

Higher Education partnerships: Experiences and impact in sub-Saharan Africa

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Abstract

Tertiary-level human capital in Africa, particularly in sub-Saharan Africa (SSA), is extremely low and, when available, it is variable in terms of quality and competitiveness. African countries are facing challenges related to ineffective institutional infrastructures and dysfunctional systems. Higher education is one of the most effective mechanisms to solve development challenges. However higher education in SSA faces several challenges including limited access, poor quality and relevance of programs and curricula, weak governance to financial constraints, poor infrastructures and facilities, weak research and innovation capacities, critical shortage of and aging faculty, and lack of focus on problem solving. Furthermore, African higher education institutions are generally plagued by weak governance, leadership and management capacities. Higher education partnerships are cost-effective and sustainable mechanisms of developing and building institutional and human capacities to solve cross-sectoral development challenges. The Higher Education for Development (HED) partnership model enhances human and institutional capacity building through international collaborations between U.S. and overseas higher education institutions.

This paper demonstrates the crucial contributions of mutually beneficial and problem-solving partnerships in addressing a wide range of development challenges in SSA. Partnerships provide improved teacher training to local schools and better-prepared health workers, build capacity that enables quick response to zoonotic disease outbreaks, build solar panels for rural communities or build capacity to improve disaster risk management and food security capabilities. The paper concludes that well-designed, monitored and supported collaborations of higher education institutions have a far-reaching impact on problem solving and development in SSA.

Key words: Africa, Higher Education for Development, impact, partnerships, problem-solving, Sub-Saharan Africa, USA

Résumé

Le capital humain du niveau tertiaire en Afrique, particulièrement en Afrique sub-saharienne (ASS), est extrêmement faible et, lorsque disponible, il est variable en termes de qualité et de compétitivité. Les pays Africains sont confrontés aux défis liés aux infrastructures institutionnelles inefficaces et des systèmes dysfonctionnels. L'enseignement supérieur est l'un des mécanismes les plus efficaces pour résoudre les problèmes de développement. Cependant l'enseignement supérieur en Afrique sub-saharienne fait face à plusieurs défis incluant l'accès limité, la mauvaise qualité et la pertinence des programmes et des curricula, la mauvaise gouvernance pour les contraintes financières, les infrastructures et les équipements pauvres, la recherche et les capacités d'innovation faibles, la grave carence de professeurs et d'experts, et le manque de concentration sur la résolution de problèmes. En outre, les institutions Africaines d'enseignement supérieur sont généralement en proie à des capacités faibles de gouvernance, de leadership et de gestion. Les partenariats en enseignement supérieur sont des mécanismes rentables et durables de développement et de renforcement des capacités institutionnelles et humaines pour résoudre les problèmes de développement intersectoriels. L'enseignement supérieur pour le modèle de partenariat au développement (HED) améliore le renforcement des capacités humaines et institutionnelles à travers des collaborations internationales entre les institutions d'enseignement supérieur des États-Unis et de l'étranger. Cet article démontre la contribution décisive des partenariats de résolution de problèmes mutuellement bénéfiques en abordant un large éventail de problèmes de développement en Afrique sub-saharienne. Les partenariats offrent une meilleure formation des enseignants pour les institutions d'enseignement locales et des professionnels de la santé les mieux préparés, renforcent les capacités qui permettent une réponse rapide aux épidémies de maladies zoonotiques, construisent des panneaux solaires pour les communautés rurales ou renforcent les capacités afin d'améliorer la gestion des risques de catastrophe et des capacités de sécurité alimentaire. Le document conclut que les collaborations bien conçues, suivies et soutenues des institutions d'enseignement supérieur ont un impact considérable sur la résolution de problèmes et le développement en Afrique sub-saharienne.

