification process – a process of training graduates in large numbers.

## ACCESS TO HIGHER EDUCATION IN AFRICA

For many decades, the higher education sector in Africa was neglected, and was not given priority in donor funding agreements. Basic education and later secondary education were funded. Furthermore, the delivery and financing of higher education was solely a government business! Most post independence governments had a firm grip on the higher education sector and would never allow in the private sector. As a result, very few secondary school leavers got the chance to attend higher education.

Recent entry of the private sector has considerably rejuvenated the higher education sector, with sudden increases in enrolment for degree programmes. However, most private universities are focused mainly in business, law and humanities. A few have ventured in Medicine and ICT. However, engineering, agriculture, veterinary medicine, applied sciences, architecture, etc are still offered only in public universities. This is largely due to the higher costs of providing resources and infrastructure for such programmes. Although Africa's private institutions may be absorbing the excess demand, and are providing diversity of programmes and competition, they still have to convince stake holders on their ability to offer quality education (Mabizela, 2004). Most of the private universities lack strategies for staff recruitment and staff development, relying heavily on part-time staff and retired professors. There is also the question whether or not private universities can attract top students from the mainstream secondary education sector. Some governments in Africa, are realizing the important role the private sector may play in higher education, and are now allocating student loans, development grants, and other support to the private universities.

The commitment of government to invest in skilled manpower, is not just limited to study grants and student loans. Globally, countries that have made it, had to invest significantly in research and development. Universities in Africa have not featured as centres of knowledge creation when compared to other parts of the developed world. Resources allocated towards R&D in Africa are still short of 1% of the GDP. It has been reported (Weber, 2006) that the amount of public funding towards R&D as a percentage of GDP is more than 2.76% in the USA, about 3.12% in Japan, and about 2% in the EU. Similar levels of support exist in the developed countries, regarding support for higher education. In the USA, higher education receives 2.7% of GDP. It is 2.5% in Canada and South Korea.

Given the low GDP in most Sub-Saharan countries of Africa, support to higher education and access to higher education in Africa remains very low. However, in a globalized environment, Higher Education is now being seen as a commercial product, and has reached the global marketplace, where it is slowly becoming internationalized. It has been reported that there are more than 27 Australian

Universities offering offshore programmes in China (Garret, 2004). The rise of the internet and the globalization of knowledge has given rise to centres and peripheries of knowledge. The centres are in developed countries and appear to be growing stronger at the expense of the peripheries, in poor countries. This globalization of higher education, exacerbates dramatic inequalities among the world's universities (Altbach, 2001). Therefore, meaningful knowledge transfer will only occur where there are strong linkages between the centres and the peripheries. The use of English as lingua franca for scientific communication and for teaching, especially when combined with ICT, makes the creation of such linkages a reality. However, developing countries still have many special academic needs that need to be protected. Third world countries that have entered into international academic relationships, should ensure that these arrangements are based on national needs and allow choice among programmes and partners.

#### OPEN AND DISTANCE EDUCATION IN TANZANIA.

Tanzania's Development Vision 2025 establishes Education as a strategic change agent for mindset transformation needed for finding solutions to its main challenge of poverty and poor economic growth, so as to place Tanzania among the developed countries of middle level income by 2025. The Tanzanian national Higher Education Policy published in 1999, lists six major problems facing higher education sector in Tanzania:

- (i) appallingly low student enrolment
- (ii) gross imbalance in science relative to liberal arts
- (iii) gender imbalance
- (iv) poor financing
- (v) unregulated, uncontrolled proliferation of tertiary training institutions
- (vi) a tendency to distort the real worth of academic programmes.

A number of strategies have been proposed and implemented to address these problems. For example, public facilities have been expanded, and several new private universities have been allowed to operate. Table 1 shows the list of private universities now currently authorized to operate by the Tanzania Commission for Universities, the regulatory body for higher education in Tanzania. Cost sharing initiatives allow the government to use its limited resources to support more students. Affirmative action programmes have been implemented allowing an expansion of female participation. Efficient use of infrastructure and resources has contributed to significant gains in the enrolment capacities of the public universities. Then the government has supported the initiative for higher education through open and distance learning mode.

