Full Length Research Paper

Breaking the fetters of higher education in Sub-Saharan Africa

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Higher education institutions (HEI) are established to address human resource needs by producing graduates with the relevant knowledge, skills and attitude for the labour market and improving the country's ability to maximize its long-term economic, social and political developments. The fetters of higher education are the challenges bedeviling its growth and development. This paper focuses on appropriate technology and innovations needed to break these fetters. Desktop research was used for data collection and textual analysis was deployed to analyze data. Results showed there were inadequate skilled lecturers, poor mentorship scheme, inequitable access, irrelevant curriculum, scarcity of lecture halls, inadequate research initiative and low ICT-mediated education. It is recommended that learner-centred and a problem-based instructions must be adopted, lecturers should be mentored and trained in the art and skill of teaching; assessment method must challenge students to perform at higher cognitive level of understanding, ICT- driven education should be adopted to impact equitable access, quality and cost of education.

Key Words: Education, Sub-Saharan Africa, Higher Educational Institutions, Universities.

INTRODUCTION

Higher educational institutions in the Sub- Saharan countries, as found elsewhere, are established to provide education, engage in theoretical and practical research that can strongly connect to industrial development and also enhance sustainable socio- economic development. They address the region's human resource needs by producing graduates with the relevant knowledge, skills and attitude for the labour market; increase the develop-ment of new knowledge and technology anddeepen their engagement in economic, political and social development (Yizengaw, 2008).

In a knowledge economy, tertiary education can help individuals have better employment prospects, higher salaries, and a greater ability to save and invest. This will also result in better health and improved quality of life. From the public perspective, tertiary education may promote faster technological catch-up and improve a country's ability to maximize its economic output.

Higher education can create greater tax revenue, increase savings and investment, and lead to a more entrepreneurial and civic society. It can also improve a nation's health, contribute to reduced population growth,

improve technology, and strengthen governance. For example, in the developed world, everyone knows that college education and professional education are necessary tools for gaining access to the best job opportunities and wealth. In addition, college and professional education opens doors to skilled employment, better pay, and a higher standard of living and thus reduces poverty gap.

Kofi Annan buttresses the above view when he said,the universities must become a primary tool for Africa's development in the new century. Universities can help develop African expertise; they can enhance the analysis of African problems; strengthen domestic institutions; serve as a model environment for the practice of good governance, conflict resolution and respect for human rights, and enable African academics to play an active part in the global community of scholars (United Nations Information Service, 2000).Several countries have linked higher education to economic development with great success, including Finland and South Korea.Therefore, higher education is to be recognized as a key force for modernization and generator of development and it is critical to economic success and long-term development of Africa.

Reid and Barrington (2001) maintain that education aims at developing knowledge, skills and attitudes in all aspects of life rather than knowledge or skills relating to only a limited field of an activity. McKeown (2002) also posits that… education is a socially transforming process that gives people knowledge, skills, perspectives and values through which they can participate and contribute to their well-being and that of the community and nation. Besides, according to Oduro-Mensa (2012), education is a process of enhancing the knowledge, skills and attitude in an individual or people to enable them identify with societal aspirations and contribute towards the improvement in the quality of life in the society.

Clearly, all the three authors assert that education is meant to enhance skills, knowledge and attitude in learners. Knowledge refers to facts or procedures or process needed to do the job. Skills indicate the competency in performing a task; that is, the capability that enables employees or learners to successfully perform their jobs by achieving outcomes or accomplishing a task. Some of the skills enhanced in learners include reading accuracy, spelling and arithmetic skills, creative and critical thinking skills, conceptual management skills, motivational and attitudinal skills, human relations skills and technical skills. The attitudes or the values are in tangent with the ethics of education. Examples of attitude are discipline, commitment, hardwork and integrity.

A country's vibrancy, economic viability, quality of life and business competition depends on how well its citizens and workforce are educated. It is the education system in a country that provides the bedrock for creating

human capital and it is also the foundation upon which the country's socio-economic well being is constructed (Anamuah-Mensah, 2014). Investment in the skills and knowledge of the people promote development (World Bank, 2011 cited in Anamuah-Mensah, 2014). This accounts for the reasons why its challenges must seriously be looked into for quick solution.

Generalizing Sub-Saharan Africa countries with diversities is difficult. Yet, there are common elements, and there are common challenges.A lot of higher educational institutions have been established with associated rapid and continuous increase in enrollment across the continent of Africa. Enrollment rates in higher education in Africa are by far the lowest in the world. Although the gross enrollment ratio has increased in the past 40 years – it was just 1 per cent in 1965(The Task Force on Higher Education and Society (TFHE) 2000, Devaragan et al., 2011) and it still stands at only 5 per cent(UNESCO, www.uis.unesco.org).

