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Improving Tertiary Education in Sub-Saharan Africa:

Things that Work

Report of a regional training conference held in Accra, Ghana on September 22-25, 2003

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Foreword

This document reports on the "Africa Regional Training Conference on Tertiary Education" held in Accra, Ghana on September 22-25, 2003. The conference was designed to be a training activity that shared lessons learned from some of the more successful tertiary level innovations that have been undertaken in Africa during recent years. Thus, the conference's title: *Improving Tertiary Education in Africa: Things that Work!* The conference was intended to be practical and problem-oriented. It sought to provide tertiary institutions with the tools that they need in order to boost their performance. It also sought to show that while some African higher education systems are facing a serious crisis, others are generating successful home-grown solutions that offer hope for a brighter future. Building on these positive trends, African tertiary institutions will be able to educate more students, to educate them with increasing levels of quality and relevance, to enable them to become knowledge generators through enhanced research, and to produce graduates who are competent leaders, capable managers, skilled specialists, and productive citizens.

It is important that Africa's development partners support this renewal process of African higher education. Tertiary education plays a key role in the economic and social development of any nation. This is particularly the case in today's globalized, information and knowledge-based economy. No country can expect to successfully integrate in, and benefit from, this 21st century economy without a well-educated workforce. The stakes are particularly high for Sub-Saharan Africa (SSA), given the low level of education attainment of most countries' labor force, and the urgent need for sustained economic growth at a high level in order to reduce poverty. In addition, while the universities may be weak in many SSA countries, they are often the only national institutions with the skills, equipment and mandate to generate new knowledge, and to adapt knowledge developed elsewhere to the local context.

At the time of independence, African leaders clearly recognized the important role that high-quality tertiary education would play in building the new nations. As a result, one of the first sub-regional conferences organized after independence dealt with the development of higher education (Antananarivo, 1962). And, as noted in the World Bank's first free-standing policy paper on *Education in Sub-Saharan Africa* (published in 1988), African "...universities have risen impressively to this challenge" (p. 5). However, that paper also warned that, because the countries in the mid-to-late 1980s already had staffed the new national administrations, and given the stagnating economies, "Higher education's contribution to development is being threatened ... by four interrelated weaknesses. First, higher education is now producing relatively too many graduates of programs of dubious quality and relevance and generating too little knowledge and direct development support. Second, the quality of these outputs show unmistakable signs in many countries of having deteriorated so much that the fundamental effectiveness of the institutions is also in doubt. Third, the costs of higher education are needlessly high. Fourth, the pattern of financing of higher education is socially inequitable and economically inefficient" (p. 5).

To address these weaknesses, the paper called for policies to (a) improve quality, (b) increase efficiency; (c) change output mix, and (d) increase participation in the financing by beneficiaries and their families. Finally, the paper warned that quality improvement will cost money, and that implementing the policies under points (b), (c) and (d) ".. will, almost everywhere in Africa, be a prerequisite for freeing the resources needed to achieve ...(quality improvements)" (p.6).

In the context of stagnating economies and a need for indispensable structural reforms, the political economy of introducing the type of higher education reforms recommended in the Bank policy paper proved very difficult in most SSA countries during the 1990s. As a result, a combination of growing enrollments and continued severe constraints on public budgets further accentuated the crisis in African higher education. At the same time, however, there was a marked increase in Africa both in the awareness of the need for higher education reforms and in the knowledge about what to do. As a result, many courageous changes in higher education policies, management and governance structure started to emerge throughout SSA during the 1990s. These reform efforts have accelerated in recent years, and deserve strong support from development partners.

As discussed further below, the World Bank has supported many of these reform efforts in several ways. However, because of its strong priority for primary education and for achieving the "Education for All" goals, the World Bank's policies have often been taken as a sign of reluctance to support higher education in Africa. The perception that the Bank has been "against higher education" is quite wide-spread in Africa, especially in the higher education community. While recognizing that this perception exists, based on my own involvement in the Bank's education work in SSA over the last twenty years, I would argue that the Bank's approach to higher education has been pragmatic and quite supportive *in cases where the conditions were conducive to promote indispensable reforms*. Rather than being against higher education, the Bank's operational policy has generally been guided by the following principles:

- Support for education at any level should be integrated in an holistic approach covering the whole education sector;
- Within this holistic approach, given the stagnation in primary education between 1980 and the mid-1990s at a level where only about half of SSA's children both entered *and* completed primary education, and where less than half of adult women were literate, investment in primary education needed to be given the overarching priority in the Bank's support to most countries in order to promote poverty reduction, greater equity and more democratic societies. This was particularly the case in countries where low primary school enrollment ratios coexisted with open unemployment for university graduates (one in three SSA countries had less than 60% primary school enrollment around 1995); and
- Development of tertiary education is important but, to be effective, public investments in this sector should be made within a policy framework that (i) promotes improved quality of training and research, (ii) adjusts training programs more closely to a country's development needs, and (iii) promotes greater equity in the benefits from public education spending among different income groups.

The World Bank's support for reform and revitalization of higher education in SSA over the last decade has been provided in the form of *analytical work*, *knowledge-sharing* and *lending*. With respect to *analytical work*, the Bank's policy is informed by an increased appreciation of the development contributions that tertiary institutions can make to their countries in the 21st century, a time characterized as the "knowledge society", the "information era", and the "globally competitive economy." The key role played by knowledge and information was examined by the Bank's World Development Report of 1998/99, *Knowledge for Development*, which underscored the contributions that information and knowledge make to economic growth. In it, the need for a "national innovation system" in which universities are key actors was highlighted. Subsequently, this role was further fleshed out by an Independent Task on

Higher Education and Society, jointly funded by the Bank and UNESCO, in its year 2000 report called *Higher Education in Developing Countries: Peril and Promise.* The full justification for the Bank's new policy position is contained in the its 2002 publication, *Constructing Knowledge Societies: New Challenges for Tertiary Education.*

With respect to *knowledge-sharing*, under its country assistance programs the Bank has supported a number of efforts designed to help countries develop higher education strategies, rooted in the national context, but enriched by international knowledge. More broadly, the Bank led for a dozen years the activities of the Working Group on Higher Education, sponsored by the Association for the Development of Education in Africa (ADEA). This was the only one of ADEA's ten Working Groups led and supported financially by the Bank. (In 2002, the leadership of this Working Group was transferred to the African Association of Universities, with continued financial support from the Bank). Under the leadership of William Saint, Lead Education Specialist, this Working Group sponsored a number of knowledge-sharing events and studies (including "Revitalizing Universities in Africa: Strategy and Guidelines", published in 1997). The training conference reported on in this document forms part of this knowledge-sharing effort supported by the World Bank. It seeks to stimulate development of higher education in Africa by ensuring wide dissemination of lessons learned from some of the more successful tertiary level innovations undertaken in Africa during recent years.