Mots clés: Afrique, enseignement supérieur pour le développement, impact, partenariats, résolution de problèmes, Afrique sub-saharienne, Etats-Unis

Background

One of the most critical factors toward ensuring Africa's renaissance in the 21st Century is how best and effectively it cultivates and utilizes its human capital, both in the region and in the Diaspora. Currently, tertiary-level human capital in Africa, particularly in sub-Saharan Africa (SSA), is extremely low and, when available, it is variable in terms of quality and competitiveness. African countries are also facing challenges related to ineffective institutional/organizations infrastructures and commonly dysfunctional systems. This has become a major concern of African governments, scholars and the international community interested in lifting the region out of poverty. Higher education is one of the most effective mechanisms for SSA to solve development challenges. Higher education enables the development of human resources toward enhancing socio-economic transformation, the innovation to catch up with technological and innovative progress, and opportunities for advancement in overall competitiveness in the global economy (Davesh and Crowley, 2008; World Bank, 2008). It is an imperative to continuously innovate in Africa toward transferring knowledge to application and leap-frog in development.

Higher education in Africa has been, for a long time, considered less critical for national development and poverty reduction in Africa than basic services, such as primary education and health care services. There is now a wealth of information, based on research and studies, supporting and arguing for the importance of higher education for development and transformation in Africa (UNESCO/WB, 2000; AU, 2006; World Bank, 2002, 2008). Developing higher education institutions and systems in Africa is no more a luxury – it is a development imperative. Higher education influences national productivity, determines living standards and a country's ability to compete in a global economy (World Bank, 2002; AU, 2006). Higher education also enhances the development of civil society, enlightened citizenship, self-reliance, values of argumentative dialogue, tolerance and respect to each other (UNESCO/WB, 2000; Ginnette *et al.*, 2008). It prepares and develops the necessary human capital, such as health workers, engineers, teachers, accountants, managers, leaders and researchers, who build the very institutions that are indispensable for development (Kapur and Crowley, 2008; World Bank, 2002, 2008).

Tertiary education supports knowledge generation, adaptation and dissemination toward improving local capacities, fostering the innovation and creativity that drive economic growth and

social transformation (UNESCO/WB, 2000; Kellogg *et al.*, 2008; Morfit *et al.*, 2008). Higher education has a cross-sectoral application has a direct influence on overall growth and development. It prepares the teachers who improve access and quality of education at primary and secondary levels, and produces health professionals who ensure primary health care. It trains the engineers, planners, and managers who build better roads, bridges and communication infrastructure ensuring access to markets and technology. It prepares agricultural professionals who improve practices and productivity contributing to reduction of poverty. Therefore, higher education is the source of the educated work force that has meaningful contributions to Africa's renaissance and development transformation.

In the current highly competitive, technology- and innovation-driven and knowledge intensive world, a development strategy embedded in preparing highly trained human capital through quality higher education is not an option but the only path for Africa to come out of poverty and ensure sustainable development. This requires focused and sustained investment in human and institutional capacity development. However, the higher education sector in sub-Saharan Africa currently faces several challenges that need to be addressed systematically and urgently.

Major Challenges of Higher Education in sub-Saharan Africa

Higher education in SSA faces several challenges that range from limited access to poor quality and relevance of programs and curricula, from weak governance to financial constraints, from poor infrastructures and facilities to weak research and innovation capacities, and from critical shortage of and aging faculty to lack of focus on problem solving. African institutions are generally plagued by weak governance, leadership and management (Azcona *et al.*, 2008). Academic autonomies are eroded by government interference through boards instituted by it and hand-picked appointed vice chancellors (Parker, 2012). Furthermore, most academic leaders (from vice chancellors to deans to department heads) are rarely trained and prepared in the areas of management and administration of such complex institutions. Many institutions, therefore, lack the ability to produce the professionals required to ensure stable and sustainable societies and economies.

Financial constraints have led to an inability to retain quality faculty and administrative staff and to maintain and improve teaching-learning facilities and research infrastructures. Poor

economic conditions and competing public service priorities, such as an emphasis on primary education and health care, as well as poor and unsustainable support from the international community have contributed to financial austerity in many institutions (Azcona *et al.*, 2008; World Bank, 2008). In most SSA countries, enrollment in higher education has grown faster than financing capabilities, resulting in severe decline in quality of education (World Bank, 2010). Although there are some efforts to diversify revenue, there is a systemic lack of experience, expertise and capacity in effective resource mobilization and income generation.