Higher educational institutions are those who offer training that is beyond secondary education. These include colleges and universities, and post secondary specialized educational institutions such as teacher training colleges, nurses training colleges, agricultural training colleges, polytechnic and technical education training centers, labor colleges, police and army staff training colleges, vocational training colleges and universities. This work is however limited to universities in the Sub-Saharan Africa.

The coverage of higher education nevertheless remains inadequate for the needs of the knowledge society. The relative decline in the state support during the turbulent and devastating economic crisis in the 1980s caused African universities to suffer a substantial deterioration: overcrowding, infrastructure deficiencies and inadequate access to international knowledge resource. The higher education system was complicated by the diversification of categories of students, types of institutions and the kinds of knowledge demanded. The effects were inadequate access, inequity, poor quality and irrelevance of education offerings to societal needs (Sawyerr, 2004).

Teferra and Altback (2004) have also maintained that Africa's higher educational institutions face unprecedented challenges: they face obstacles in providing the education, research and service needed in the communities. Currently, they are functioning in very difficult circumstances both in terms of socio-economic and political problems facing the continent and in the context of globalization and the way to success.Besides, for several decades, donor agencies have focused on primary and, more recently, secondary education in their development assistance to Sub-Saharan Africa. However, they have ignored higher education as an added means to improve economic growth and alleviate poverty. The challenges of higher education also include

gaps in educational policy, party politics, scarcity of lecturers, poor ICT- mediated education, banking education, high cost of education, gaps in administrative and management structures and processes, networking and partnership development.

Understanding the challenges facing the universities is one step forward in the development of the right policy and strategic decisions for higher educational transformation. The purpose of this paper is to address the common challenges bedeviling higher education in the Sub-Saharan Africa countries. It is unfortunate when some critics demand that only one problem must be considered and addressed at a time. It is of equal importance to research into general challenges to provide an overview of the situation. Other academic researchers could then look into each one of them in detail. This paper looks at higher education problems from omnibus perspectives and provides solutions to them rather than merely tackling each problem at a time. This approach compares with the general practitioner and the specialist concepts in various fields of practice.

METHOD

Desktop research involving an integrated literature review was used. An integrative literature review is a form of research that "reviews, critiques, and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated" (Torraco, 2005, p. 356). Relevant articles in peer reviewed Journals, text books and other academic papers were accessed and reviewed.The sampling approach for obtaining countries within the sub-region was purposeful, selective, non-random sampling method. Ghana was sampled as typical case study because it is the first country that gained independence in the sub-region; thus could be seen as the gateway to the sub-region. It has similar background equated to Singapore, South Korea and Malaysia which have moved into the developed trajectory. Again, in geographical context and socio-economic experiences, Ghana has similar characteristics like the countries in the sub-region (Region in Africa south of the Saharadesert) as mentioned earlier on.The same answers for its educational problems could be modified a bit and applied to the countries in the sub-region too. Since the method for this research paper was purely desktop approach, textual analysis was used as the method for data analysis. It is however important to mention that several examples have been cited from other countries within Africa continent.

RESULTS

Textual analysis

Four areas were found to be the main fetters of higher educational development namely:

Skills limitations

This embraces three areas as follows-

i. Inadequate skilful, experienced, committed and disci-

plined lecturers;
ii. Insufficient ability to provide the required capable leaders of business and other disciplines to possess sophisticated new perspectives and skills as well as heightened levels of knowledge;
iii. Poor preparedness to embracing Information and Communication Technology revolution in higher education.

b. Inadequate research engagement culture and a disconnect between academia research and industrial activities;

c.Limited lecture halls and

d.Insufficient funding.

DISCUSSION

First, there is a critical shortage of quality faculty. We have inadequate skilful, experienced, committed and disciplined lecturers to adequately prepare numerous students capable to become transformational leaders in Africa and the world at large. This shortage is significantly attributable to the brain drain of Africa's academics/ scholars to the developed countries to seek for greener pastures. A high percentage of highly educated Africans migrate oversees. It is on record that between 1990 and 2000, the stock of high-skilled immigrants from African countries residing in the OECD countries increased by 90 per cent. As a result, a number of African countries "lost" a significant proportion of their highly educated labor force (Capuano and Marfouk, 2013). The problem is more critical when it is about women because women's education is a fundamental element for growth and development (World Bank,2007). Women enrollment in education is low. Therefore, a brain drain of the few educated ones makes it a critical issue. The brain drain within the medical profession also represents a more serious problem for the African continent, as it may be linked to a worsening of the health situation of its population and of its health system as a whole.

