

EDITORIAL

Tracing the evolution of higher education institutions and linkage to rural development in Africa

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ABSTRACT

This issue of the African Journal of Rural Development (the June 2017 Issue-Vol.2 (2)) features 16 articles that demonstrate the evolving role of higher education institutions (HEI's), particularly universities in Africa. The evolution of HEI's in Africa highlights a few striking examples that existed prior to colonial era. Nonetheless, most HEI's in Africa are situated in the legacy of colonial relations. In the post independence arrangement, HEI's on the continent have been variously tasked with endogenous mandates in support of building human capacity in order to address local, national and at times regional issues. It is envisaged that unemployment in Africa can be solved by placing greater emphasis on entrepreneurship education in agriculture and its contribution to rural development using models similar to the EARTH University approach as presented in the lead paper. The remaining 15 articles present issues of policy engagements, adoption of best practice and knowledge generation to provide technological solutions to pressing challenges such as clean seed, declining soil fertility, etc which are examples among the diversity of research problems addressed by HEI's in Africa. The evolution since colonial pre-and- colonial times depicts a shift from ancient universities, and/or HEI's that were largely dealing with vocational training to distinguished institutions that are in addition to vocational education, taking on more roles and increasingly being classified variously as modern, research-intense, community-based, entrepreneurial universities, etc. In this editorial, we trace the evolution of HEI's in Africa and its linkage to socio-economic development. The historical account is consistent and clearly indicates that HEI's have always positioned and repositioned to serve needs of the society within the contemporary context.

Key words: Africa, ancient and modern universities, entrepreneurship education, human capital development

RÉSUMÉ

Ce numéro du Journal Africain du Développement Rural (numéro de juin 2017 - Vol.2 (2)) comprend 16 articles démontrant le rôle évolutif des Etablissements d'Enseignement Supérieur (EES), en particulier les universités en Afrique. L'évolution des EES en Afrique révèle quelques exemples frappants existant bien avant l'époque coloniale. Néanmoins, la plupart des EES en Afrique proviennent de l'héritage des relations coloniales. Lors des arrangements après l'indépendance, les EES sur le continent ont été de diverses façons, chargés de mandats, en appui à la création de capacités humaines, de résoudre les problèmes locaux, nationaux et parfois régionaux. Il est envisagé que le chômage en Afrique soit résolu en mettant davantage l'accent sur la formation à l'entrepreneuriat dans le secteur de l'agriculture, et sa contribution au développement rural en utilisant des modèles similaires à l'approche de l'Université EARTH, comme présentée dans le premier article. Les 15 autres articles soulignent des problèmes d'engagement politique, d'adoption des meilleures pratiques et de création de connaissances afin de fournir des solutions techniques aux défis pressants comme les semences de qualité, non infectées, la baisse de la fertilité des sols, etc. qui sont des exemples parmi la multitude des problèmes de recherche abordés par les EES en Afrique. L'évolution depuis les temps précolonial et colonial montre une transition des anciennes

universités, et/ou des EES s'occupant largement de la formation professionnelle, aux institutions qui en plus de la formation professionnelle, jouent de plus en plus d'autres rôles, et sont classées comme étant des universités modernes, de recherche, communautaires et entrepreneuriales. Dans cet éditorial, nous retraçons l'évolution des EES en Afrique et le lien avec le développement socio-économique. L'historique est consistant et indique clairement que les EES se sont toujours positionnés et repositionnés pour répondre aux besoins de la société dans le contexte d'un monde contemporain.

Mots clés: Afrique, Universités anciennes et modernes, formation à l'entrepreneuriat, développement du capital humain

INTRODUCTION

Higher Education Institutions (HEIs) and their roles in Africa have been shaped by the continual policy reforms, contexts, historical processes, socio-political and economic dynamics among government, societies and the academic oligarchy (Clark, 1983). In this manuscript, the term 'Higher Education' is taken to represent all forms of post-secondary education, including universities, colleges and polytechnics. The account of HEIs and their roles in Africa stretches over 4000 years ago. While several of present-day HEIs originated from a colonial or neo-colonial framework, the idea and reality of higher education was not necessary new to the African context before colonisation (Lumumba, 2006). In fact, some of the world's oldest institutions of higher learning are found in Africa.