Finally, *education lending* is the third instrument used by the World Bank to support higher education in Africa. During the five-year period 1985-89, about 17% of all education lending in SSA was directly for higher education, as compared to 29% for primary education. During the five-year period 1995-99, the corresponding figures were 7% for higher education and 46% for primary education. Thus, following the 1990 Jomtien World Education Conference, calling for universal primary education by 2000, this renewed priority for primary education was clearly reflected in the Bank's lending program. However, while the volume of lending for higher education declined, at the end of the 1990s, the Bank continued to finance higher components in education sector programs in about 20 countries, i.e., in more than half of the countries where the Bank provided direct financial support for education. As indicated above, much of this funding supported the elaboration of higher education development strategies.

In conclusion, the World Bank is encouraged by the many positive trends seen today in African higher education and stands ready to increase its assistance to African countries to strengthen their systems of higher learning. In doing so, the Bank promotes institutional strategic planning, greater institutional autonomy from government, an equal playing field for private higher education, and knowledge-sharing among African institutions on successful innovations. It also supports quality assurance and institutional accountability in the efficient use of public resources, and efforts to ensure that tertiary education responds in a more effective and flexible manner to labor market demands for skilled manpower. Fundamental to this approach has been the Bank's financial support for demand-responsive "innovation funds" that seek to foster positive changes in the institutional culture which surrounds traditional approaches to teaching and learning in tertiary education. This new approach is already manifest in current Bank projects benefiting education in Ethiopia, Ghana, Mauritania, and Mozambique.

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Improving Tertiary Education in Sub-Saharan Africa: Things that Work!

A decade ago, the University of Dar es Salaam (UDSM) was in shambles. Faculty members were miserably underpaid, the library had received almost no new books or periodicals for years, and violent student protests over the poor state of dormitories and classes led to the closure of the university for most of 1990. But today UDSM is seen as a model of self-initiated transformation. It has developed new sources of income, cut costs by farming out non-academic services like catering and cleaning, and invested heavily in better faculty salaries and Internet connectivity.

After emerging from a crippling civil war in 1992, Mozambique concluded that its vast potential riches could be unlocked only by sharply increasing the number of its young people getting a higher education. So recently the country doubled its total spending on education. In an effort to ensure that the investments in higher education are spent in the most effective way, officials organized a series of consultations across the country, where academics, students, business people and non-governmental organizations helped shape the plans for expansion.

In Rwanda, a largely rural country, few people possess technical training, and many of those who did were killed or forced to flee during the genocide of 1994. So since its founding in 1997, the Kigali Institute of Science and Technology has been developing and promoting simple technologies to meet the country's gaping needs. Its foot-powered water pumps help irrigate crops. Its solar electricity units power radios and computers. And its biogas digesters should soon turn sewerage from provincial prisons—which hold tens of thousands of those accused of the killings—into methane gas, saving the prisons much of their huge expenses on firewood, while protecting the environment. Profits from entrepreneurial activities already provide the institute with over-one third of its operating budget.

These cases figure among a growing number of "things that work" within the tertiary education systems of Sub-Saharan Africa.[1] But they are still exceptions. For many tertiary institutions, relentlessly expanding enrollments, coupled with two decades of economic stagnation, have generated a sustained crisis in higher education. Poor pay and deplorable working conditions have led many of the continent's best minds to abandon their universities and often their countries. Numerous institutions receive little budget for equipment, library acquisitions, research activities, or maintenance of buildings. Now, the scourge of HIV/AIDS has compounded these problems, introducing a more deadly type of "brain drain" and diverting scarce institutional resources for health care and death benefits, while under-cutting governmental and family investments in the education of young adults. Yet even in this situation, positive actions by tertiary institutions can be documented and shared.

In the effort to learn from these and other cases of successful innovation, some 150 higher education leaders and policymakers from 26 African countries – 12 French-speaking, 2 Portuguese-speaking, and 12 English-speaking – met in Accra, Ghana on September 22-25, 2003. Their goal was to share experience and exchange good practices on how to confront various obstacles to the improvement of post-secondary education. The conference, *Improving Tertiary Education in Sub-Saharan African: Things that Work!*, was sponsored by the Association of African Universities, the Working Group on Higher Education of the Association for the Development of Education in Africa (ADEA), the Ghana National Council for Tertiary Education, and the World Bank. Financial contributions were also made by the Government of the Norway, the Government of the Netherlands, the Carnegie Corporation, and the Agence Universitaire de la Francophonie.

[1] For purposes of this conference, tertiary education includes universities, polytechnics, and teacher training colleges.

The purpose of this report is to record a number of the innovation experiences presented at the conference and discussed among the participants. These successful efforts offer tangible instances of hope in what is often an otherwise gloomy landscape. But even failed efforts can provide useful lessons. Therefore, the aim of this conference report is to record some conclusions about what is working, and why, in African tertiary education.

During the last few years, a number of African tertiary institutions—and a few governments — have found ways to bring about significant improvements. In the best cases, like the three examples above, determined and enterprising higher education leaders have produced striking results, demonstrating that much can be achieved with limited resources.

In general, successfully reforming institutions have moved simultaneously on two interrelated fronts: they have found ways to improve their financial situation while boosting the quality and relevance of the education they offer. Institutions have increased revenues by such measures as charging fees for some courses and programs, providing paid services to businesses, and engaging in other entrepreneurial activities. Some report significant savings, as well as better results, from contracting out a large part of their non-academic services, like catering, cleaning and grounds-keeping.

Institutions have improved learning conditions by increasing faculty salaries so professors needn't work outside jobs, by instituting mechanisms to monitor teaching hours, and by enabling peers and students to evaluate teaching. They have restocked libraries and begun to develop their capacities to provide information services. They have installed new laboratory equipment and provided Internet connectivity. Often they have made management more effective—in part by transferring responsibilities to faculty or department levels. Successful tertiary institutions have frequently developed new study programs to meet the demands of their countries' rapidly changing economies.

