
THE PARTNERSHIP FOR HIGHER EDUCATION IN AFRICA



AFRICAN UNIVERSITIES: *Stories of Change*

Ghana Kenya Mozambique Nigeria South Africa Tanzania Uganda

Seven Nations, Six Foundations, One Mission: Africa's Future

On these pages you'll find some of the countless success stories unfolding across sub-Saharan Africa—stories that prove African solutions to African problems are indeed possible.

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Overview



Photo by Stephen Shames

Famine, genocide, poverty, AIDS. So many stories about Africa are told in these dispiriting words. But Africa has other stories to tell in far more hopeful words: education, democracy, progress, peace. African universities are central actors in these untold narratives—as they work to change the lives of Africans and the futures of their countries.

As the new century dawned in Africa, democratic ideals and an eagerness for a more robust higher education system deepened in a number of nations seeking African solutions to African challenges. African leaders focused on strategic planning, decentralization, innovation and experimentation in their efforts to revitalize African universities. This wave of positive change captured the attention of some of America's leading foundations. In April 2000, Carnegie Corporation of New York and the Rockefeller, Ford and MacArthur foundations joined together to help strengthen African higher education, recognizing that universities play a critical role in efforts to reduce poverty and stimulate economic and social development.

Today, Africa's universities are providing essential training for the continent's future leaders in the public and private sectors. Many are offering newfound educational opportunities for African women; others have become full partners in the process of improving public services and governance, stepping in to expand the pool of skilled professionals entering national and local government.

The Partnership for Higher Education in Africa is helping to sustain the dynamic renewal now underway. The foundations that form the Partnership have a history of grantmaking in African countries, and under the Partnership have continued to provide individual support while also funding joint endeavors. Chosen for their democratic public policies and history of foundation activities, Ghana, Kenya, Mozambique, Nigeria, South Africa, Tanzania and Uganda make up the seven countries participating in the Partnership. Universities in these countries that promote innovation, engage in strategic planning and demonstrate creative, broad-based institutional leadership are the locus for foundations seeking investments with long-range impact.

The four foundations initially pledged \$100 million toward higher education: to date over \$150 million has been invested in 40 African universities with a combined enrollment of more than 300,000 students. In the fall of 2005 The William and Flora Hewlett Foundation and The Andrew W. Mellon Foundation joined the Partnership, and the six partners have pledged \$200 million more over the next five years.

While universities arguably represent a promising vehicle for Africans to address the new

century's challenges, for more than 20 years these institutions struggled to survive. During the nation-building period of the 1960s public universities received significant investment and important leaders emerged. Yet by the mid-1970s, a long period of disillusionment took hold in an environment of civil unrest, runaway costs, student protests, corruption and other factors. Through the 1980s and into the 1990s, a focus on universal basic education shifted resources toward primary education and away from Africa's universities.

A new vision has emerged however, one that recognizes that higher education and development must go hand-in-hand, and that Africa's ability to generate and harness knowledge is critical to advancement. This awareness accompanies an embrace of public policy reforms, market principles, and multi-party systems by countries whose university leaders have begun to rethink the missions and guide the transformation of their institutions. While needs are considerable, a quiet revolution has been taking place, making universities once again a source of innovation, training, and scholarship. Today university leaders are strengthening basic research and training in science and technology; developing new strategies that use technology for communication, distance learning and networking; and encouraging gender mainstreaming.

Witnessing the promise of political and economic reforms and the role higher education has played in this ongoing transformation, the foundations within the Partnership are expanding their commitment to the renaissance of African higher education. This commitment will promote further autonomy, innovation and networking among African institutions, to facilitate the sharing of ideas and pooling of resources.

The Partnership's Bandwidth Initiative, launched in late 2005, is a prime example. Full participation in today's marketplace of ideas requires access to the limitless exchange of information on the Internet. Lacking the required infrastructure and equipment, African universities have found themselves on the wrong side of the digital divide with little hope of bridging the distance. They have been forced to buy bandwidth (Internet capacity) at a very high cost compared to other parts of the world. With co-funding from the Partner-

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ship, universities in several sub-Saharan countries have formed a consortium to purchase a sixfold increase in bandwidth and share Internet capacity at lower rates—an important first step towards parity in the online world.

Another milestone for the Partnership was the launching of the *Journal for Higher Education in Africa* in 2003. The journal is the first publication to focus on the dissemination of research and knowledge generated by universities on the continent. Despite the challenges of long-distance and cross-cultural collaboration, the journal is helping to create and sustain a community of informed researchers and policy makers, and is contributing to a more energized field of research in Africa. It is strengthening the voice of higher education in national and regional debate.