The Per-ankh (the House of Life), one of the origins of African higher education in Egypt started around 2000 BCE (Lulat, 2005) in an Egyptian temple and had the multiple functions of a scriptorium, training site, and research institute. It provided higher education to both religious and secular scholars, attracting a wide following that included scholars from the Mediterranean and Arabic world and taking the form of large campuses with many buildings and thousands of staff (Lulat, 2005). Although literature from several sources is not consistent, it is clear that in the city of Alexandria in Egypt, there existed a form of higher education which attracted scholars, scientists, philosophers, mathematicians, artists, and historians long before the colonial era. Eratosthenes who lived between 276 BCE and 194 BCE is said to have calculated the circumference of the earth to within 50 miles (80 km) at Alexandria. Archimedes (287-212 BCE) the great mathematician and astronomer is also said to have taught in Alexandria and certainly studied there. According to Ajayi *et al.* (1996) the Alexandrian Academy (Universal

Museum Library at Alexandria) existed between 331 and 642 AD in the City of Alexandria in Egypt. The many years of old tradition of elite education of Ethiopia with an African script (called Ge'ez) could also be taken as an example of higher form of education in pre-colonial Africa (Woldegiorgis and Doevevspeck, 2013).

With the coming of Arabs and European missionaries, other institutions were established in Africa. The Al-Quarawiyyin University was established in 859 AD at Fez in Morocco and Al-Azhar Mosque University was established in Cairo in 969 AD (Zezeza, 2006). The Fourah Bay College in Freetown (Sierra Leone) was established in 1827 by the Church Missionary Society (CMS) of London as an institution for training African clergymen and schoolmasters and is the oldest among higher education institutions established in Africa with a Western model (Ridder-Symoens, 1992). Cape Town (1829) and Stellenbosch University (1866) of South Africa, University of Khartoum (1902), Cairo University (1908), University of Algeria (1909), were also established in the years that followed and exist today among leading higher education institutions in Africa.

The evolution of HEI's in Africa

African Higher Education Institutions in the Pre-Colonial era. Taking the cases of Alexandrian Academy (Universal Museum Library at Alexandria), University of Al-Karaouine, Al-Azhar University and Fourah Bay College (University of Sierra Leone), it can be asserted that religious affiliations played a great role in the establishment of the early African Higher Education Institutions in Africa. Their roles and efforts were devoted to religious, philosophical, moral, medical and other studies to meet the demands of local people and were responding to the needs of the society. These systems were later disrupted by events including slave trade and wars which, to a

reasonable extent, disconnected higher education from its historical past (Lumumba, 2006). Available evidence indicates that HEIs in Africa have, despite the significant evolution remained focused on addressing contemporary issues in society and providing solution for better livelihoods (Luwalo, 2014). Indeed literature is replete of efforts by HEIs in the fight against rural poverty (Chambers, 1989; Leah Filho, 2011; Dasgupta, 2015).

Higher Education Institutions in Africa during the colonial era. As the power balance shifted from the African citizens to colonial powers, Higher education became an instrument of facilitating colonial administration instead of enlightening the African societies (Mamdani, 2007) making access to higher education extremely limited to few individuals. The colonialists established more higher education institutions for the same purpose. These included; The Gordon Memorial College in the Sudan in 1902 (which became the Khartoum University College in 1951), Makerere University (1922) in Uganda, Egerton University (1939) in Kenya, University of Ghana (1948), University of Ibadan (1948) of Nigeria, Addis Ababa University (1950) in Ethiopia, Kenya's Royal Technical College in Nairobi (1951) and University of Zimbabwe (1952) (Damtew, 2003, Atuahene, 2012), among others.

Higher Education Institutions after independence. Post-colonial Africa regarded higher education institutions as apparatuses for creating African identity within colonial institutions. At the time of independence there were few trained African personnel to take over colonial institutions including higher education institutions. Moreover, almost all academic staffs teaching in these universities were by non Africans. Discussions on the need to reform these institutions focussed on the need to Africanise the academic staff, and the relevance of teaching programmes (Mamdani, 2007) to independent Africa. Thus, higher education institutions also served the role to prepare African workforce that replaced Europeans in these and other institutions. Universities were encouraged to do research to address African challenges alongside their teaching responsibilities (Eicher, 1973). Local knowledge was to be generated through research and then communicated to the public through teaching and publications.