University leaders who have carried out reforms often stress the importance of an institution finding—and "owning"—its own solutions. Typically, changes are designed by an inner circle of reform leaders and the reform agenda takes the shape of a strategic development plan. But an additional, essential component appears to be long and deep consultations with stakeholders—especially faculty members, but also representatives of students, businesses, labor unions, local government, and non-governmental organizations.

Institutions making a concerted effort to reinvigorate themselves have often found a willingness on the part of donors and multilateral organizations to provide additional funding to support specific elements of these strategic plans. After more than a decade of focusing mainly on support for primary education, the World Bank and other donors have, in recent years, become convinced that tertiary education too is a needed component of economic growth and social development, even in the poorest countries.

African higher education wasn't always in a bad state. In fact it got off to an auspicious start during the period of national independence almost half a century ago. Most newly independent African countries saw the establishment of local universities as essential to their plans for economic development, alleviating poverty and closing the gap between themselves and the developed world. In most cases, they had to start from scratch, since the colonial powers left behind few institutions

of higher learning. In 1960 only 18 of the 48 countries of sub-Saharan Africa possessed a university or a university college.[2]

The new institutions were generally of good quality for two reasons. First, most were affiliated with—or sometimes colleges of—universities in the former colonial countries. These European institutions typically supplied many of the faculty members, and also supervised curricula and exams. Second, enrollments were low and the new institutions were relatively well funded by their governments. Africa's young universities were imbued with a sense of enthusiasm and purpose, seeing themselves in the vanguard of nation-building efforts.

Things began to deteriorate in the late 1970s, as Africa began a slide into economic decline. According to the World Bank, regional output per capita dropped from about USD 525 in 1970 to USD 336 in 1997. Terms of trade worsened as prices for primary commodities from Africa fell in relation to the cost of imported manufactured goods. Dictators seized power in many African countries, often mismanaging their countries' economies and stealing from their treasuries. Frequently they had no sympathy for the universities, which traditionally serve as centers of social critique and political opposition. Governments accumulated large debts that had to be serviced—with money that could otherwise have gone for education and other social services.

By the late 1980s, governments began redirecting funding from higher to primary education, in part at the insistence of international lending institutions, which argued, not unreasonably, that with high levels of illiteracy in Africa, money spent on basic education would do the most to alleviate poverty. At the same time, many donors reduced support for higher education, including high cost graduate scholarships, and phased out subsidies for expatriate faculty members teaching at African universities. Moreover, the collapse of communism in the former Soviet bloc brought an end to the generous scholarships that allowed many young Africans to undertake their university studies in Eastern Europe, the Soviet Union, and Cuba. In a vicious cycle, worsening conditions have led many of Africa's best minds to emigrate to the Northern hemisphere, where they benefit from far superior academic facilities and living conditions. Their departure deprives African higher education of its most important resource: local intellectual power.

To make matters worse, declining state support came as tremendous increases in enrollments put added strains on institutions. The data are sketchy. But a task force convened by the World Bank and UNESCO calculated that the number of higher education students in Sub-Saharan Africa increased almost ten-fold over two decades, from 181,000 in 1975 to 1,750,000 in 1995.[3] Even so, a far lower proportion of young people are engaged in tertiary studies in Africa (with the exception of South Africa) than in any other region of the world. In the mid-1990s, less than 4 percent of African young adults were enrolled, compared to 10 percent in all developing countries and 60 percent in industrialized nations.

But Africa's problem is not just low enrollment rates. The continent's weak and poorly developed economies provide too few jobs for graduates, many of whom end up unemployed or emigrating to the richer Northern countries. Unemployed or departed graduates represent a tragic squandering of scarce resources. Part of the cause is that higher education is often not very relevant to the needs of the region. Mostly modeled after European higher education, African systems are evolving rapidly from elite structures educating only a few highly-qualified students, into mass systems of lower

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[2] Sawyerr, Akilagpa, "Challenges Facing Africa Universities," Accra, Ghana: Association of African Universities, 2002. (www.aau.org/english/documents/asa-challenges.pdf).

[3] Task Force on Higher Education and Society, "Higher Education in Developing Countries: Peril and Promise," Washington DC: World Bank and UNESCO, 2000. (www.tfhe.net)

quality. In numerous cases, this expansion has not been accompanied by efforts to develop a range of degree programs better suited to countries' development needs. Often, part of precious higher education budgets might be better spent on shorter programs that train students for identified needs, rather than on traditional programs—often of four, five or six years duration—designed to prepare large numbers of students for white-collar government jobs that don't exist.

The case of the University of Ibadan is typical of the downward spiral of many good institutions as enrollments rose and revenues fell. Founded in 1948, it is Nigeria's oldest, and was one of Africa's most prestigious, institutions. When Nigeria gained independence from Britain in 1960, Ibadan's future looked bright. Many instructors were British, only a small number of top students could attend, and standards were high.

During the oil boom of the 1970s, Nigeria, a member of the Organization of Petroleum Exporting Countries (OPEC), was awash in oil money. "All you had to do was submit a request," says Christian A. Fatokun, a molecular geneticist at Ibadan from 1977 to 1993, "and you got funding" for equipment, research, or other academic needs. Twenty-five years ago, Mr. Fatokun recalls, the university's large residential campus was a place of scholarship and beauty. "The lawns were manicured, hedges were maintained, and there were no electrical shortages."

But petroleum earnings were used poorly and Nigeria soon became caught up in Africa's general economic decline. By the early 1980s, research grants dried up, as did support for travel to international conferences. Once-attractive university salaries were eaten away by inflation until full professors earned no more than US USD 2,000 to USD 3,000 per year. Mr. Fatokun watched as many of his colleagues left the university, and often the country. Others turned to backyard poultry farming or invested in a taxi to supplement their eroded salaries.

"I wanted to continue working as a scholar," says Mr. Fatokun. "But when conditions became almost unbearable and I had a better offer, I quit." He was fortunate to be hired by an internationally financed agricultural-research institute in Ibadan. "Each time I go in there," he says of his old, now-ramshackle university, "I feel really upset."