Many more Partnership-funded programs are helping to reshape the educational landscape across sub-Saharan Africa. We invite you to turn the page to learn more about how African universities are making a difference.

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Smart Cards Put Tanzania at the Cutting Edge

University of Dar es Salaam, Tanzania

The University of Dar es Salaam is aiming at relevancy, and smart card technology has put it right on target. Beginning in 2000, with the help of a \$3.5 million grant, the university undertook an ambitious, multi-faceted reform program meant to address Tanzania's critical needs in the 21st century. Along with essentials such as upgrading the library and improving students' access to computers, the university launched the smart card pilot project. When it was exhibited at an international trade show in Dar es Salaam, this forward-looking venture caught the attention not only of business leaders, but of the highest government officials from Tanzania and beyond.

"We want the university to be an important part of the life of the country," explained vice chancellor Professor M.L. Luhanga. "We are trying to do something different and something entrepreneurial." Bringing smart card technology to campus turned out to be a brilliant strategy. Drawing on the capacity of their own IT department and using students and professors to help develop and test the software, this project has let the university polish its image and connect more closely with the needs of the broader community. "I would say our reputation, currently, is very good," Professor Luhanga confirmed, "especially after having moved away from the ivory tower image that we had."

Smart cards, which resemble credit cards, can contain hundreds of times more memory in an embedded microprocessor. The cards are used worldwide, in libraries, banks, health care, telecommunications and more. University students use them everywhere from the dormitory to the dining hall. Tanzania's smart card project began by linking with the university library and computer center, and applications for the health system and the academic registrar are planned. The smart card system is also designed to monitor students' access to funds, making sure money from parents or the government is spent for its intended purpose.

While this financial function is clearly a benefit in the eyes of university administrators, students had some serious doubts. To encourage acceptance, informational workshops for student leaders and campus-wide public awareness campaigns were rolled out to explain the value of smart card technology and dispel misunderstandings about privacy issues and spending controls. Another unplanned, but potentially beneficial project, the smart card website, grew out of the need for students and staff to keep up-to-date on card services. Despite such unforeseen challenges, Partnership funds have fueled progress, helping to build and maintain the website as well as



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pay for computer equipment and programmers who keep the entire smart card system up and running.

Perhaps it's not surprising that Professor Luhanga, a telecommunications engineer, would be the one to help lead Dar es Salaam's students to the forefront of today's technology. But he gives credit to his country's traditional values. "That has been the unique thing about Tanzania. Julius Nyerere, our first president, always instilled in the youth the idea that we are building a nation, a self-reliant nation. Somewhere, I think, the message got blurred a little bit, but that sense is beginning to come back."

An Innovative Way to Boost Food Production and Fight Chronic Food Shortages

University of KwaZulu-Natal, South Africa

Hunger is the largest cause of death in Africa, taking more lives than AIDS. In sub-Saharan Africa, over 200 million people aren't getting the food they need. And the number is rising.

Inadequate food production inevitably leads to poor nutrition, posing enormous obstacles to ordinary Africans who are trying their best to improve their lives. Due to widespread outbreaks of pests, viruses and other diseases, many sub-Saharan countries face crop shortages regularly. This dire situation exacerbates the spread of hunger and has a pernicious economic effect, especially on the more than 80 million small-scale farmers in the region.

One solution has been to train scientists to use plant breeding and plant pathology to develop more robust strains of crops that can resist a wide range of viruses and pests. Training of this type has typically occurred in the U.S. But such programs are cost-prohibitive and can be counterproductive, if they have little in common with agricultural conditions in the students' home countries—the very areas where expertise is most needed.

One especially innovative program currently operating is the African Centre for Crop Improvement. Housed at South Africa's University of KwaZulu-Natal, this five-year Ph.D. program trains plant breeders to develop new varieties of crops in hopes of bolstering the continent's homegrown food supply. "You can't breed crops at a distance—it fails every time," says program director, Mark Laing. What makes the Centre's work groundbreaking is that "we're training African plant breeders, in Africa, with African crops. And no one else is doing that."

As a result of the program, one program fellow, Chrispus Oduori of Kenya, was the first person ever to develop hybrid varieties of finger millet, a highly nutritious crop native to Africa, which had previously received scant attention from scientists

By the time the program receives its sixth cohort, in January 2006, close to 40 students from nearly



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a dozen countries across Africa will have enrolled. These young scientists were trained for approximately \$150,000 each—just over half the cost of similar training in the U.S.—and with a curriculum and research environment far more relevant to their needs, goals, and realities. By the end of 2006, the first group of graduates will be fanning out through the continent as part of their mission to find more inventive solutions to Africa's chronic food shortages—solutions that are viable, cost-effective, and meaningful.