TABLE1: STATUS OF UNIVERSITIES IN TANZANIA

S/N	Name of Institution	Location	Ownership	Status
1.	The University of Dar es Salaam <b>(UDSM)</b>	Dar es Salaam, Mlimaniwa Campus	Public	Accredited
2.	The Sokoine University of Agriculture <b>(SUA)</b>	Morogoro	Public	Accredited
3.	The Open University of Tanzania <b>(OUT)</b>	Kinondoni, Dar es Salaam (with branches in all regions)	Public	Accredited
4.	The Hubert Kairuki Memorial University <b>(HKMU)</b>	Mikocheni, Dar es Salaam	Private	Accredited
5.	The Tumaini University <b>(TU)</b>	Moshi, Municipality	Private	Accredited
6.	The Muhimbili University of Health and Allied Sciences <b>(MUHAS)</b>	Upanga, Dar es Salaam	Public	Accredited
7.	Ardhi University <b>(ARU)</b>	Dar es Salaam, Survey Area	Public	Accredited
8.	University of Dodoma	Dodoma	Public	Accredited
9.	Saint John's University of Tanzania	Dodoma	Private	Accredited
10.	Stefano Moshi Memorial University	Moshi, Kilimanjaro	Private	Accredited
11.	The Saint Augustine University of Tanzania <b>(SAUT)</b>	Nyegezi, Mwanza	Private	Accredited
12.	The Mzumbe University <b>(MU)</b>	Mzumbe, Morogoro	Public	Full Registration
13.	The State University of Zanzibar <b>(SUZA)</b>	Mnazi Mmoja, Zanzibar	Public	Full Registration
14.	The International Medical and Technological University <b>(IMTU)</b>	Mbezi Beach, Dar es Salaam	Private	Full Registration
15.	The Zanzibar University <b>(ZU)</b>	Tunguu, Zanzibar	Private	Full Registration
16.	Aga Khan University- Tanzania Institute of Higher Education <b>(AKU-TIHE)</b>	Upanga, Dar es Salaam	Private	Full Registration
17.	Mount Meru University <b>(MMU)</b>	Ngaramtoni, Arusha	Private	Full Registration
18.	University of Arusha <b>(UoA)</b>	Usa River, Arusha	Private	Full Registration
19.	Muslim University of Morogoro <b>(MUM)</b>	Msamvu, Morogoro	Private	Full Registration
20.	Teofilo Kisanji University <b>(TEKU)</b>	Mwanjelwa, Mbeya	Private	Provisional Registration

Source: <http://www.tcu.or.tz/universities.html>

The Open University of Tanzania (OUT) was established by an Act of Parliament no. 17 of 1992. The University offers certificates, diplomas and degrees through Open and Distance Learning (ODL) mode. In 2007 the OUT was granted a Charter. It is an accredited institution, with five faculties and three institutes. Within a few years of its establishment, the OUT has been able to spread its activities throughout the country, with a regional centre in each of the country's 23 administrative regions on the mainland, and a centre in Zanzibar and Pemba

Islands. There are five district towns with examination centres. Table 2 below shows the cumulative enrolment at the OUT by programme, since its establishment.

TABLE 2: CUMMULATIVE ENROLMENT BY PROGRAMME

<b>Programme</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
BA (General)	1518	494	2012
BA (Education)	4628	1707	6335
BCom (General)	1216	178	1394
BCom (Education)	321	65	386
B. Ed.	2990	1410	4400
LLB	4120	672	4792
BSc (General)	1333	392	1725
BSc (Education)	1651	348	1999
BBA (General)	1405	320	1725
BBA (Education)	235	76	311
BA Tourism	202	50	252
BSc (ICT)	66	8	74
BEEd (Special Education)	30	15	45
BA (Social work)	54	66	120
BA (Sociology)	140	119	259
<b>TOTAL</b>	<b>19909</b>	<b>5920</b>	<b>25829</b>

Source: The Open University of Tanzania: Facts and Figures, Jan 2008.

Open University students largely constitute of mature people who are working. Most of them missed a chance for higher education during their schooldays due to fewer places available in public universities. A few others, did not have university entry qualifications, and enter degree programmes after successfully completing a foundation programme. Some of the students attempt a few modules and are forced to defer studies due to pressures of employment or family. As a result, only about 50% of all enrolled students are active at any one moment.