Incompetent educational leadership to attract and retain quality faculty is also a challenge. The responsibilities of academic department heads include managing the academic, faculty, student and budgetary issues; engaging in external communication; office management; space management; and fund raising. Department heads also function as leaders when they focus on the key aspects of organizational culture: mission, vision, engagement and adaptability (Tahiret al., 2014). They are also taxed with the challenging tasks of developing a department's future and of building faculty vitality.Unfortunately, we have several heads of department who do not perform to expectation because

they lack the leadership qualities and skills, thus creating several deficiencies in the academia. The academic leaders are also left with no formal leadership education or training in administration.Besides, the selection of ideal academic leaders has become a problem due to the lack of competent candidates. Again heads are usually not chosen based solely on their leadership knowledge, skills or abilities but by seniority, research capacity, international exposure in the area of specialty.

Most are chosen because of their intellect, research abilities and how renowned they are in their specific field. However, these qualities do not necessarily equate effective leadership and the wisdom that effective leadership requires. These have posed deficiencies in higher level education.

Highly inadequate mentoring system in the academia is equally a problem to the required skillfulness of lecturers. For example, professors and well experienced senior lecturers are supposed to select some junior lecturers and mentor and coach them in order to prepare them for the teaching and research business and for a smooth and well prepared transition, a takeover when the professors are retired and also finished serving their contracts with the University. But this is not effectively done. The lack of this practice is not helping to build skilful and well experience lecturers who are able to perform to the expectation of the society.

Lumpkin (2011) opines that a means by which faculty could be helped to grow and develop in higher education is through mentoring. Mentors guide, advice, or coach colleagues in their development, even though the academia has been slow to formalize faculty mentoring programs. Lumpkin (2009) described how mentoring programs can help smooth the transition of faculty into new roles. Mentoring contributes to a more collegial culture in the academy through interpersonal relationships based on trust and respect and to the professional growth and career development in both protégés and mentors.

Another factor accounting for the inadequate skills of lecturesis lack of adequate and relevant training of lecturers. It is normally assumed that the moment one has a lot of impressive academic transcripts and certificates then he/she can teach well and relate to students cordially. This notion is not wholly true. With a few exceptions, colleges and universities' faculty embark upon the business of teaching with little instruction or training in pedagogy. They therefore teach as they were taught; no much teaching skills.

It is a challenge because lack of training in teaching skills of lecturers will have a completely negative impact on the students; especially the average students and those who learn slowly. Mowbray and Perry (2013) assert that the reason why so many lectures are unengaging is in large part because University lecturers receive little, if any, pedagogical training.

One other reasonfor the poor skillfulness of lecturers is lack of consistent supervision of lecturers in terms of their teaching delivery style and relationship with the students. Several lecturers do not attend lectures punctually or regularly and do not make any provision for the students. Some lecturers intimidate the students; others are very vindictive. Therefore, the enabling environment needed to enhance lecturer/ students rapport is not there. This inhibits teaching and learning dialogue. The need for effective monitoring and strong leadership is critical to have any chance of succeeding (Kuyini, 2013).

Moreso, a factor aggravating the problem in question is poor students' appraisal system. Either the students are not given opportunity to appraise their lecturers at all or it is not done regularly or if it is done at all the office in charge does not work on them or if they do, no relevant decisions are taken on them. It appears lecturers have too much independence and freedom.

In addition, permanent employment offered to employees, especially in the public universities affects the delivery prowess of some lecturers. If they are given a short term contract like two year contract subject to renewal based on their performance and attitude, it will serve as a warning light to improper behaviours.

Another issue is the teaching method. The teaching method is usually the banking education style. Students or pupils are not given opportunity to criticize the view point of the lecturer/ teacher who can punish the student for such an attempt, thus students play sycophancy; sit listening to didactic recitations from the lecturers as passive absorbers. This affects learning since it thwarts creativity and initiative. In a nutshell, there is a problem associated with the teaching and learning encounter. Several lecturers are not teaching effectively and students are also not learning effectively. There is therefore a mismatch between knowledge acquired and the demand of the society.

Second, Africa's higher educational institutions are not well able to provide the required capable leaders of business and other disciplines that possess sophisticated new perspectives and skills as well as heightened levels of knowledge derived from the rapid changes in technology, enhanced global competition and the development of innovative structures in society.

Economic development is increasingly linked to a nation's ability to acquire and apply technical and socio-economic knowledge; and the process of globalization is accelerating this trend. Globalization, which has engulfed Africa, is the complex integration of capital, technology, and information across national boundaries in such a way as to create an increasingly integrated world market. This has a direct consequence that more and more countries and firms have no choice but to compete in a global economy (Salmi, 2000).