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Women's Scholarship Program Spells Empowerment

University of Dar es Salaam, Tanzania

Makerere University, Uganda

University of Jos, and Amadou Bello and
Obafemi Awolowo Universities, Nigeria

South African Universities

Anyone seeking hopeful signs of Africa's potential should take a look at the Partnership's university scholarships for women. Between July 2001 and April 2005, this program awarded scholarships totaling \$10 million. More than 1000 women have benefited—762 were awarded full scholarships, and 341 received other forms of financial support. With 95 graduates to date and a dropout rate below two percent, this is one of the Partnership's unqualified success stories.

To illustrate the dramatic way this program is changing lives, one woman student describes her probable future without higher education. "I would be given away in marriage early," explains 24-year-old Ugandan Barbara Wakooli, "maybe around 12, but certainly no later than 15. I would have many children. I would live in my village and be a good wife and mother." But despite strong parental objections, Barbara had other dreams, and attending Makerere University in Kampala could help make them come true. "I'm looking forward to receiving my degree in philosophy and history," she says, "and I'd like to go on for my master's degree."

According to Fenella Mukangara, Ph.D., gender program coordinator at the University of Dar es Salaam in Tanzania, cultural and economic factors often conspire to keep African women out of universities. "For many of them...the path to education, which is essential to their development, is blocked by poverty and by cultural attitudes holding that education is wasted on girls because their only role in society should be as wives and mothers." She remembers her own school days, when "if two or three children from the same family were sent home because they couldn't afford to pay for school, the parents would manage to secure funds for the boy in the family and the girl would be left behind."

But Mukangara believes the time has come for such obstacles to be eliminated. "Education is a top priority," she stresses. "When you educate women, you help to prepare and empower them for participation in all sectors of society...More and more women need to be given the opportunity to attend university, so they can realize their potential." By providing financial resources, the partnership enables struggling African universities to increase their capacity to educate women in a sustainable way...allowing more young women to achieve their dreams as Barbara has. "I see myself becoming a philosopher and perhaps teaching at the university level" she says, "I'd also like to write about human rights, particularly addressing women's rights in society." And it's with no small satisfaction that she adds, "now my mother is very proud of me."



Giacomo Pirozzi/Panos Pictures

MIT iLabs Link Up with African Universities

Makerere University, Uganda

University of Dar es Salaam, Tanzania

Obafemi Awolowo University, Nigeria

Starting this fall, students in three African universities will conduct complex experiments in the same state-of-the-art labs used by students at MIT in Cambridge, Massachusetts—all they'll need is a computer and access to the Internet. Partnership funding is making it possible for students in Uganda, Tanzania and Nigeria to gain essential hands-on science and engineering experience by linking to MIT's innovative online laboratories, or iLabs.

"If you can't come to the lab, the lab will come to you," says MIT Professor Jesus del Alamo, who developed the web-based alternative to meet the needs of his engineering students. "This is a cool new concept with tremendous potential. Because of the specialized equipment required, even the most advanced universities cannot afford to offer their students all the lab experiences they would like to. But with a lab setting that's accessible via the internet you have access anytime from anywhere in the world. Instead of all institutions having all labs, sharing allows costs to be pooled. The result will be better labs with better equipment and better pedagogical experiences."

Online laboratories are real labs, not virtual labs or canned experiments. By making it possible to do real-time experiments via the Internet, these labs will allow African students to do high quality research regardless of their schools' severely restricted resources. Two specific iLabs will be utilized initially—heat exchange and microelectronics device characterization. Meanwhile, MIT and the African universities are developing curricula and course materials as well as new online laboratories to address local needs and constraints.

This exciting collaboration is the direct result of a visit to MIT by a group of African university vice-chancellors during a grant supported study tour on research administration. Once the visitors saw the iLabs, the idea of expanding laboratory access to their own institutions was born. The resulting initia-

tive addresses two longstanding priorities for African universities: 1) restoring capacity for research and teaching in science and technology and 2) expanding access to and use of information and communication technology. Because its success depends entirely on web access, this project also benefits from the Partnership's ambitious bandwidth initiative.