This pattern has been repeated in country after country. Academic quality falls, and university leaders' attention is pulled away from their core academic mission to finding money to pay salaries and bills, keeping campus buildings in a minimum state of repair, and dealing with frequent strikes and protests by disgruntled staff and students.

But now, after hitting bottom, a few universities are starting to rebound. In the case of Nigeria, the democratic government that took over in 1999, ending 16 years of military rule, announced a jump in total annual support for the 24 federal universities from USD 370 to USD 970 per student. The money went chiefly for a five-fold increase in depressed faculty salaries. For full professors, this meant a raise to roughly USD 10,000 per year in addition to on-campus housing and other benefits.

"Ten years ago most universities were looking down," says Akilagpa Sawyerr, Secretary General of the Accra-based Association of African Universities. "Now most of our universities, except in the war-torn countries, have stopped looking down and some are looking up. A few are actually climbing up."

Perhaps the one institution that best represents this new group of what a partnership of American private foundations has labeled “universities on the move” is the University of Dar es Salaam. It was established in 1961, the same year that Tanzania achieved independence from British rule, as a branch college of the University of London. It became a full university in 1970. In the beginning,

UDSM was a leading intellectual center for those committed to the continent's development along a path of African socialism. Perched on a pleasant, breezy hill 16 kilometers from the city center, the university was an exciting place, attracting scholars from around the world who questioned Western, capitalist ideas and sought to shape an alternative model of development.

But by the mid-1970's, things began to sour. Students and scholars grew dissatisfied with the bureaucratic and non-consultative ways that the university was being run by the non-academics appointed as senior administrators by Tanzania's one-party government of the time. As the country sunk ever deeper into economic crisis during the 1980's, state support to the university plunged. Between 1985 and 1992, funding dropped by more than 40 percent. The institution became run-down, with a bloated, underpaid, and demoralized staff. Many faculty members were forced to take second jobs to survive. The university was closed for most of 1990, following violent protests by students dissatisfied with the poor conditions and the government's dismissive response to their complaints. Similar tales can be told by sister institutions in other African countries.

But amid the gloom, one branch of the university—the Faculty of Engineering—searched for a new path. It was losing faculty members even faster than other academic arms of the university, in part because their skills easily won them better-paying jobs in industry. Responding to this challenge, the Faculty of Engineering began a series of reforms. A first step was to establish a Bureau for Industrial Cooperation to promote consulting work and allow faculty members and their departments to earn extra money.

The Faculty persuaded a few donors—including the overseas development agencies of Germany and Switzerland—to establish a fund to pay for research projects that the university couldn't afford. And to promote the idea of accountability, the Faculty of Engineering started to monitor teaching hours and provide extra pay to those who assumed greater workloads.

Take-home pay for faculty members at the time was about USD 40 a month, a sum that could be doubled or tripled under this new management initiative. Today faculty members earn up to USD 1,100 a month. But university officials and donors worried that improvements in just one part of the institution would not be sustainable. Nor did a piece-meal approach appear sufficient to address institution-wide needs. The only solution, officials concluded, was a systematic attempt to analyze and correct of the problems of the whole university.[4]

So began a long process of institutional transformation. The Vice-Chancellor, Matthew L. Luhanga, a professor of telecommunications from the engineering faculty, and other senior administrators formed a committee to reflect on what was wrong with the institution. The committee produced a report that documented many problems in financing, management, academic performance, and living conditions for students.

The university then began work on a detailed plan to deal with those problems. Every department held internal meetings. A separate body, including all the deans, met regularly. And a steering committee, put in place to oversee the whole process, convened every Friday morning from 8 to 10 a.m. in the Vice-Chancellor's cramped office.

In 1992 the first draft of a strategic plan was presented to a meeting of the university community and foreign donor organizations. At that and subsequent gatherings, there were heated debates, leading to various revisions of the plan to take into account the views of staff, students and other

[4] Luhanga, Mathew L., "The Tanzanian Experience in Initiating and Sustaining Tertiary Education Reforms." 2003. (conference paper available at www.worldbank.org/afr/teia)

stakeholders. The consultations culminated in 1994 with the publication of a final 39-page *Corporate Strategic Plan*, which has been the basic guide for the university's transformation ever since. To help carry the reform agenda forward, as well as to provide monitoring and coordination, the administration established a Program Management Unit, headed by a UDSM professor.

"It consumed a lot of people's time and required a lot of meetings," says Prof. Luhanga, "to get consensus, to get the whole university to own it."

The plan makes clear that the university's mission must shift to meet the profound changes taking place in Tanzania. Until the early 1990s, two-thirds of UDSM graduates were hired by the government or state-owned companies. But faced with a collapsing economy and pressure from international lending institutions, the government opened up the economy to private ownership and foreign investment. The changing labor market required graduates with skills different from those traditionally provided.

"The challenge is to produce a 'job creator,' not a 'job seeker,' " the strategic plan says. To that end, the main goal of education must be "cultivating analytical skills and developing critical thinking." At the same time, more emphasis has been placed on teaching students business and financial skills in order to encourage entrepreneurship.

Curricular reform followed suit. New degree programs have been created, for example, in computer hardware and software, transportation engineering, and public health. "We're trying to cater to the needs of the economy," says Prof. Luhanga, "and to the social needs of the country." UDSM has generated new sources of income by creating evening degree programs in business administration for fee-paying students, and providing technical advice and training to companies and government agencies.

The majority of the university community has now been won over by these improvements. But the process was clearly led by Prof. Luhanga and his close associates. "This has been a revolution from above," says Brian Cooksey, a British sociologist living in Dar es Salaam and co-author of a study of UDSM reforms. "A lot of people at the university have been brought on board gradually by being cajoled and challenged by the top leadership."

The strategic plan calls for optimizing the use of all the institution's resources. At the start of the process, it was determined that classrooms were only used on average one-third of the time. This information justified a decision to substantially expand enrollment. The management also concluded that with 800 academic staff members and just 3,300 students during the 1994-95 academic year, the institution was seriously overstaffed. Some 200 faculty members, deemed academically unproductive on the basis of an institution-wide performance assessment, were dismissed. This did not stop enrollments from more than tripling to 11,000 by 2003-04. The strategic plan calls for further expansion, as Tanzania still provides a higher education to a far fewer portion of its young people than its neighbors, like Kenya and Zimbabwe.