Rapid changes in technology, enhanced global competition, the development of innovative structures in

society, business and government, and an ever more complex workforce require cable leaders of business and other disciplines to possess sophisticated new perspectives and skills as well as heightened levels of knowledge. Also, contemporary non-for-profit organization, business and industry executives are turning increasingly to academic institutions for new paradigms to secure success today, to recruit the best possible leadership for the future, and to guide growth and development wisely.

Unfortunately, Africa's Educational Institutions are not producing the needed graduates who have the confidence and the knowledge capabilities to match the expectations and demand of the society and at global level. This means, there is a mismatch between academia knowledge and societal demand. Graduates from the African universities may have chains of certificates but lack the values, attitudes and skills needed to do the job.

One major factor causing this problem is the academic curriculum. The subject contents are too theoretical, not a problem-based. Lectures are normally content driven, emphasizing abstract concepts over concrete examples and application. One of the reasons for the curriculum deficiency is explained by Devaraja et al. (2011), that higher education in Africa suffers from institutional rigidities that make it difficult for colleges and universities to adjust their curriculum and strategies to be more responsive to the changes in the global knowledge and labour market demand. They also point out that in some countries – such Cameroon, Tanzania and Madagascar- universities are highly centralized and under the strict control of Ministry of Education which select and appoint faculty members (often using political criteria) determine salaries, condition of promotion and so and so forth. However, in countries like Angola and Liberia, universities have considerable legal autonomy.

If Africais to be transformed, then we should be mindful of institutional rigidities and unhealthy politics. In addition, the choice of subjects at the universities is not tailored to the labour market expectations. For example, engineering, science and health sciences are among the subjects with the highest salary for graduates; yet 47% of the African University graduates had degrees in social sciences and humanities and another 22% in education. It is possible that when students do not pay for their education, their desire to enroll in higher –return subjects is diminished (Devaraja et al., 2011). Yizengau (2008) affirmed this when he said less than 30% of the students are enrolled in the field of agriculture, engineering and technology, basic and applied sciences, and health sciences- field is required for long-term society-relevant innovation and problem solving.

Additionally, the duplication of programmes (copying) does not depict initiative, creativity and innovative skills let alone to describe talents and uniqueness. Besides, students' demonstration and teachers' strike often pre-

vent the completion of the curriculum. This weakens academic achievement. There is also institutional failure of curriculum design. Higher education institutions have to redesign their curricula and admission policies to cope with the prevailing exigencies and resource constraint.

The teaching method is another key factor accounting for the problem under review. The didactic instruction reinforces in students a naïve view of learning in which the teacher is responsible for delivering content and the students are passive receivers of knowledge. This is the method that the colonial masters bequeathed us. This is not helpful to us and therefore, this paper is meant to address them.

Literature on effective teaching has provided a range of insights concerning the effects of teachers 'classroom behaviour, teachers' subject knowledge and teachers' beliefs onpupil learning. Research has explored the importance of features such as classroom management, task setting, task content and pedagogic skills. It has also investigated the role of teachers' content knowledge in a subject, their understanding of how children learn in that subject, the belief systems which interact with and enable such knowledge to be put into operation in the classroom, interaction with children, monitoring of children at work and feedback have all appeared tobe features of effective teaching and play a part in ensuring high levels of task engagement. Silcock (1993) cited in Wray et al., 2000) argues that the chief finding of research into effective teaching is that effective teachers are those who provide pupils with maximum opportunity to learn. This could be replicated in higher education too.

The assessment method needs to be refined. Assessment is a form of knowledge control and it is about making judgments on the quality of students' performance. It can be used both to summarize students' achievements in order to award some kind of certification (summative assessment) and to give feedback to students in order to support learning (formative assessment). Assessment emphasizes competence and capability rather than recollection of factual knowledge. Assessments which focus on recall of factual knowledge tend to steer students towards surface approaches to learning, whereas assessments which emphasize application and comprehension tend to encourage deep approaches to learning (Weurlander et al., 2012).

The prevailing assessment method in higher education primarily focuses on just a recall of information and facts. It does not challenge students to perform at higher cognitive level of understanding. The assessment does not involve much of critical and creative thinking skills. The academic curriculum, teaching method and assessment methods need drastic overhaul in order for higher education graduates to be relevant to the societal.