For hundreds of African university students, these activities will instantly open up a new world of scientific discovery and provide an opportunity to see the true power of the computer as an engineering tool. In the long term, they can also lead to a new appreciation for collaboration among African universities as a way of finding sustainable solutions to the problems facing science and technology education and research. "With the dearth of funds for the purchase of equipment for experimentation, the iLab project is an important intervention for African universities," stresses Professor L.O. Kehinde, coordinator of the iLab project at Obafemi Awolowo University. "Not only will it afford better access by more students to relevant experiments, it certainly will also result in human and infrastructural development in partner African universities."

The iLabs initiative also includes an exchange program between MIT and each of the African universities. Professor Kehinde believes "the cross-cultural values of the collaboration between African universities and MIT are immense." Nigerian graduate students Kayode Ayodele and Olumide Akinwunmi spent a month at MIT this past summer studying the iLab's technology and course applications. "The opportunity to work with the MIT team is very exciting," Ayodele said, "it's opening new horizons. Leveraging the platform will give us access to instruments and experiments we wouldn't have back home. And there's an open approach to research and sharing results that we'll take back with us." According to Akinwunmi, "It's changed our point of view and raised our educative standards. With this kind of experiment students will be willing to work long into the night," he added. "Now we can keep up with anybody, anywhere in the world."

Raising Awareness of Gender Issues

University of Cape Town, South Africa

One of the most critical challenges facing higher education across Africa is gender inequity among staff and students. Evidence of unfairness can be found in virtually every institution and at every level. Few African universities promote women to senior management positions, for instance, and few even approach parity between female and male professors. Female teachers without tenure are the most exploited members of many faculties. And with few exceptions, enrollment figures for female students lag seriously behind those for male students. At one time female students were so unwelcome that many higher education institutions did not provide women's bathrooms in departments such as engineering and science. But today, more and more universities seek to enhance opportunities for women.

The African Gender Institute at the University of Cape Town has made significant progress tackling these pervasive problems. Since it was launched in 1997, the Institute—which has both teaching and research functions—has sought to foster understanding of the important role of gender in Africa's development and social transformation, and to strengthen the intellectual and leadership capacity of those working to achieve gender equity across the continent.

With the help of Partnership funding, the Institute carries out its mission through means such as educating students about gender issues in higher education and offering new ways for women scholars in Africa to work with one another. Its Visiting Scholars and Institute Associates program has brought 40 women academics from 13 countries across the African continent to Cape Town to write, work with students and contribute to the development of core curricula for Gender and Women's Studies. Its internationally recognized journal, *Feminist Africa*, published once a year by the Institute, provides key articles on themes such as intellectual politics and changing cultures. And the newsletter, *Herstories*, shares information and ideas with members far and wide.

"The Associates Programme has gone a long way in liberating the dormant leadership potential of women in Africa." Says Professor Njabulo Ndebele, Vice Chancellor of the University of Cape Town and Chair of the Association of African Universities. "It offers a greatly needed space for women in Africa who have ideas they do not have time to develop and revives women who have experiences in patriarchal institutions which have resulted in energy depletion, and provides the space to consider oneself as having the potential to start again."

The African Gender Institute's network of women researchers now includes more than 160 members throughout Africa. Its work has helped to spark the development of other centers for the study of women's issues in a growing number of African universities. And despite myriad internal and external challenges, this pioneering institution has been rated one of the most productive research and outreach departments in the Faculty of Humanities at the University of Cape Town.

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A Small University Makes a Big Impact

Catholic University of Mozambique

With only 2,450 students, and branches scattered among five cities surrounded by rural areas, Catholic University of Mozambique is a small but vibrant institution. Its mission is to provide higher education to disadvantaged regions, particularly in the north and center of the country, and to contribute to the development of Mozambique. Without a graduate school, however, the university was unlikely to become a true hub of higher education. In 2002, Partnership support made it possible to inaugurate master's programs in economics and in management, which formed the basis of a new graduate school, launched three years later.

To date, 22 students have received degrees in the economics and the management master's programs. The majority are from outlying areas, far from the capital city of Maputo, and half are women. Most encouraging of all, every one of these graduates has found a job in the public or private sector—with six receiving university posts.

The progress made by Catholic University beautifully illustrates the impact of Partnership support. Throughout Mozambique today, there are only 20,000 students in public and private universities, less than one percent of the country's university-age population. When Mozambique attained independence in 1975, there was one university, with about 2,000 Mozambican students, and some 20 university graduates in the country. The 16-year civil war, which ended in 1992, compounded this dire situation, and when a democratically elected government took office two years later, the country's education system was in shambles. Since then, education has improved at all levels, although many obstacles remain, particularly for higher education: the widely dispersed and relatively small population; a struggling primary and secondary school system and competing public service needs.