While higher education has seen little improvement in infrastructure and facilities, expansion in primary and secondary education levels in many SSA countries has substantially increased the pressure on demand for higher education (UNESCO/WB, 2000; Yizengaw, 2008; Parker, 2012). The higher education enrollment rate in SSA still hovers around 5–7 percent, one of the lowest in the world. The situation is more critical in terms of serving women and under-represented or disadvantaged individuals. Although there is an increase in undergraduate enrolment, graduate-level (MSc and PhD) enrollment is still very low. This has limited research, knowledge generation, and adaptation, as well as innovation capacities of most institutions. Of greater concern is that a fraction of the increases in enrollment are in science and technology fields. Mismatch between curricula and programs of study with labor market needs (AU, 2006; Johanson and Saint, 2007; Azcona *et al.*, 2008) have had a profound effect in the ability of institutions to produce graduate that could solve societal problems and bring about meaningful change in livelihoods and overall national development. One of the critical challenges of African higher education institutions is the limitation in positioning higher education as a responsible partner in building democratic societies (Parker, 2012).

In many institutions physical facilities have deteriorated, library accessions (reference materials, journals, etc.) are extremely limited and technological infrastructures including Internet connectivity are also limited. These challenges have limited the capacity of higher education institutions in SSA to meaningfully contribute to national and regional development and competitiveness.

**Human and
Institutional Capacity
Development
Through Higher
Education
Partnerships**

One of the successful models that support development of human and institutional capacities of higher education institutions is the promotion and investment in international collaborations and cooperation. African higher education institutions and government increasingly recognize the value of higher education for accelerated national development and poverty reduction (Yizengaw, 2008; Parker, 2012). A growing number of international (multinational) and bilateral agencies have started showing interest and commitment to support higher education in SSA (World Bank, 2002, 2008) to achieve sustainable development. African governments have started investing in higher education, articulating their vision in their poverty reduction strategies and regionally through the unified voice of Africa (AU, 2006). The African Union Commission has recently embarked on a new initiative of Pan-African University project that seeks collaboration with higher education institutions within and outside of the continent. It has led the region with a motto: “Africa’s development should be shaped by Africans.”

Higher education partnerships are mechanisms of collaboration between institutions toward a common goal enhancing shared learning and mutual benefit, while contributions are made by the partnering institutions. Partnerships are more than development assistance and aid; they are far greater than technical assistance and exchanges (Samoff & Bidemi, 2002). They are not mechanisms in which one partner gives and the other receives. Genuine partnerships are based on shared goals, mutual respect and understanding and recognition of each other’s capacities and limitations.

Higher education partnerships are cost-effective and sustainable mechanisms of solving cross-sectoral challenges and developing and building institutional and human capacities of beneficiary host-country higher education institutions and development players. Higher education partnerships serve as mechanisms that help ignite and rekindle innovation and problem-solving potential of the higher education community and institutions in Africa.

There are several models and approaches to higher education partnerships. The RUFORUM model (Adipala and Osiru, 2012; Malcolm and Muir-Leresche, 2012)¹ is one successful approach

¹ RUFORUM is a Network of 29 African Universities (see www.ruforum.org) that is engaged in strengthening postgraduate training in Africa through joint collaborative training programmes. RUFORUM uses M.Sc training as a rapid response to train skilled human resource and provide a pipeline for PhD training, and Regional PhD training programmes to develop capacity developed in key strategic areas to support the CAADP process and strengthen the continent’s innovation capacity.

that fosters collaborations from within, i.e., African institutions to African institutions. There are also models of higher education partnerships between European higher education institutions and those in Africa (e.g., SIDA-SAREC support to universities between Sweden and African universities, VLIR support to universities between Belgian and African institutions, NORAD support for university collaboration between Norwegian and African institutions, etc.). This paper discusses the Higher Education for Development (HED) model that embodies and advocates human and institutional capacity building through international collaborations between U.S. and overseas higher education institutions.

The Higher Education for Development (HED) Model.

The United States Agency for International Development (USAID) started funding and managing higher education partnerships after the Foreign Assistance Act of 1961. In 1992, the Association Liaison Office for University Cooperation and Development (ALO) was founded through a consortium of the six major U.S. higher education associations. These associations include the American Council on Education (ACE), the American Association of Community Colleges, the American Association of State Colleges and Universities, the Association of American Universities, the National Association of Independent Colleges and Universities, and the Association of Public and Land-grant Universities. ALO began awarding grants funded by USAID in 1998 and changed its name to Higher Education for Development in 2006. HED manages higher education partnerships between U.S. higher education institutions and overseas institutions through an open competitive award process (Morfit *et al.*, 2008; <http://www.hedprogram.org>). HED is supported through a cooperative agreement between USAID and ACE and operates with the advice and counsel of the six major U.S. higher education associations.