Although the student numbers appear to have grown very fast, the same cannot be said of staff numbers. Currently the university has just 172 academic staff, for handling an average of 17,000 active students at any one moment. This would give a staff/student ratio of 1:100. In reality the staff workload is much higher because about 30% of the staff are on study leave, undertaking postgraduate studies at various other universities. For preparing study materials, setting and marking of examinations, the OUT continues to rely of part-time lecturers, especially from the University of Dar es Salaam.

Recently, the government of Tanzania has embarked on a programme to revitalize secondary education, with establishment of secondary schools in every ward. It is hoped that most of the scholars who joined the system in 2006, will be ready to enroll in universities in 2011. The present capacity in campus based face to face learning in most universities in Tanzania will not be able to absorb the massive numbers of qualifying candidates. The Open University of Tanzania is likely going to be the only institution able to absorb all these candidates, through its growing network of regional centres at regional and later at district level. With improvements in bandwidth and anticipated drop in the price of computers in the near future, delivery of higher education by Open, Distance, and e-Learning will be much simpler.

During the 2007/8 academic year, the Open University of Tanzania enrolled 1,500 trainee teachers, who had earlier been licensed by the Ministry of Education and Vocational Training (MEVT) to teach in secondary schools before attending any training. Teacher training normally takes between three and four years in face – to – face institutions. It takes about six year in open and distance learning programmes offered by OUT. But for this special programme, the ministry requested OUT to fast-track the training, so that the students can be ready to graduate after three years. The pioneer group of students are now in their second year, and most of them are making satisfactory progress. The success of this programme will be an important milestone in the efforts of the Tanzania government to meet the growing needs of teachers for its rapidly growing education sector. In 2005, there were 77,238 secondary school leavers in Tanzania. The figure rose to 115,302 in 2007. It is expected that in 2010, there shall be 326,955 secondary school leavers. It is estimated that 50,000 new teachers are needed to meet this rapid expansion of the education sector.

The vast numbers of scholars scattered across a poor country like Tanzania, poses the greatest challenge to the OUT. Some areas cannot be reached by car from Dar es salaam in less than three days. During the rainy season, most roads are not passable, and the University hires a charter plane to distribute exams and tests in the periphery regional centres. Stringent requirements for quality control means a lot in terms of cost of managing examinations and tests, and routine distribution of printed study materials. The OUT continues to rely heavily on public financing, as it charges fees at about 20% the unit cost. To complete a bachelor degree in education, students spend about Tsh 1.8m (less than USD 1,600), as direct tuition cost for the entire programme. (3-6 years of study). To study for the same degree at the University of Dar es salaam as a private candidate (partially subsidized), tuition would cost a minimum of Tsh. 4.8 m (About USD 4,000). It is this low fee structure that makes studying at the OUT attractive, and has enabled thousands of Tanzanians from low income families to earn a higher education qualification.

Apart from scholars inside Tanzania, the OUT has enrolled about 139 students from Kenya, 91 from Uganda, 5 in Lesotho, 5 in Zambia, 3 in Ethiopia, 9 in Burundi, 2 in Rwanda, 2 in Malawi and 2 in Hungary. There is a growing interest in the sub-Saharan region to study by distance from OUT. Currently, the OUT operates a study centre in Nairobi to cater for students in Kenya. Interest has been shown by the Triumphant College in Windhoek and the Namibian College of Open Learning (NAMCOL) to serve as a coordinating centre for OUT students in Namibia.

On the other hand, the Open University of Tanzania seeks to collaborate with the University of Coventry to offer by distance mode, the Masters of Communications Management (MCM). There is also interest to secure collaboration with the Glasgow Graduate School of Law to offer their LLM in IT and Telecoms by distance. Cross-border initiatives like these will facilitate smooth knowledge transfer, where both the centre and periphery have something to offer one another, but more precisely, this is a unique opportunity for scholars in Africa to get a chance to undertake postgraduate degree programmes at just a fraction of the actual cost.

## CONCLUSION

Open and distance learning offers the best opportunity for massification of higher education in sub-Saharan Africa. Collaboration through cross-border initiatives with universities in developed countries will accelerate the pace of knowledge transfer to the region, thus stimulating the growth of the nearly stagnant economies of sub-Saharan Africa.

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