Over the past five years, the Partnership has supported efforts by Mozambican ministries to strengthen the country's science and technology sec-



Photo by Stephen Shames

tor and to develop an effective strategy to improve the country's higher education system. Support has also helped strengthen staff development, institutional management and administration, scholarship programs, and library and research facilities at universities. Besides helping to leverage funding from other sources, such as the World Bank, this work has contributed greatly to the rapid growth in the number of skilled professionals who are now prepared to address local and national development challenges throughout Mozambique.

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Nigerian Universities Make Strides in Information Technology

Bayero University

Ibadan University

Ahmadu Bello University

University of Port Harcourt

Modern universities must have modern technology. In 2001, four universities in Nigeria were receiving major Partnership support—and they had only a handful of computers among them. Today, on the same four campuses, there are thousands of computers for faculty and students to use, and computer training and computerized operations are underway.

With a technology investment of \$7 million, all four universities have purchased computers and software, built facilities, instituted training, and provided Internet connectivity and local area networking service to university departments. The result has been modernized teaching, research, and communication plus improved collaboration with colleagues both nationally and internationally. University leaders are reaping the rewards of greater efficiency and productivity throughout the system.

“It has really made an impact for faculty and staff to have access to computers and training in computer literacy,” says Danjuma Abubakar Maiwada, acting vice chancellor of Bayero University. Demonstrating how far funding can go, Bayero built a new information technology center equipped with hundreds of workstations, teaching laboratories, and training facilities. The university now also has access to an additional 175 computers through the Widernet project of the University of Iowa. And a very popular, low-interest revolving loan program allows academic and non-academic staff to buy their own computers.

“At first, there was great interest in using the computers for research purposes, and we acquired a lot of e-journals and books,” Maiwada says. “Now we’re beginning to see faculty focus on using computers for teaching. The enthusiasm among faculty, students, and staff is very high.” Each semester Bayero can now train more than 200 students in geographic information systems, computer-aided accounting,

computer science and related subjects to keep them on track with 21st century technology—and take them into the future.

The University of Port Harcourt has also established a new center for information technology, funded by Shell Petroleum Development Company and, with the deployment of management information systems within the university, students can register for courses online, track grades, and stay abreast of campus news.

The University of Ibadan built a new digital library facility with money raised by the university, and equipped it using Partnership funds. The university has upgraded from 25 dial-up Internet links to a campus-wide system with 1,000 networked computers using wired and wireless technology. Sixty percent of all university operations will be online by 2007, up from zero percent in 2001.

Ahmadu Bello University has set up a CISCO Academy on campus, where students receive accreditation in computer network and systems management, and is steadily growing its computer network.

The Nigeria ICT Forum of Partnership Institutions was established to leverage the impact of information technology at all four universities. Convened by Ahmadu Bello IT director, Aminu Ibrahim, the Forum facilitates communication among university staff who plan, implement, and manage information technology programs. Members of the Forum work together to organize training programs related to network and system administration, library automation and development of digital libraries, academic and research activities, and other issues. The Forum also advocates nationally on behalf of universities in the area of telecommunications policymaking.

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Fulfilling the Public Service Needs of a Nation

Makerere University, Uganda

A key component of any healthy society is a strong and well-functioning public sector. Ideally, universities are primary training grounds for qualified professionals—especially for young people who hope to pursue careers in public agencies and public health services.

In Africa, that hasn't always been the case. For years, academic programs in many of the continent's most important universities were highly theoretical and somewhat removed from the most pressing needs of their societies, giving them little application to the workplace. As a result, universities failed to help produce adequately trained public servants, leaving state agencies chronically understaffed while delivery of essential services suffered.

The picture seemed to brighten in the mid-to-late 1990s, when, as a result of growing liberalization in both the political and economic sphere, Uganda embarked on a path of greater decentralization. A considerable degree of authority was ceded to local branches of government in hopes of improving public services, increasing accountability and better addressing the nation's goal of tackling poverty. Still, the lack of personnel trained to address these problems presented a major obstacle, as did the fact that Uganda's universities, which might have helped to fill the gap, were not responsive to the nation's needs. In addition, poorly coordinated donor-supported strategies—frequently conceived without local input—created an uneven patchwork of programs and competition for funding. Despite being the country's single largest employer, local government offices had vacancy rates of 30 to 45 percent. Nearly two-thirds of staff lacked university qualifications, and only two percent had any postgraduate training.