Higher education institutions in Africa shouldered multiple responsibilities as agents of economic growth, creating Africa's identity and nation building in propelling Africa through the postcolonial era. Roles of HEIs in Africa after independence were a product of government policies to address the challenges of colonial creation imposed on African societies (Woldegiorgis, 2017). Education policies were defined within the framework of national strategies of development that were adopted in post-colonial Africa with focus on decolonization, seeking to redress colonial injustices, and undertaking effective means to achieve socio-economic development (World Bank, 1991). The Higher education institutions were expected to serve as tools of socio-economic development and political transformation in post-colonial Africa to fulfil the role of training professionals, promoting access, extending the frontiers of knowledge, serving the national economy and embrace the theory of change. The theory of change emphasized that investing in formal education had a cumulative effect of both individual and societal development (Bloom *et al.*, 2005). Thus, HEI's contributed significantly towards supporting African governments to reconstruct African identity and nation-building through creating strong African institutions which could carry the sense of nationalism among the public. Universities were pushed to the limit to create a large middle-class (Accountants, teachers, doctors, technicians, engineers, e.t.c) which is believed to be very important to nation-building (Yesufu, 1973). The early year graduates of African Universities and western trained African academics provided the intellectual bases of African nationalism (Seepe, 2004).

African Higher Education Institutions in the Community Development space. Every higher education institution must be sufficiently stable to sustain the ideal which gave birth to it, and sufficiently responsive and relevant to the changing demands of the society which supports it (Lumumba, 2006). With the African economies improving remarkably, not only have new demands for trained man-power emerged but also new forms of training that meet the expectation of the new economy are now expected from higher education institutions. This has basically changed the role of African higher education in the society. African higher education

institutions have started to assume the role of being agents of knowledge based economy in an increasingly knowledge intensive economic system in which Africa now plays an active role.

African higher education institutions are continually repositioning their roles to act as catalysts for economic growth and development. Various kinds of higher education reforms related to finance, management and governance, research and development, leadership and autonomy, have been effected to equip the higher education sector of Africa to play a key role in economic growth and development. Higher education institutions have gradually assumed their role as players in economic growth and development of African nations, and re-positioned themselves as players in a knowledge driven economy through training skilled man power for the newly emerging economic sectors, through extensive collaboration in research with other European and American universities especially in broad sector of health, agriculture and technology, through industry linkage and engaging in various forms of community services. According to Schultz (1977), it is not possible to have the fruits of modern agriculture and abundance of modern industry without investing in human beings and this can be done in part, through education.

In the Market Place, Higher education reforms have largely been oriented along the demands of stakeholders and society, the dominant ideology and context of the time. The gradual expansion of the private sector, the coming of international companies and foreign direct investments have created additional roles on higher education institutions to be responsive not only to governments but also to the new demands from private sectors. Global competitiveness has also put pressure on higher education institutions to be relevant not only for national demands but also international labour market forces. African universities and governments have recognized that the nature of skills and expertise required in the newly growing global economies and the private sectors are different from the old traditional ones. Thus, many African universities have engaged in curriculum reviews and training programs to meet market requirements and adopt entrepreneurial spirit (World Bank, 2009; Osiru *et al.*, 2016). The labour market now looks out for graduates that are trained in diverse programs on more of practical rather than theoretical

levels and ready to engage in the labour force with short period of time. In order to accommodate such new demands, African higher education systems have moved from the one-tiered mono systems to diversified dual systems—incorporating both private and non-university institutions like colleges, vocational institutions and training centers, with “continuing” education facilities, business education and entrepreneurship skills. Today, Higher education institutions are providing a mechanism for linking academic teaching and research to the real society (Nampala *et al.*, 2016) with examples of University-Community engagement and outreach.

The number of higher education institutions both in public and private sector has increased enormously and as of 2009 there were over 250 public universities (Woldegiorgis and Doevenspeck, 2013) and 468 private Universities (AAI, 2015) on the African continent. These play roles given by governments and societies and in many cases such roles have been constructed by various agents through history coupled with changing demands. According to Woldegiorgis and Doevenspeck (2013), the main agents of change in the role of higher education include, but not limited to; governments, changes in ideology, market forces, globalization, societies, international donors and financial institutions.

The relationship between education and development has provided a basis for direct investment for socio-economic development through education (Lumumba, 2006). The current focus of Higher education is to produce highly specialised skills required for the highly specialised economy, a role that has been modelled by society needs and demands. At the same time, new skill demands require a more wholistic approach in terms of technical and functional competencies as well elucidated in the EARTH model (this volume-Sherrard and Alvarado, 2017) and those being adopted at Gulu University in Uganda (Kalule *et al.*, 2016; Odongo *et al.*, 2016) and Egerton University in Kenya (Mungai *et al.*, 2016). Thus Universities need to monitor closely skill demands by the market, and adjust their training accordingly.