There is a challenge embracing ICT –driven education in higher educational institutions in Africa. Information, communication and technology -driven education (ICT-E)

means the reliance ontechnology -transformed teaching and learning using online delivery system and other information communication based device such as online learning, web-based learning, e-education, distributed learning, open educational resources, virtual learning - video conference, use of mobile learning system, the use of tablets and other computing device mediated learning system for open schooling, open University system, mass open online courses, distance education and campus based learning that provide education for all and sundry-students, parents, workers, retirees and others.

Technological innovations are revolutionizing the capacity to store, transmit, access and use information. Rapid progress in electronics, telecommunications and satellite technologies, is permitting high capacity data transmission at very low cost, and has also resulted in the quasi abolition of physical distance. The decreased importance of physical distance owing to dramatic advancement in technology means that the best universities of any country can decide to open a branch anywhere in the world or to reach out across borders using the internet or satellite communication links, and effectively compete with any national University in its own territory.

Many foreign schools have established presence with very reasonable educational package, using ICT -driven teaching and learning and mounting educational curricu-lum that is relevant to market demand. Their graduates are given certificates which have international recognition.

There are several African students who prefer having technological based distance education and online learning with institutions in the developed countries and several African higher educations' academics/scholars travel abroad for campus based classroom teaching and learning blended with technology. What is attracting them? Is it not the use of modern technology in education delivery, teaching quality, practical based curriculum?

This is a challenge to Africa's higher education institu-tions. Are they conversant with the use of educational technology for teaching and learning? No! Are they well prepared to compete with the foreign universities? The answer is no. Can they do something about it? Yes, despite the possible difficulties.

Higher educational institutions in Sub-Saharan Africa are battling breaking through with the adoption and adaptation of ICT-driven education despite all its related opportunities and benefits.

ICT- driven education is a digital mechanism to enhance sustainable human capital development in Africa. It reduces cost of secondary and tertiary education and provides quality education to bridge the gap between rural and urban schools and increase mobile learning.

Apart from the importance above, there are several factors necessitating the need for information communication technology driven education in Africa.

There is a rapid increase in demand for higher education, yet there is inadequate infrastructure to accommodate them. It will also cost a lot of money to build schools that commensurate the demand surge. Additionally, there is a problem of equity in enrollment. There is also a gap with respect to students' socio-economic status, regions of origin, type and location of secondary schools attended, geographical inequalities and inadequate qualified teachers all of which influence enrollment (Anamuah-Mensa, 2014).

Due to the above factors, there are records of some strides adopting ICT- driven education among higher education Institutions in Africa. University of Ghana has a course- Educational Technology and Innovation (about 80 percent online), Accra Institute of Technology offers online learning on the platform of the Open University of Malaysia; Ghana Technology University College also offers online education to its students. University of Education, Wineba is on online with the use of Tablets, with much struggle. Ghana's open schooling, the Centre for Distance Learning and Open Schooling (CENDLOS) also provides open distance learning through print, CD-ROMs and other electronic tools to supplement learning in the schools and to provide technical vocational training for out-of-school pupils. South Africa and other African countries like Nigeria, Tanzania, Zambia, and Zimbabwe have taken a clue to establish open universities to cater for the teeming number of people seeking post-secondary education.

The challenges bedeviling Ghana's Higher Educational Institutions with regard to embracing ICT-driven educa-tion are the lack of access to the appropriate ICTs, lack of much understanding of what technology-driven education is, lack of financial support to deploy ICT enabled distance and online learning, lack of a policy framework to manage information communication technology driven education and lack of ICT experts. In addition, there are problems relating to internet connectivity, affordability of modem and electricity availability. These are very serious challenges that need to be tackled if we are to benefit fully from using ICT-driven education in Ghana's higher educational institutions.Recommendations are made in this area.

There is an inadequate research engagement culture and a disconnection between academia research and industrial activities. The higher education research culture in general is slow. The volume of research activity remains small, much smaller than is desirable if the potential contribution of Africa's researchers is to be realized for the benefit of its populations and be able to compete globally. Most of their research is theoretical as against applied research. Many of them are rejected by highly reputed Journals because it lacks the well rooted intellectual capacity required.

There is also a disconnection between theoretical research and practice especially in Ghana. The research

patterns do not inform industrial development. One reason accounting for this trend is that several tertiary educational institutions' lecturers have in the past, devoted 95% of their time to teaching and a modularized commoditization of the teaching business: teaching morning, evening, weekend streams at several campuses and institutions (they had no time for research), a process that skewed the nascent universities in an unbalanced direction. Pursuit for material wealth ate into their ability to fulfill their academic research mandate. Others combine the academic work with their private businesses in town, so they have no time to devote to research activities. The difficulty involved in accessing funding for a research programme is also a factor for the low research activity.