Makerere University, established in 1922, is the oldest university in Uganda. With more than 30,000 undergraduates and 3,000 graduate students in an average year, it seemed the logical choice to play a key role in turning out well-trained professionals to meet the challenges of the 21st century. In 2000, Maker-

ere and the Ugandan government entered a partnership designed to bring together constituencies that had rarely collaborated, including university staff and administrators, government officials and private sector representatives. In an effort to encourage the university to develop programs more attuned to the country's recent social transformations, the Innovations at Makerere Committee was created. Its mission was to find ways to train individuals to pursue new careers resulting from the process of decentralization. Two promising ventures prove this is an idea whose time has come:



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Field Internships

In 2002, Makerere launched a field internship program that offered students the opportunity to experience life as a public servant in one of Uganda's outlying areas. Initial projections were for 300 students to enroll in the program. But by March 2005, more than 2,800 students had already signed up to serve as interns in local governments throughout the country. The local districts hosting these interns have reported a notable improvement in the quality of services, and additional districts are vying to join the program.

Health Professions

The lack of qualified health workers around the world is well known and, sadly, is most severe where there is the greatest need. A recent report by the Joint Learning Initiative noted that sub-Saharan Africa has one-tenth the number of nurses and doctors per capita of Europe. Makerere's Institute for Public Health, the main training center for health professionals in Uganda, has a new two-year masters program aimed at developing analytical and management skills through combined class instruction and fieldwork. The program accepts 40 new students each year. To date, more than 115 graduates have been deployed throughout the country in health management and other leadership positions. The Institute is also developing a series of field-based training modules in cooperation with the Ministry of Health, local districts and development partners. Distance learning will be a key component of these training programs—an outgrowth of anticipated nationwide improvement in bandwidth capacity and distribution.

Taking a Team Approach to South Africa's AIDS Crisis

University of KwaZulu-Natal

University of Stellenbosch

Medical University of Southern Africa

An important goal of the Partnership for Higher Education in Africa is to strengthen African universities. As part of their strategy the Partnership sometimes provides funding to help deal with urgent problems affecting higher education—in this case, the AIDS epidemic. Two innovative programs were established in South African universities in response to the HIV/AIDS emergency: One was a collaboration across disciplines aimed at facilitating research and treatment; the other was a model program in which two allied universities taught students how to manage the disease in the workplace.

University of KwaZulu-Natal

With an infection rate between 15 and 25 percent among black students and academic staff, South Africa's University of KwaZulu-Natal recognized that to remain a viable institution and provide excellent education, it had to find a way to cope with this crisis. A \$1.1 million grant was given to support an innovative research, training and intervention program to address the challenges of HIV/AIDS. Based in the University of KwaZulu-Natal, the Centre for HIV/AIDS Networking (HIVAN) quickly became a powerful force promoting awareness and action on all local AIDS-related issues. Partnership leaders felt strongly that the university played a vital role in the debate on how AIDS should be addressed in South Africa—an act that took courage at a time when the government was not supportive.

The program's directors, Eleanor Preston Whyte, Ph.D. and Hoosen Coovadia, M.D. had responded to a call for help from the university's vice chancellor, putting together a plan for a campus support organization to help deal with HIV and AIDS. "We were free to develop our plan any way we wanted," said Whyte, "and we wanted two things: excellent research, and a network for bringing people together. There were other AIDS programs, but



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The innovative programs flourishing at Makerere University are proven successes, with large numbers of graduates employed outside the major cities, and earning better salaries. Other university departments and other districts in Uganda are asking how they, too, can participate. Important changes in attitude have emerged as well. Where working in an outlying district was once seen as a dead-end, jobs in rural areas are now considered desirable. Perhaps most significantly, these programs have given rise to a new vision of what is necessary, and what is possible.



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University of Stellenbosch and the Medical University of Southern Africa

The prevalence of AIDS has severely undermined the workplace in South Africa, causing rampant absenteeism and dramatically reducing productivity and performance. With all communities, workplaces and government departments affected, the resulting economic slowdown could shatter all hopes of an African renaissance. Something had to be done to educate workers and establish and implement HIV/AIDS policies: A public health program seemed to be the best solution. In September 2000 the government of South Africa challenged the National School of Public Health at the Medical University of Southern Africa and the Department of Industrial Psychology at Stellenbosch University to work together to develop such a program.

it would be this sharing function that would make ours different,” she added. “And it was the grant that made it real.”