HED promotes and manages grants supporting efforts of higher education institutions to address development challenges in developing countries, while also benefiting the U.S. higher education community. Through institution-to-institution collaborations, HED partnerships build human and institutional capacities to create positive change and meet development needs. Funding for such partnerships is provided by USAID Bureaus, USAID Missions, the U.S. Department of State and

other federal government agencies (<http://www.hedprogram.org>).

Through its open competitive process, HED facilitates selection of the best from the U.S. higher education community to collaborate with higher education institutions in developing countries. HED is uniquely positioned with its access to a large number and variety of types of institutions in the U.S. higher education community. It provides expertise in developing programs design, and facilitates merit-based, transparent competitions and rigorous peer review process to select partners. This ensures that only the best and most cost-effective programs are recommended for funding. HED manages partnerships and also provide service to USAID Bureaus and Missions by identifying experts and organizing roundtable discussions that generate innovative ideas and potential solutions to development issues.

HED-managed partnerships link higher education institutions in the United States with institution (s) in developing countries to work together to address a wide range of challenges. These include workforce development, agricultural and food security, teacher education, public health, biosecurity and biodiversity, water management, rule of law and entrepreneurship. These partnerships largely focus on faculty and staff development, curricula review and academic programs development, research and innovation capacity building, improving community outreach and dissemination of technology and better practices. They also focus on revitalizing and enhancing leadership and administration capabilities, renovating and upgrading teaching-learning and research facilities and infrastructure, and overall institutional capacity development.

Representing a breadth and depth of the U.S. higher education, in its existence of a little over 10 years, HED has managed over 350 international partnerships. In 2011, HED supported 75 partnerships involving 81 host-country higher education institutions in 35 countries and 58 U.S. universities and colleges (<http://hedprogram.org/resources/HEDAR2011.cfm>).

Illustrations of Successful Higher Education Partnerships in sub-Saharan Africa. HED managed partnerships have contributed to develop human capital, strengthen capabilities for sustained economic growth, support in increasing agricultural productivity and reducing food insecurity and improve public

health and access to clean water. To demonstrate the value of partnerships in addressing development challenges in Africa, a select number of HED managed higher education collaborations are highlighted in the following sections.

HED-Managed Africa-U.S. Higher Education Initiative Partnerships. The Africa-U.S. Higher Education Initiative is addressing development challenges in sub-Saharan Africa through the human and institutional capacity building activities of 11 partnerships led by African higher education institutions and their U.S. partners. These partnerships are targeting development needs through improved academic programs and curricula, enhanced faculty and staff capacity, expanded applied research capabilities, and reinvigorated community outreach and engagement. The following are brief overviews of Africa-U.S. Higher Education Initiative partnerships in Eastern and Southern Africa region managed by HED.

A partnership between Addis Ababa University in Ethiopia and the University of Connecticut, working with five other Ethiopian higher education institutions, is building institutional capacity and workforce expertise for sustainable development and management of Ethiopia's water resources. Key components include graduate-level academic programs, faculty development, and undergraduate outreach activities (<http://www.eiwr.org/>). In their first year, partners developed master's degree programs; reviewed and developed courses and enrolled 24 masters' and 18 PhD students. One example demonstrating problem-solving in this partnership, is the work of partners in finding solutions to reduce effects of high fluoride contents in drinking water for rural communities in the Afar region in Ethiopia.

In Kenya, a partnership between the University of Nairobi and Colorado State University created a Center for Sustainable Dryland Ecosystems and Societies (<http://csdes.uonbi.ac.ke/>) and implemented a competitive research-for-development fellowship program with a service-learning component. It supports 13 PhD and three master's-level students. A partnership between Kenyatta University and Syracuse University embarked on improving quality of secondary school teaching and education in Kenya (<http://cuseinkenya.syr.edu>). Kenyatta University faculty members are trained on improved skills of teaching large classes, supporting all learners, and integrating technology in teaching-learning.