Another reason is lack of knowledge in how to fully use the research projects and long essays produced by their numerous students. This actually explains why most of the students' theses are dusty shelves. They are partially used for academic references only. This is underutilization of available intellectual property. The low graduates enrollment also account for the low research capacity. University of Ghana has started to increase enrollment significantly for the graduates' studies. It is expected that this will be emulated by all higher institutions in Africa who have not started it. The overall problem is that research that must inform policies is lacking. Meanwhile policy that is not underpinned by research evidence is dangerous.

In Germany and other parts of the world, most of the inventions and innovations by the industries were derived from research from the academia. The inventions are tested and retested several times and the moment it proves reliable it is released into the market for use. Africa's educational institutions have not demonstrated reasonable efforts in this area. The trend must change right now!

There is also a problem of space, inadequate lecture theatres that can commensurate with possible enrollment level in higher education in Africa. In Ghana for instance, enrollment increased 14% annually from 2008-2012. Students compete for the scarce places in the top universities in Ghana.There are also several developments that are challenging higher educational system in Africa. For example in Ghana, 57.8% of the population is under 25 years with a mean of 21.7 years. All these students are aspiring to pursue higher education as a means to attaining skills, knowledge and attitude for a better future (Naidoo, 2013 cited in Anamuah-Mensah, 2014). The changes in the work place societies are causing the influx of workers to access higher education in order to get relevant skills and knowledge to perform.

In Ghana, the government needs to build about 1000-2000 schools within 10 years to match with the demand. Meanwhile, there is no funding for this even if it should be a foreign grant. In fact, the obnoxious strings attached to grants are becoming very unbearable. Access denied to higher education is a loss to the production of an educated workforce.

The increasing demand for higher education has also created corruption in higher education admissions, examination malpractices, such as falsification of entry requirements, bribery of admissions officials for the limited spaces that are available.

How has tertiary educational leadership planned to solve this local problem? How is their preparedness to accommodate these students now? Is it prudent to go ahead and rely fully on campus based educational system? The answer is a big no. Should the rest who do not have access to campus based education be left out, not having alternative? No. There should be a way to perfectly mop up the excesses.

This should necessarily be by having a well managed technologically driven education system.

In Ghana, how is the preparation to mitigate against or manage the very serious challenges in practicing ICT driven education, especially in addressing issues on ICT related problems raised early on? How can one also address attrition rate which is normally very high in running such programme as pertaining to other jurisdictions like UK? The solution to the space problem is to run technologically based distance education, open and online education. Some funding arrangements must also be made to build more schools.

Lack of adequate finance due to poor economic conditions, competing public service priorities, week support from the international communities (Yizengaw, 2008) have led to poor government financing on infrastructural development and ability to retain quality faculty, staff and research funding. The effects are poor teacher/student ratio, overcrowded lecture halls, freeze of recruitment, and delay in payment of wages and salaries and several many related problems.

Also, due to the demographic trends, the demand for higher education has been increasing faster than the funding capacity of African government. For example, the total number of higher education students has increased from 2.7 million in 1991 to 9.3 million in 2006 (16% annually), while aggregate current expenditures in this sector have only increased at an average annual rate of 6% (Devarajan et al., 2011). This shows that the traditional free tuition and highly subsided accommodation was not sustainable indeed. The over reliance on government support is a bad practice. Some recommendations are made to improve internally generated income to meet various needs that hitherto the government was sorely held responsible for.

The question is how can higher education institutions in Africa attract quality lecturers, embrace ICT driven education, improve access to higher education, engage in quality research, maintain the cultural and political democratization process, contribute to the human capital

development of the nation, decrease poverty, alleviate human suffering, improve public health, and finally manage available learning resources? There are no easy answers but this is the time to begin the process of finding answers that would help Africa improve its capacity development in higher education, workforce development, knowledge management and nation building.

CONCLUSION AND RECOMMENDATIONS

From the above discussions, it is clear that there are challenges facing higher education in Sub-Saharan Africa. This must be addressed with immediate effect if Sub-Saharan Africa will advance. With regard to the benefits of higher education for a country's economy, many observers attribute India's leap onto the world economic stage as stemming from its decades-long successful efforts to provide high-quality, technically oriented tertiary education to a significant number of its citizens. Understanding the challenges facing higher education is one step forward in the development of the right strategic decisions. Policy options and types of appropriate educational technology and innovations could be formulated to enhance institutional transformation to confront and manage the challenges for the sustainability of universities in the 21st Century, Sub-Saharan Africa are as shown below.