Whyte credits HIVAN’s success to its strong staff, including a team of junior level people who participated in the organization’s mentoring program—a creative solution to the problem of filling senior positions. “Working with young people has been a fantastic learning experience for them and for us,” she said. “We wanted to build capacity, so all the participants had to be working toward higher degrees. After three years with the program, most of them have now been launched into very good jobs, some in research where they’re now getting their own funding.”

HIVAN, conceived as a bridge between the university and the community as well as between the social science and medical disciplines, has far exceeded expectations by forging strong researcher-practitioner alliances in which scholarship and action come together. An outstanding model for universities in other AIDS-affected regions to follow, its achievements include campus-based AIDS support services, a globally accessible database, and an HIV-Website and 911 Help-Line. These accomplishments are due in large part to Whyte and Coovadis, highly committed visionaries. Their organization’s networking efforts, bringing together a wide variety of faith-based, academic and nongovernmental groups, have raised the visibility of the program and led to the additional funding of a series of international forums to be hosted jointly by HIVAN and the School of Development Studies at the University of KwaZulu-Natal. The program’s capacity for attracting additional funding is a positive sign for its sustainability.

With support of a \$1 million grant, the Postgraduate Diploma in the Management of HIV/AIDS in the World of Work was established, and 106 students enrolled for the first term. The curriculum addressed concepts ranging from legislation and policies to prevention and community outreach, all taught from the workplace perspective. By graduation, students were expected to be able to conduct research, implement policies and monitor prevention and care, resulting in decreased absenteeism and discrimination and improved productivity and worker morale.

The groundbreaking collaboration between Stellenbosch and the Medical University of Southern Africa—universities with historically disparate status and resources—was challenging, but the program ultimately succeeded, attracting large numbers of ethnically diverse students and achieving excellent graduation rates. These numbers have grown steadily over three years. With impressive amounts of media coverage and positive feedback from students, this high-profile program has proven its ability to meet an urgent demand and become sustainable in the future.

The Institute for Petroleum Studies Allies with Industry

University of Port Harcourt, Nigeria

New alliances are proving to be the key to revitalization for a number of Nigerian universities. The University of Port Harcourt, founded in the wake of the 1970s oil crisis, is making tremendous progress thanks to partnerships with private companies, educational institutions and individuals. Primed by Partnership funding, the Institute for Petroleum Studies was established with substantial support from Elf Petroleum Nigeria Limited. It is the university's first-ever collaboration with the region's oil giants, which also include Shell and Chevron.

"The companies are finding that their investment pays off many times because the quality of the program is so high," says Professor J.A. Ajenka, director of the Institute. "The whole 12-month program is geared toward serving industry and includes many experienced lecturers and participation from industry. So they are hiring people who are well prepared right from the start."



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The Institute, in partnership with the Ecole du Petrole et des Moteurs, France, awards international joint master's degrees in petroleum engineering. In 2004, the first graduates went to work—many of

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them recruited by the multinational oil companies concentrated in the oil-rich Niger Delta. "These companies are increasingly recognizing the synergies between their own growth and the development of the university even beyond the institute," says Ajenka. For example, Shell Petroleum Development Company recently constructed a \$1 million campus information and communication technology center.

A private sector leadership council, Friends of Port Harcourt University, has been launched to promote university development. Co-chaired by the university and Shell, it includes representatives from Nigeria's major oil companies. "These partnerships have been like a catalyst in helping us have a stronger and stronger relationship with industry," Ajenka says. "And the whole university is happier for that."

Educating Teachers to Achieve Excellence

University of Education, Winneba, Ghana

Across Africa, the push for improved education is being felt at all levels, from primary to postgraduate institutions. Teachers, in particular, are under pressure to upgrade their skills and get high-quality training in order to provide a better level of education and advance student achievement—in hopes of yielding greater numbers of educated young people with leadership potential. With \$1.7 million in Partnership support plus government funding, the University of Education, Winneba, which has a current enrollment of 13,500 students, has undertaken an ambitious strategy to meet the nation's need for educational excellence through three channels: distance learning, student internships and postgraduate studies. These new and enhanced programs aim to make teacher training more widely available, practice-oriented and cost effective.

Distance Education. Every year about 15,000 Ghanaian primary school teachers leave their jobs to further their own education. This exodus results mainly from the recently instated government requirement that teachers hold a diploma in basic education conferred by a university. For those with middle-level teaching certificates (about 90,000 in all) this means going back to school. Distance learning can help by enabling teachers to do their coursework and hold onto their jobs. In 2003, the University of Education had an enrollment of 2,000 students in the distance education department, which with grant support has expanded to 3,500—54 percent women, compared to 31 percent in conventional classes—while improving the quality of the program. Newly trained lecturers and tutors, updated course books, upgraded radio and computer equipment and new study centers have all been acquired with the help of Partnership funds.