Expansion is placing strains on the institution. In some faculties, classrooms aren't big enough, and some students must sit outside in the tropical air, following classes through slatted windows. Yet in other ways, UDSM's position as a leading center of scholarship is being strengthened. Through it all, traditions have remained. Rows of students still study at concrete tables and benches in the shade of the "degree tree," a giant sandbox tree which earned its nickname because, students say, you earn your degree by sitting under its outspread arms and tackling your textbooks.

Most people at the institution appear to see the reforms as worthwhile, although some faculty members are unhappy with the increased workload due to rising enrollment. But the new approach initially sat badly with a few scholars. One professor of political science told Prof. Luhanga, "I completely disagree with the mission statement; it must have been drafted in Washington, D.C."

One reason for the mistrust, the Vice-Chancellor says, is that UDSM's reforms came at the same time as reforms in Tanzania's banking and financial sectors which had been mandated by the World Bank's sister organization, the International Monetary Fund. Some people thought, wrongly, that UDSM's reforms had also been mandated by the two Washington-based organizations.

But nothing succeeds like success, and it gradually became obvious that UDSM's situation was improving dramatically. The library filled with new acquisitions and was run more efficiently. A new library wing was built to provide more space. With initial assistance from the Netherlands, UDSM decided to invest heavily in information technology. It has installed hundreds of computers and become one of the best-wired African universities outside of South Africa, with most campus buildings connected to the Internet via high-speed, fiber-optic cables. The university has opened air-conditioned Internet cafés that are always full of students e-mailing or searching for scholarship information. To help subsidize development of its own computer infrastructure, UDSM established a wholly-owned private company, UCC (University Computing Center) Ltd, to market Internet services, provide training, and develop and sell software in Swahili—a potentially significant market with some 80 million Swahili speakers in East Africa.

The Law Faculty became the first at UDSM to introduce a web-based platform through which students can access class reading assignments, take exams, submit homework, and participate in class discussion groups. The move was motivated by the expansion in enrollments, meaning that law professors could no longer devote much individual attention to their students. "It's a way of getting around the numbers issue," says Ibrahim H. Juma, Associate Dean of the Law Faculty. "A professor can't talk to everyone, so he'll use an Internet chat room. He'll say: 'From 7 to 8 pm I'll be on my computer, and anyone with questions can log on.' " Still, laments Mr. Juma, "the close contact has been lost."

Donors appear eager to support a rare African institution that gives value for money. About 40 percent of the UDSM budget is now provided by overseas development agencies, mostly from northern Europe. That compares to 20 percent before the start of reforms.

In 1998 Dar assembled a panel of seven senior academics—both Tanzanian and foreign—to carry out the institution's first "academic audit." [5] Their report contained 57 substantive recommendations for improvements in academic programs, teaching, research, consultancy, public service, quality assurance, etc. The university spent the following years in the progressive implementation of these recommendations. At the end of each academic year one or two academic units—a faculty or institute or department—have gone on a retreat to review its academic program. UDSM managers say the audit exercise is useful, and they plan to repeat it every five years or so.

Another major component of UDSM's transformation strategy has been cost-cutting by contracting out a large part of non-academic services. A decade ago, UDSM hosted a large army of cleaners, grounds keepers, cooks, cafeteria workers, attendants, messengers, painters, and carpenters, as well as employees of a university-owned hotel, auto repair garage, and supermarket. These jobs were

[5] Nkunya, Mayunga H.H. and Abel G.M. Ishumi, "Improvements in the Quality of Education: The University of Dar es Salaam's Experience with an Academic Audit." 2003. (conference paper available at www.worldbank.org/afr/teia)

often filled by political patronage, and strict labor laws meant that once someone was hired, they could expect to keep their job for life. By the 1994-95 academic year, the number of non-academic staff totaled almost half the number of enrolled students! They had to be paid month in, month out, whether or not their work was needed.[6]

The long reflection on the university's problems, carried out in the early 1990s, revealed that in addition to being expensive, these large in-house service units had become a terrible distraction. Managing them "diverted the administration from its core mission," says Daniel Mkude, a professor of linguistics who was UDSM's chief administrative officer during the 1990s. The administration "spent too much time putting out fires"—crises caused by inadequate quality of the services, the need to find the money to bail out loss-making units, and the threats of industrial action.

The workers who were slated for dismissal, understandably, protested, sometimes with support from workers' rights' activists outside the universities. But after drawn out negotiations with the various workers' unions, retrenchment agreements were reached which included generous "golden handshakes"—large bonuses in exchange for accepting termination of employment. One foreign donor agreed to pay part of the cost of the retrenchment packages. Government, which had adopted the principle of reducing the bloated public workforce, paid the rest. Between 1996 and 2000, 1,027 non-academic jobs at UDSM were eliminated.

Now private companies bid for contracts to provide the services formerly supplied by the university itself. In the case of cleaning and grounds keeping, UDSM divided its large residential campus into a half-dozen zones, each of which is contracted out separately. Contracts are generally for one year. This approach ensures that companies vying for the contracts compete with one another, knowing that if they do not perform adequately, they can be easily replaced by a company offering better service.

In a few cases, former UDSM employees have formed collectives and won contracts to provide their former services on a private basis. In one case, 25 former cafeteria workers asked to be allowed to continue running one of the campus cafeterias. The university administration advised them to form a company and submit a bid. It also helped them with the business registration process. They eventually won the tender and are making a profit managing a unit that used to employ 80 workers.

In the past, a number of services, including the university hotel, student cafeterias, and the staff canteen, all operated at a loss. In other words, the money they took in did not cover the costs of salaries and materials. By out-sourcing, the university obtains these services at lower cost—and in many cases at better quality. In the case of income-earning services like the hotel, supermarket, and staff canteen, the university now receives rental income. For student cafeterias, however, the approach is a little different. The university has decided to charge only token rent in exchange for agreements to keep student meal prices low.

The university says the policy of contracting out services has been a big success. "The savings appear substantial," writes Mr. Mkude, "partly because the work force used by contractors is much smaller and the salaries of unskilled or semi-skilled labour are much lower that those in the public sector."