In Malawi, University of Malawi and Michigan State University (MSU) link science to action in the area of agro-ecosystem services. The partnership develops the University of Malawi's capacity to contribute more effectively to the drive for agriculture-led economic growth and management of human activities to protect vital natural resources. Malawians are enrolled in PhD programs at MSU and new courses on ecosystems, qualitative methods in agriculture, environmental science and module on payment for environmental services have been developed.

The University of Cape Town in South Africa (with additional partners in Ethiopia and Rwanda) and University of Cincinnati are collaborating across borders to develop the research and entrepreneurial capacity needed to electrify rural and remote areas. An emerging low-cost, durable, highly portable solar power cell is at the center of a new approach to solar energy production. http://www.uc.edu/webapps/ucosmic/faculty_research/detail.aspx?id=359/.

The University of Juba and the Catholic University of South Sudan in partnership with Virginia Polytechnic and State University is implementing a comprehensive plan to restore agricultural higher education curriculum and research capacity in South Sudan. The resulting improved institutional capacity will address food security and development challenges with skilled graduates and effective outreach programs. <http://www.oired.vt.edu/Projects/Sudan.html/>.

Makerere University in Uganda in partnership and North Dakota State University established joint regional Master of Science degree and Graduate Certificate in International Infectious Disease Management and Biosecurity. Its goal includes risk assessment to reduce transmission of zoonotic and vector-borne diseases. Partners participate in outbreak investigations of anthrax and brucellosis in Uganda and collaborate in the emerging pandemic threats program to synergize activities in the region.

Other HED-Managed Partnerships. The following are brief overviews of other SSA partnerships managed by HED.

A partnership between Makerere University in Uganda and Muhimbili University in Tanzania with John Hopkins University, Tulane University and George Washington University improved

academic programs and upgrade skills of public health practitioners and managers enabling them to lead and respond to public health issues and disasters. Through this *Leadership Initiative for Public Health in East Africa* (LIPHEA) partnership, 50 faculty members have gained new knowledge and leadership skills through short courses in-country and abroad including sabbaticals at Johns Hopkins University and Tulane University. New master's degree programs in Health Service Research and Public Health Nutrition were developed. Through LIPHEA, health researchers are now better able to produce data that informs national policy decisions, and health leaders influence media reporting on health issues and contribute to advocacy efforts.

The National University of Rwanda partnering with Michigan State University (MSU) and Texas A&M University (TAMU) under the project *Partnership Enhancing Agriculture in Rwanda through Linkages* (PEARL) has improved teaching, research and outreach capacity. It supported coffee growers to produce specialty coffee that has become a model for Rwandan coffee industry. Sixteen Rwandan faculty and researchers from partner institutions received masters' degree training at MSU and TAMU. The partnership trained more than 2,500 Rwandan women and more than 3,800 Rwandan men in marketing, financial management, business management, business-plan writing, and information technology. As the Maraba coffee growers received fair trade certification and began to grow shade-grown coffee, their specialty coffee has become a model for the Rwandan coffee industry that has been replicated countrywide. In cooperation with the Maraba Coffee Producer Association, PEARL has sold 18 tons of bourbon coffee beans to Community Coffee of Louisiana and 19 tons to Union Roasters in London at a fair trade price. Since PEARL's inception, the partners constructed 25 new coffee washing stations throughout the Maraba, Karaba, and Gashonga districts. This success has received extensive media coverage, including The Chicago Tribune, CNN and TIME Magazine.

Malawi Bunda College and Lincoln University promoted high-quality nutritional supplements containing goat milk. The partners promoted crossbreeding of local goats with purebred strains from France and South Africa that improved animal health and increased milk production. Partnership nutritionists demonstrated the value of goat milk, mixed with soy supplements, and fed the product to a sample of children at the

local hospital rehabilitation center for malnourished and vulnerable children. The mortality rate of these children dropped considerably and the children's health improved.