Student Internships. The University's bachelor of education degree program consists of three years on campus and a fourth-year internship. About 2,500 interns are placed in schools throughout Ghana to

experience the day-to-day realities of the classroom and to develop successful teaching strategies and self-confidence. To prepare, students attend pre-internship seminars and report on their teaching philosophy and research projects. Once interns arrive at their schools, the quality of their experience is mainly in the hands of their mentors. "We have a partnership with schools, and the Heads (Principals) recommend mentors to us," explains Kwami Asante, director of the student internship program. "They must be very experienced, competent and committed teachers."

To assure that mentors are well prepared, Partnership funds have paid for comprehensive training materials and workshops held at regional capitals. "It's a very big job for mentors and they need to be skilled—not only in teaching but in counseling, too," Asante adds. "They can't just be critical. There's give-and-take, and being tactful is important." A double dividend from this investment has been the boost mentoring has given to experienced teachers. According to Asante, "Heads of schools are writing to request that their teachers become mentors because there's a big benefit to the in-service training they get from the program. Participating teachers work harder and become more professional."

Postgraduate Studies. Established less than ten years ago, the School of Research and Graduate Studies offers master's degrees in a limited number of subjects. This lack of opportunity has meant university staff often travel abroad for long periods of time for training—which is costly and discourages women from participating—and almost a third of those who study abroad do not return to Ghana after graduation. By strengthening the graduate school, the Partnership hopes to keep scholars home while developing university staff and providing educational opportunities for thousands of individuals, many of them secondary school teachers whose degrees are in disciplines other than professional teaching. By offering scholarships and establishing a system for attracting, recruiting and retaining top students and lecturers, university leaders have taken great strides toward achieving the level of excellence they seek.

Expanding Opportunities for Women to Study Math and the Sciences

Kenyatta University, Kenya

Over the past decade, sub-Saharan Africa has seen great progress in access to primary education, particularly for girls. In East Africa, major increases in attendance resulted when governments introduced free primary education in Uganda, Tanzania and Kenya. Enrollments in Kenya alone have grown by more than one million since 2003.



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But while it started out strong, this trend has been hard to sustain, and achieving participation in higher levels of the education system remains a serious challenge. In Kenya, for example, only about half the number of children who begin primary school will complete it, and half that many will drop out by secondary school. Only four of every one hundred students will pursue higher education. If the overall enrollment figures are troubling, the gender gap is even more so. Girls and boys attend primary schools in more or less equal numbers, but by the time they reach secondary school, boys consistently outnumber girls. At the university level, the gap becomes enormous: 71 percent males compared to 29 percent females.

Nowhere is this disparity more evident than in mathematics and science, where, depending on the department, there are between three and ten times as many men as women. A major obstacle for female students is the Kenya Certificate of Secondary Education exams, which require a minimum grade of C+ for university admission—and which women are far less likely to pass than men.

Bridging this achievement gap in mathematics, science and information technology is a priority for Kenyatta University. With Partnership support, the university has developed an ambitious plan to increase women's participation and strengthen their performance. "We can already see the impact of working directly with students in the science-based faculties," says Deputy Vice-Chancellor Olive Mugenda. "Previously, we had a large number of women students transferring out of the sciences at the end of their first year. With the introduction of this program, that has already stopped."

The university has employed a variety of successful strategies, beginning by raising administrators' awareness of the value of this effort. They have trained mentors and role models for women in science, created science students' associations and offered career workshops for secondary school students. According to Mugenda, outreach to secondary schools helps instill confidence in female students. "This was a major omission in the past," she believes. "Working directly with secondary schools is having a significant impact on girls considering science as a real option for the future."

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The **Partnership for Higher Education in Africa** is a joint effort of Carnegie Corporation of New York and the Ford, MacArthur, Rockefeller, William and Flora Hewlett and Andrew W. Mellon foundations to build the capacity of African universities and the field of higher education in seven African countries: Ghana, Kenya, Mozambique, Nigeria, South Africa, Tanzania and Uganda. Each of the four founding partners (Carnegie Corporation, Ford, Rockefeller and MacArthur) had significant grantmaking programs in Africa prior to forming the Partnership. Working together has broadened their effort and impact.

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