As the lecture is a common form of instruction in universities, it is appropriate to consider how lectures can be improved. Lecturing is nevertheless a time-tested, common and efficient form of instruction for conveying knowledge. Africa's educational institutions need to adopt and adapt a problem-based instruction and learning as opposed to the banking education practiced at the moment. The problem-based learning is an educational strategy that helps build the reasoning and the communication skills necessary for success today. The principal idea behind problem-based learning is that the starting point for learning should be a problem, a query or a puzzle that the learner wishes to solve (Boud 1985:13 cited in Duch et al., 2001). Practicalised learner-centered education must be emphasized (Lee, 1997, p.22 cited in Bae et al., 2011).Anderson's model draws on notions of learner-centredness and discovery learning that resonate with the pedagogy of Dewey's progressive education. For Anderson, 'learner-centredness' does not imply pandering to individual students' interests. Rather, 'learner-centredness' requires that the teacher/lecturer ascertains the knowledge a student has prior to the construction of new knowledge (Jaffer,2010).

The teaching method today must change in order to prepare the students to cope with new situation. Students need more than ever to be able to pose questions, seek and find appropriate resources for answering questions and communicating their solutions effectively to others. Students should be prepared to function in a very different working world than existed before. The problems that these future professional will be expected to solve will cross disciplinary boundaries and will demand innovative approaches and complex problem-solving skills (Duch et al., 2001).

Faculty must therefore rethink how they teach and what students need to learn in order to prepare them for this challenging time.Lecturers must be instructed or trained in pedagogy and andragogy.To achieve world class higher education teaching, it should become the norm for all permanent staff with teaching responsibilities to be trained on accredited programmes (Hodkinson and Taylor, 2002).

As universities are domains of teaching and learning, the lecturer is fundamentally an institutional figure who as an academic and scientist commits much of his/her time to teaching rather than to pure research. The task of teaching, given the massification of universities, the diversity of students, and the advent of the new information technologies, is much more a question of inducing student learning than of mechanically transmitting knowledge. Therefore, newly appointed University lecturers must have come to their posts with an understanding of University pedagogy. As their careers unfold, lecturers must be offered continued instruction in the art of teaching and the inducement of learning in others. Good teaching/inducement of learning work is a contribution to knowledge and should be as well rewarded as the contribution to knowledge that comes from pure research. Prior professional training should also be made available to University teachers taking up administrative responsibilities (Martínez et al., 1998).

Mentoring must also be taken very serious because the potential benefits of mentoring include facilitating the recruitment, retention, and advancement of faculty; socializing protégés into an academic unit's culture; increasing collegiality and building relationships and networks among protégés and mentors; increasing productivity for protégés and mentors; and promoting professional growth and career development for protégés and mentors (Lumpkin,201 1).

Lectures which are content driven, emphasizing abstract concepts over concrete examples and application must end. There is also a substantial amount of literature indicating that successful lecturing requires many of the elements of good public speaking. Improving lecturing skills through the development of public speaking skills may be an effective way to improve education, with potential for improvement in student topic retention and learning standards (Andrews, 2006, Mowbray and Perry, 2013). So that through effective pedagogy and and ragogy, students are prepared to function successfully in business and industrial environment.

In connection to this, assessment method must not only focus on just recall of information and facts but also embrace challenging students to perform at higher cognitive level of understanding.

Lecturer and teaching quality audit must be carried out every semester/term. There should be development of students' evaluation instrument (students' course experience questionnaire) designed to measure the teaching performance of lecturers in a higher education (Heinrich and Fourie, 2010). The indicators in the questionnaire instruments must include: Good teaching, clear goals, appropriate workload and an outcome scale measuring generic skills development.This will call for the enhancement and strengthening of the quality assurance function. A broader quality assurance policy and measures must be developed and made efficient.

One of the major concerns regarding the emigration (brain drain) of the highly educated labor force from Africa is the potential loss of the investment directly associated with training. However, the issue of the brain drain has some associated benefits. Theoretical and empirical studies highlighted how a positive high-skilled emigration rate can be beneficial for the sending countries. The channels through which this is possible are several, ranging from return migration and additional skills acquired abroad, flows of remittances, tourism revenues, technology transfers, creation of business and trade networks, and the stimulation of human capital formation at home (CapuanoandMarfouk,2013).Despite, this benefits, it is expedient that an enabling environment is created for lecturers (trained within and outside) to fill comfortable staying to work in their motherland country to boost socio-economic developments.This is lacking and attention must be given to it. Providing the job, descent accommodation, good salaries, working tools and equipments are examples of enabling working environment.