In the South African state of KwaZulu-Natal, there is a dire shortage of teachers qualified to teach high-level high school mathematics, especially in rural areas. Most of the math teachers have only a secondary school teaching diploma. The University of KwaZulu-Natal in partnership with the University at Buffalo and the State University of New York were able to develop a low-cost, flexible delivery pilot math teacher education program, strengthening the knowledge and pedagogical skills of black South African secondary school teachers to teach mathematics in grades 10 through 12. The partners succeeded in developing three modules for a new advanced certificate of education for further education and training in mathematics with a potential impact of improving student achievement.

Years ago, managing conflict resolution and peace building in Somaliland was an obstacle that kept the nation's progress slow. Today, formal education that includes unique traditional Somali approaches is one outcome of a higher education partnership between the University of Hargeisa and Eastern Mennonite University. The partners focused on providing methodology that promotes peace and stability in Somaliland through the involvement of traditional elders and modern best practices in conflict resolution. During a four-year period, the partners established an Institute of Peace and Conflict Studies (IPCS). About 105 people from the public and private sectors including members of parliament, the House of Elders, current and former ministers, and the United Nations have received a Postgraduate Diploma in Peace and Conflict Studies from IPCS.

A partnership between Bahir Dar University in Ethiopia and University of Arizona developed a Master of Science training programs in disaster risk management and sustainable development and trained 27 professionals at master's level. It also laid the foundation for the establishment of a national center of excellence in disaster risk management that could potentially serve the eastern Africa region.

Lessons Learned and Conclusion

Through mutually beneficial and problem-solving partnerships, higher education institutions and communities collaborate to contribute to human and institutional capacity building that impacts national and regional development in Africa. Such collaborations

serve as a critical modality or mechanism of addressing a wide range of challenges. They contribute in providing improved teacher training to local schools and better-prepared health workers, as in the Kenyatta University-Syracuse University and the LIPHEA partnerships, respectively. Partnerships are building capacity that enabled to quickly respond to zoonotic disease outbreaks in Karamoja as in the Makerere University-North Dakota State University partnership or establish a school for conflict resolution and peace-building by employing traditional means and practices in Somalia through the University of Hargeisa and Eastern Mennonite University partnership. Dedicated partners strive to build solar panels for rural communities as in the University of Cape Town-University of Cincinnati partnership or build capacity to improve disaster risk management and food security capabilities in Ethiopia through a partnership between Bahir Dar University and Arizona University.

By upgrading curricula, teaching methods, and resources, partnerships produce graduates that can contribute to societal transformation in sub-Saharan Africa. Through faculty development and exchange, partnerships strengthen personal and professional capacities toward enhanced teaching, research and community outreach and problem solving. Improved faculty capacity has enabled institutions to provide policy advice and lead dialogues.

Higher education partnerships build cross-cultural understanding, improve awareness on critical development challenges, create opportunities for joint research and re-orient institutional missions toward problem solving and community/national development. Experiences from HED-managed higher education partnerships revealed that success and sustainability of partnerships heavily depend on the ability of the collaborations to:

- Ensure that institutions in Africa are involved in the critical process of determining performance objectives, work plan, and selection of collaborating institutions.
- Focus on human and institutional capacity development.
- Commit and engage with clear roles and responsibilities toward long-term and mutually beneficial cooperation.
- Enshrine respect, sincere sensitivity and awareness of technological, cultural, political, social and geographic constraints.

- Use the collaboration as a stepping stone to mobilize additional resources—human and material.

Success in partnerships requires persistence and patience to nurture shared ownership, understanding and flexibility to adapt to local cultures, institutional set ups and allocation of resources. It also depends on demonstrated professional respect to aspirations, opportunities and limitations of partners in Africa. Public-private collaboration and creative leveraging of additional resources are critical to successes and sustainability of partnerships.

In order to succeed and have meaningful results, partnerships need to be appropriate to a country's or an institution's specific circumstances, be focused on problem solving and sustainability, enhance local ownership, and be sensitive to local socio-economic, political and cultural diversities and values.

Well-designed, monitored and supported collaborations of higher education institutions have a far-reaching impact on problem solving and development. HED-managed higher education partnerships are cost-effective and sustainable mechanisms of collaborative undertakings that contribute to solving societal problems by addressing science, education, and technology issues in Africa. Higher education partnerships can serve as effective modalities of development intervention through their ability to ignite and rekindle innovation and problem-solving potential of the higher education community and institutions.

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