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[6] Mkude, Daniel, "Contracting Non-Academic Services to Private Providers: The Dar Es Salaam Experience." 2003. (conference paper available at www.worldbank.org/afr/teia)

In fact UDSM has been so happy with the results that it is considering contracting out more services, including medical care, staff housing, management of on-campus student hostels, maintenance of infrastructure and sports facilities, and some aspects of accounting. However, the university is still waiting impatiently for the passage of legislation (first proposed six years ago!) to give it the greater financial autonomy necessary for more effective management of its resources.

It is worth noting that UDSM decided not to contract out several highly professional services, including printing, publishing, the campus bookshop, and computer services. Instead, they have been turned into limited liability companies wholly owned by the university. This is because these services are both critical to the university and not well developed in Tanzania's private sector. According to Mr. Mkude, "The purpose of hiving-off these units from the corporate structure of the university is to give them greater autonomy to operate efficiently and compete effectively without being hampered by institutional policies that are not business-minded."

Mr. Mkude's advice to other universities considering a similar policy is: "Do it systematically, not in an ad hoc way. It should be part of a strategic plan, so every one can chip in."

This is sound advice. Some institutions, which have tried contracting out services only to find themselves hampered by government-imposed restrictions, have had disappointing results. For example, when universities in Zimbabwe faced frequent work stoppages by non-academic staff, the government urged institutions to outsource their non-academic services. But there was a catch: the authorities insisted that the workers be re-organized into private, cooperative companies, and that they be awarded the contracts on a non-competitive basis.

In the mid-1990s, the University of Zimbabwe did just that for a number of its services, including catering, cleaning and grounds keeping. A couple of years later, Midlands State University tried the same thing. In both cases, the change brought little if any benefit. But neither university could proceed as they would have liked. "Unfortunately," says one university officer, "unlike at Dar es Salaam, we couldn't fire our workers. We had to go with new companies made up of the original workers. To be frank, they haven't made any profits or saved us any money."

Reducing staff numbers is usually an expensive proposition, especially if a university approaches the problem in a humane way and negotiates liberal severance packages. UDSM was fortunate to have been able to persuade one donor and the Tanzanian government to pay much of the costs. The University of Witwatersrand, one of South Africa's leading institutions, had to absorb the costs itself. Yet it is convinced the move was worth it.

A major restructuring of the university undertaken in 2000 included a downsizing of non-academic staff and dismissal of more than 600 workers. Patrick FitzGerald served that year as director of *Wits2001*, as the university's restructuring program was dubbed. He says the process started with a review of almost every university function, often with the help of outside consultants.[7] Reports of these reviews were presented in forums where academic and non-academic staff, and students, were represented. Suggestions and proposals made at these meetings were studied, and the forums were then reconvened for final comment. The resulting recommendations were then sent to the university management, which generally implemented them as presented.

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[7] FitzGerald, Patrick, "Successes and Failures of Restructuring, Decentralization and the Implementation of a Cost Centre Approach at the University of the Witwaterstrand." 2003. (conference paper available at www.worldbank.org/afr/teia)

There was opposition. For three months daily protests by the staff unions crowded the foyer of the main administration building, sometimes supported by students. But Mr. FitzGerald says the administration "was nonetheless able to win the propaganda battle by clearly demonstrating the financial and efficiency rationale for outsourcing/downsizing and pledging that savings realized would be invested in three main areas, namely library and information technology development, student facilities and services, and academic salaries."

According to Mr. FitzGerald, the severance packages negotiated with staff representatives "proved highly expensive for the university. However the performance improvements brought about by the new service providers stunned supporters and critics of *Wits2001* alike, as realization dawned of how poor (and how costly) previous service arrangements had been. For example, a clean university was experienced for the first time in most people's memory." In the end, he adds, "huge savings" were realized.

The retrenchment exercise was only part of the larger *Wits2001* restructuring program. The reforms at Witwatersrand and at Dar es Salaam were both motivated by a realization that the institutions had become worryingly unresponsive to the changing needs of the societies around them. More immediately, both sets of reforms were prompted by the need to do more with less, in the light of falling state support.

But these two transformation efforts have taken place in very different environments. Tanzania in the early 1990s had begun liberalizing politically and economically after having been a one-party state with a largely state-run economy. Higher education was very little developed; by the middle of the decade, less than one percent of Tanzania's young people received a higher education. During the same time, South Africa, to the great relief of its citizens and the rest of the world, had achieved a peaceful, negotiated transition from Apartheid to a multi-racial democracy. It is the continent's most industrialized economy, with a well-developed higher education system. Fully 17 percent of its young people received a higher education in the mid-1990s, although the figure was much higher for whites than for non-whites.

Common features nevertheless characterize the two transformation processes. For example, creating greater efficiency—and accountability—of academic and service units, and making academic units more flexible so they could better respond to the needs of their fast changing countries.

The overriding problem that Witwatersrand faced was an academic structure that had grown to more than one hundred departments. This structure was unwieldy, overstaffed, difficult to manage or hold unaccountable, and slow to respond to new demands of society. What's more, numerous instances of wasteful duplication of courses occurred among departments with similar specialties.

The solution Witwatersrand came up with involved abolishing many departments and replacing them with 33 mostly-interdisciplinary "schools." The new structure promotes interaction among academics of different disciplines and the development of new degree programs involving varied specialties, such as urban studies, rural development, and others.

The restructuring also included the devolution of a considerable degree of management responsibility to five new faculties and 33 new schools. Faculties have received greater financial responsibility and now do their own hiring. This "has massively cut red tape and inordinate delays previously experienced in appointing staff," according to Mr. FitzGerald. He adds, "Certainly accountability has increased and non-performers who used to hide in the obscure corners of the old

disciplinary departments are now mercilessly exposed by the School workload models, as well as by the scrutiny of a Head of School who now must meet his/her own strategic and performance objectives."

Because Witwatersrand had tried and failed to carry out major restructuring several times during the 1990s, the university leadership decided this time to establish a small, dedicated team to see the transformation through. The position of director of *Wits2001* was externally advertised and Mr. FitzGerald, a professor and former ANC activist, was hired in January 2000 to fill it. A senior manager at deputy-registrar level was seconded to join him. Administrative and secretarial assistance was provided as was a budget for such things as consultancies, computer equipment, printing, workshops and other consultative events.

Among the tasks assigned the office was to make sure staff and students were kept informed of the developing restructuring plans and their implementation. The university felt that the wider public also needed to feel a stake in the changes. So the office carried on an active press campaign aimed at involving the media in coverage of the changes.