Higher educational institutions in Ghana should embark on research which tackles both applied and theoretical problems; a research that has of direct relevance to Sub-Saharan Africa and Africa in general. This research may not be acceptable for publication in the best scientific Journals; but can reach out to assist the local communities which have many challenges: illiteracy and unemployment, poverty, political instability, corruption, disease and armed conflicts frequently driven by ethnic and tribal divisions (Baty, 2011). Lecturers and research fellows are to publish a well researched, problem solving articles and increasingly solve our local problems and become notable scholars of Africa and beyond. Funding arrangement must be made for research fellows and lecturers so that they are encouraged to publish.

It is also significant to mention that the publications must not only be Journal articles but also textbooks that are research based suitable to our local developmental needs. Educational leaders may have to tie research

base of lecturers to attaining certain opportunities such as renewal of contracts, promotions and other office positions. In fact ability to write proposals that attract project funding which meets the needs of the local communities must be emphasized. There should be significant increase in the enrolment for graduate studies; this is aimed to boost the required research capacity and volume needed to impact the regions' industrial development.

Existing universities do not have the campus based capacity to accommodate increased access. Distance education was then considered to be the solution: it is cost effective and can achieve significant economies of scale, as it enables its institutions to increase enrollment without overly increasing staff levels and associated physical infrastructure. However, most open distance education institutions have also reached the tipping point where the pressure of growth impacts negatively on service delivery to students. Therefore, there is the urgent need to explore the possibility of bringing ICT-driven education to Sub-Saharan -Africa's higher education through collaborative networks and strategic partnerships. It is envisaged that this approach will solve the dual problem of infrastructural barriers and weak ICT policies. The use of information communication technologies (ICT) to deliver courses to students should be adopted because it has the potential for providing training and education at a much cheaper cost than campus based colleges. In addition, it helps reduce the pressure on facilities at higher education centers. ICTs should become the cornerstone of course deliveries in higher education. This may provide further access to many who are currently shut out from participating in higher education because of lack of infrastructure and other services

The needs of technologically based educational environment suggest multi-stakeholder networks to share expertise and solve issues related to training needs. Technologically based education sponsors, policy makers, telecommunication network service providers are required to solve the problem of technologically based distance, open and online education in Africa (Gunga and Rikketts, 2007).

System level policy frameworks must be negotiated and established to guide the strategic choices that have to be made by all players in the education sector. Government must provide the enabling environment and motivate people to embrace lifelong learning opportuneties. Public-private partnerships and institutional collaboration is needed for scaling-up sustainable ICT service delivery (Anamuah-Mensa, 2004).

Higher education in Sub-Saharan Africa including Ghana is grossly underfunded due to weak financial support from the governments and lack of direction as to what such institutions should do to get funds or minimize or shift their expenditures. In line with Altbac (2012), loans and grant programmes must be made available for

the students.

Besides, lecturers should be taxed with the task of writing proposals to appropriate donor institutions and sponsors for critical problem-solving projects. This should take the form of collaboration and partnership. The essence is that certain percentage of the project income will be channeled into the higher education institutions' coffers. Can we imagine if about 100 lecturers are on such projects at a point in time on each campus? Again, there must be a very strong link between the academia and the industry so that various researches could be carried together with the industry for inventions and innovations. After a particular invention is made possible, products are released to the global market and each unit sold will attract a share of the profit for the academic institutions. Besides, the collaborations with the industry will also mean some industries may decide to provide numerous scholarships to students who do theses in areas that will support the course of industry.

A very strong collaboration and teamwork could also be established between Sub-Saharan Africa higher educational institutions and the mainstream higher education institutions abroad so that they can finance certain projects in Africa that fall in line with their vision. Arrangements could be made with very booming industries to build or provide infrastructure for the higher education institutions as part of their corporate social responsibility.

Additionally, there are several income items that could also be explored and generated alongside fee income that can do a lot for the higher educational institutions in Sub-Saharan Africa.

Financing higher education include tuition payment by those who can afford to pay, and identified as such, through income verification and tax returns, social security pension plans or family income and status. Merit scholarships and bursaries and grants are another source of funding for higher education. A third option is an open market or commercial education loans to qualified loan applicants. Finally, loan repayment mechanisms should also be put in place such that defaulters would be sent to either government or private collection agencies for payment.

Arrangements must be made in all these areas in other to ensure very sound educational finance.

When these recommendations suggested are not only tabled for discussions but also implemented, several Sub-Saharan Africa countries will move into the middle income category, others enhance their middle income status and with time graduate to a developed country.

This is a great aspiration that all countries in Africa must yearn and get to through education and selfless character.

Conflict of Interests

The author(s) have not declared any conflict of interests.

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