Higher education institutions are now the most reliable source of highly educated people, especially in the perspective of charming change agents that can be relied upon for transforming thinking in societies

Table 1. Some of the earliest Higher Education Institutions in Africa

SN.	Name of University	Year started	Location (City, Country)	Genesis
1	Alexandrian Academy or the Universal Museum Library at Alexandria	280 BC	Alexandria, Egypt	Alexandrian Museum, also called Museum of Alexandria, was an ancient centre of classical learning at the city of Alexandria in Egypt. A research institute that was especially noted for its scientific and literary scholarship, the Alexandrian Museum was built near the royal palace about 280 BC. It is mentioned that the museum was a large complex of buildings and gardens with richly decorated lecture and banquet halls linked by porticos, or colonnaded walks. The renowned Library of Alexandria also formed part of the museum. In 272 AD, the buildings of the museum were destroyed in the civil war under the Roman emperor Aurelian, although the educational and research functions of the institution are reported to have continued until the 5th century.
2	University of AlKaraouine	859 AD	Fes, Morocco	Also called Al-Qarawiyyin, is one of the leading spiritual and educational centres of the Muslim world and is considered the oldest continuously operating institution of higher learning in the world. This university is recognized by the Guinness Book of World Records as the world's oldest continuously-operating, degree-granting university
3	Al-Azhar University	972 AD	Cairo, Egypt	Al-Azhar Mosque and University, was founded in 970-972 AD as a centre of Islamic learning. The mosque was built in two years from 969 AD, the year in which its foundation was laid. The Madrasa connected with it was founded in 988 AD. It is the chief centre of Arabic literature and Sunni Islamic learning in the world and the second oldest degree-granting university in Egypt after Cairo University. In 1961 non-religious subjects were added to its curriculum. As a result it is considered that it became a modern university in 1961.
4	Fourah Bay College – University of Sierra Leone	1827	Freetown, Sierra Leone	Fourah Bay College (University of Sierra Leone) was founded by the Church Missionary Society in 1827, for the purpose of training Africans as schoolmasters, catechists and clergymen. In 1876, the CMS succeeded in getting the College affiliated to Durham University. It is the oldest and first western-style university in West Africa. It is located at Mount Aureol in Freetown, Sierra Leone.
5	University of Cape Town	1829	Cape Town South Africa	The University of Cape Town is the oldest South Africa's university, second oldest extant university in Africa, and one of Africa's leading teaching and research institutions. It was founded in 1829 as the South African College, a high school for boys. The College developed into a fully-fledged university during the period 1880 to 1900.

6	University of Liberia	1862	Monrovia, Liberia	The university of Liberia was established in 1862 and opened in 1863 as Liberia College (school), and became a university in 1951. This publicly funded institution of higher education is located in Monrovia. It is one of the oldest institutions in West Africa.
7	University of Khartoum	1902	Sudan	The University of Khartoum is the largest and oldest university in Sudan. It was established in 1902. The multi-campus, co-educational, public university is recognised as a top university and a high ranking academic institution in Africa. It was renamed from Gordon Memorial College in 1956.
8	Stellenbosch University	1903	Stellenbosch, South Africa	This leading public university was established in 1903. It is located in Stellenbosch; the university was the first African university to sign the Berlin Declaration on Open Access to Knowledge in Sciences and Humanities
9	University of Algiers	1909	Algiers, Algeria	University of Algiers is Algeria's first University. It is called the Mother university and situated in the capital of Algeria, Algiers. Today it has about six faculties: Law, Social Sciences, Religious studies, Medicine, Letters and languages, Economic Sciences and Management.
10	American University in Cairo	1919	Cairo, Egypt	Was established in 1919 by the American Mission in Egypt. The founders intended the university to be both a preparatory school and a university. It is non-profit, independent, liberal arts, English language university. It offers American-Style learning programs at the undergraduate, graduate and professional levels attracting students from more than 100 nations.
11	Makerere University in Uganda	1922	Kampala, Uganda	Makerere University is Uganda's largest and oldest institution of higher learning, first established as a technical school in 1922. In 1963, it became the University of East Africa offering courses leading to general degrees from the University of London, and later Makerere University in 1970.
12	University of Ghana	1948	Accra, Ghana	The University of Ghana is the oldest and largest institution of higher learning in Ghana founded in 1948 in the British colony of the Gold Coast (present day Ghana) as the University College of the Gold Coast, and was originally an affiliate college of the University of London in United Kingdom and gained full university status in 1961.
13	University of Ibadan	1948	Ibadan, Nigeria	The University of Ibadan originated from Yaba College, founded in 1932 in Yaba, Lagos as the first tertiary educational institute in Nigeria. Yaba College was transferred to Ibadan, becoming the University College of Ibadan (today's University of Ibadan), in 1948.
14	University of Zimbabwe	1952	Harare, Zimbabwe	The University of Zimbabwe, the oldest and largest University in Zimbabwe was founded in 1952 through a special relationship with the University of London in