At the same time, a committee headed by the Deputy Vice-Chancellor was established to give the director of *Wits2001* guidance, legitimacy and support. In addition, an Academic Planning and Review Committee was established for each of the five newly created faculties, staffed with representatives of outgoing and new faculties, departments, and programs.

Although many of the circumstances were different—for one thing, Witwatersrand is considerably bigger than UDSM—several common factors were crucial to the success of the transformation programs at both institutions:

- Strong leadership, committed to guiding their often skeptical institutions through wrenching changes;
- The establishment of formal mechanisms to coordinate, support, and monitor the restructuring; and
- Consultative mechanisms to involve staff, students and the wider community of stakeholders, seek their ideas, and keep them informed about—and hopefully supportive of—the plans and the benefits expected.

The National University of Lesotho (NUL) provides a third example of a recent, but promising, self-initiated transformation. The NUL faces its own challenges. Yet its reform experiences confirm the basic lessons of reforms at UDSM and Witwatersrand.[8]

Lesotho is a small, mountainous country completely surrounded by South Africa. In terms of the development of its higher education, it is closer to Tanzania: only two percent of Lesotho's young people were receiving a higher education in the middle of the 1990s.

Like UDSM and Witwatersrand, NUL was jarred into action by a growing realization that it was increasingly unable to meet the needs of the society it was meant to serve. Low enrollments and other signs of stagnation had already prompted education officials to order several independent studies of the university's problems during the 1980s and 1990s. They all found that the institution

[8] Mahao, Nqosa Leuta, "Towards Curriculum Relevance: The Reform Experience of the National University of Lesotho." 2003. (conference paper available at www.worldbank.org/afr/teia)

suffered from significant inefficiencies, a cumbersome and outmoded managerial system, and a lack of entrepreneurial spirit. But nothing much was done to correct these deficiencies.

At the end of the 1990s the university council ordered yet another external audit, this time following pressure from the academic staff union, which was angry over alleged mismanagement and corruption by senior administrators. By then the university was feeling new pressures: its position as the sole provider of higher education was being challenged by industry and private groups which provided training of a type perceived to be more appropriate to the world of work. In addition, it became clear that the university could not expect an increase in funding from the government.

The report, produced by the international auditing firm, Ernst and Young, was jolting. It said the institution faced a stark choice: either a far-reaching change of direction, or terminal marginalization.

Shocked by these conclusions, the university council, at a special meeting in August 2000, decided to appoint a Convenor to spearhead the university's transformation efforts. Shortly thereafter, a strike by the staff unions forced the departure of the Vice-Chancellor. He was replaced by one of those who led the calls for reforms: the President of the academic staff union. The union's Secretary General became the Pro-Vice-Chancellor. The appointment of new senior managers gave real impetus to the restructuring process. (An internal university investigation later confirmed there had been large-scale, high-level corruption, which then became the subject of a criminal investigation).

A task team was put together and it organized unprecedented consultations with stakeholders, including students, faculty and support staff, government ministries, the two houses of Parliament, the private sector, and non-governmental organizations.

Each of the university's more than 40 departments was asked to put forward proposals on how they could trim costs and become more effective. As in past attempts at reform, the results were disappointing. "They each produced a report," says Nqosa Leuta Mahao, the Pro-Vice-Chancellor, "but they only tinkered a bit. This wasn't going to yield any results."

So the new management took matters in hand and pushed through a much more radical restructuring program. It was formally presented in the *Strategic Plan 2002/07*, which was approved by the Senate and Council respectively in August and September 2002. The objectives laid out in the plan include: the introduction of relevant and marketable study programs, diversification and modularization of programs, introduction of more practical elements into study programs, and the modernization of teaching through the adoption of best practices.

Like Witwatersrand, NUL decided on a wrenching merger of faculties and departments in the interest of increased efficiency and accountability, eliminating duplication of courses while integrating research and teaching units, which up to then had been separate. The former eight teaching faculties had ranged in size from 1,000 students to only 17 students! They were merged into three mega-units, to which considerable administrative and financial responsibilities have been devolved.

This merging of small units "was probably the most hard-fought contest in the whole transformation process," according to Prof. Mahao. Many faculty members were skeptical of the move and fearful for their jobs or their positions of authority.

To address these concerns, senior administrators tried to make the process "transparent and inclusive to the extent practicable," says Prof. Mahao. "Three key initiatives were put in place. At one level monthly Management Forums incorporating deans of the traditional faculties were instituted with the specific aim of involving leadership at this level into driving the process. To avoid possible grounding of the transformation process by vested interests, Interim Executive Deans were appointed to preside over the merging faculties parallel to the traditional deans with the formers' remit limited to transformational issues only. At another level space was created for the active participation by faculty staff in all matters pertaining to configuration of new schools, governance issues at faculty/institute level, and program design. These measures ensured that a critical mass of stakeholders with a buy-in in the process existed and drove it."

As university's new structure solidified, the Interim Executive Deans were soon replaced by fully empowered ones. Like Witwatersrand, NUL concluded that managerial authority should be streamlined by replacing the traditional collegial-style deans with executive ones who are given greater responsibilities and are appointed by—and answerable to—the senior management.

Like UDSM, NUL decided that a more effective use of its resources would allow a sizeable increase in enrollment. NUL's plan calls for a three-fold expansion, from 3,500 students in 2001 to 10,000 in 2007. To improve access, a remedial course, named the Bridging Program, was established to beef up the English and mathematics competencies of candidates who otherwise qualify for admission.

The university leadership recognizes that increasing enrollments will add considerable strain on top of the deterioration that staff morale has suffered in recent years. "One of the legacies of managerial neglect over the years," writes Prof. Mahao, the Pro-Vice-Chancellor, "is the discernible decline in the work ethic of staff, especially with regard to conscientiousness to duty, research output, being available for consultations with students, poor preparations for lessons, etc."

An official workload policy is now being rigorously enforced, following the determination that workloads were very unevenly distributed, with some faculty members spending considerable time in jobs outside the university. A Code of Ethics for faculty members was approved by the University Council, and peer and student assessment of lecturers is being introduced.