15	Agostinho Neto University	1962	Luanda, Angola	Harare. Agostinho Neto University was established in 1962 by the Portuguese as “Estudos Gerais Universitários de Angola” in the country’s capital, Luanda. In 1968, it was renamed Universidade de Luanda (University of Luanda). After independence in 1975, the institution was renamed the University of Angola (Universidade de Angol). In 1985 it got its current name, Agostinho Neto University, in honour of the first president of independent Angola.
16	Eduardo Mondlane University.	1962	Maputo, Mozambique	Eduardo Mondlane University (Universidade Eduardo Mondlane) is the oldest and largest University in Mozambique, located in the country’s capital, Maputo. The institution was set up as a center for higher education in 1962 as “General University Studies of Mozambique” (Estudos Gerais Universitários de Moçambique). In 1968 it became the University of Lourenço Marques (Universidade de Lourenço Marques), and later, after independence in 1976, Eduardo Mondlane University (Universidade Eduardo Mondlane) in honor the founding President of the Mozambican Liberation Front, Eduardo Chivambo Mondlane.

Source: Compiled by authors based on dialogue with key informants

and create communities into populations that are more likely to be active participants in the decision-making process in the context of a knowledge-based society. Africa Higher Education institutions have evolved to establish standards and now stand out as great national storehouse of trained, informed inquiring and critical intellects and the indispensable means of replenishing national talent.

In some cases higher education are currently viewed and used as places in society where citizens reach an understanding of themselves as individuals committed to recognising culture and a shared identity. Higher education yields significant benefits for both African young people and society as a whole: better employment opportunities and job prospects, improved quality of life, and greater economic growth.

Private benefits for individuals include better job opportunities and prospects, higher salaries, and the ability to save and invest. In turn, these benefits can result in better health and quality of life, allowing workers to work more productively for longer. It can thus be asserted that education is an important means for individual upward mobility and lifting of status in society. With respect to public benefits, higher earnings result in higher tax revenues and less reliance on government and foreign assistance. The presence of more tertiary graduates also enhances participation in the global knowledge economy by increasing a country’s capacity to keep up or catch up with more technologically advanced societies. Higher education graduates are more likely to use and develop new technologies and skills and can help co-workers to learn and use them as well. The general increase in know-how may promote entrepreneurship and the job creation that typically accompanies it.

Other positive effects of higher education include well educated teachers who can enhance the education systems, more skilled health workers who can improve health outcomes and thus raise general productivity, and government leaders with greater capacity who can create growth-oriented policy environments. According to Bloom *et al.* (2014) there is a positive and statistically significant correlation between higher education enrolment rates and good governance indicators.

This June 2017 Issue 2 of AFJRD provides examples of how universities are responding to create entrepreneurial graduates, while at the same time generating knowledge to address some of the agricultural development issues in the continent. The publication of this Issue has been made possible through the Transforming African Agricultural Universities to meaningfully contribute to Africa’s growth and development (TAGDev) project funded by Mastercard Foundation.

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CONCLUSION

Stakeholders (including farmers, entrepreneurs, managers, policymakers, industry and private sector) in agriculture and rural development sectors in Africa are faced with processes of rapid change, unprecedented opportunities and turbulent events (such as extreme weather events related to climate change). As such, they need to constantly balance business development and social/community development practices. In the face of these challenges, academia is currently struggling to connect education with business incubation, strategy and social development into a balanced education coherent theoretical framework that allows for both technical skill development, broad-skill base and creating business-oriented mindset.

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