In light of Lesotho's history and unique characteristics, the university has designated three key areas in which it wants to build up knowledge specialization:

1. Water and Environmental Management (many of the rivers flowing into South Africa and Namibia rise in Lesotho).
2. Tourism and Cultural Studies (identified as a potential income earner).
3. International Relations and Conflict Management.

To help equip graduates to contribute to the growth of democracy and prosperity in Lesotho, two courses have been introduced which are compulsory for all students: Computer Skills and Life Skills. The latter includes aspects of human rights, democracy, gender issues, and HIV/AIDS.

Even successful reform is no guarantee against disruptions instigated by students. NUL was forced to delay the start of its 2003-04 academic year after student demonstrations turned aggressive over non-payment of government stipends. In 2001 UDSM expelled all of its 7,000 students after their demands for more financial aid led to violent protests. It then readmitted most of them six weeks later, but only after each wrote a letter promising to refrain from unauthorized protest.

The challenge of carrying out a meaningful institutional reform is multiplied when the task embraces the renovation of a country's entire higher education system. Mozambique and Ethiopia are both attempting just that, and their difficulties and successes to date offer useful insights.

After years of war that drained the public treasury and paralyzed economic life, both countries are today among the world's poorest. In Ethiopia less than 1 percent of young people receive a higher education. In Mozambique the portion is, shockingly, only 0.2 percent, despite a quadrupling of enrollment from 4,000 in 1990 to nearly 17,000 students in 2002.

But in both countries the restoration of peace, and moves toward greater democracy, have created favorable conditions for the development of tertiary education. In Mozambique, particularly, the end of the civil war in 1992, followed by good governance, have brought dramatic improvements. Per capita income has doubled over the past decade to about USD 300 per year. Both countries have recently demonstrated their commitment to human resource development by substantially increasing their spending on higher education. And the top higher education official appointed by both countries is part of a new generation that has started turning up in such posts across Africa: relatively young people, from university backgrounds, who are committed and impatient to push forward with higher education reform.

Mozambique began a concerted effort to improve its post-secondary education with a national meeting in 1997, three years after the country's first-ever multiparty elections. This led to the creation of a national commission, which in 1999 undertook a baseline study of the small higher education sector and developed a strategic vision for its development. In January 2000, the Ministry of Higher Education, Science and Technology was created to lead these efforts forward. [9]

According to Lídia Brito, the minister, Mozambican authorities were by then convinced that sustained development of higher education was not only urgently needed, but also feasible. Several external factors were favorable to such a move:

1. Creditor countries and lending institutions were offering debt relief if Mozambique increased its overall spending on education,
2. Significant opportunities for regional higher education cooperation had opened up in southern Africa,
3. A high level of interest and willingness to provide support and assistance was voiced by the national business community, multilateral agencies and overseas donors.

As part of the process of planning the development of the higher education system, the authorities decided to hold consultations across the country, where local stakeholders could express their ideas. "We wanted to make sure," says Ms. Brito, "that it would be a system that could meet the needs of the country as a whole, as well as the particular needs of the regions."

Minister Brito and her colleagues organized ten regional consultations in May and June 2000, at which they held separate sessions with people from each of Mozambique's ten provinces. About ten people came from each province, representing existing higher education institutions, students, businesses, regional government, and civic associations. At each meeting, a large map of the province was spread out on a table.

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[9] Brito, Lídia, "The Mozambican Experience: Initiating and Sustaining Tertiary Education Reform." 2003. (conference paper available at www.worldbank.org/afr/teia)

Each province had been asked to prepare its own development plan, including its training needs. The ministry brought out brightly colored Lego blocks. The blocks, placed on the map, provided a simple way of visualizing what kinds of institutions were needed and where. Each color represented a different discipline (green was agronomy, red was medicine, white was teacher training, etc.). One block stood for one year of training. So, for example, a one year agricultural extension training program was represented by one green block placed on the town where the province wanted it; a six-year medical program by six red blocks. "We were asking our kids to lend us their blocks," says Ms. Brito, "but we were afraid we wouldn't have enough."

Of course the provinces asked for much more than there were resources to fund. But the consultations helped the ministry attain its goal of planning a rational—and equitable— use of available resources. At the end of each consultation, a ministry official took a digital photo of the province's map. The photos were later put together in a Power Point presentation showing the entire country's higher education needs.

Soren Nellemann, a World Bank education specialist closely involved in Mozambique's efforts, says these and other consultations contributed significantly to the good design and success the strategy has shown so far. "Moreover," he says, "the consultations built a broad base of support" for the reforms. Minister Brito adds that the consultations helped her team identify "champions" for change. "Champions need to be identified and encouraged at all levels," she says. "Champions are people who are interested in the process, who can bring knowledge to it, and who are able to mobilize others around the vision."

The results of the regional consultations were presented in July 2000 to a national seminar with 300 participants from all the provinces, higher education institutions, government ministries and parliament. Out of this gathering came the *Strategic Plan for Higher Education in Mozambique 2000-2010*. It was approved by the government's Council of Ministers the following month. Among its main goals:

- An expanded and more diversified higher education system (with new universities, academies and polytechnic institutes) offering different degrees, but sharing a new common credit system and supported by a new national quality assurance system.
- A shortening of the basic university degree from six to three or four years, and the development of additional post-graduate programs.
- Curricula reform intended to make study programs more practical and oriented to the needs of the economy.
- The outlines of a new funding policy for higher education, intended to be more rational, and based more on performance outcomes.
- Establishment of a Quality and Innovation Fund to provide grants on a competitive basis to public and private institutions. (There are currently four public institutions and five private ones). The money is for training, research, and institutional capacity building and innovation, with special attention to multidisciplinary projects. The fund started distributing grants in 2003.
- Establishment of Provincial Fellowship Programs administered at the provincial level, to enable more young people from outside the capital to pursue higher education. Three provinces were implementing the program on a pilot basis by mid-2003.

The ministry then began a revision of the country's higher education legislation, which dated from 1993, to bring it in line with the new goals. Mozambican legal experts studied the higher education laws of several other countries, especially Portugal, Spain, Brazil and South Africa, to see how their laws tackled various issues. The Paris-based International Association of Universities (IAU), a part of UNESCO, was of particular help. When a country's higher education law was not accessible on the World Wide Web, the IAU found the requested sections and send them by e-mail. Proposed legislative changes were discussed with stakeholders at three regional consultations covering the northern, central and southern portions of the country.

Mozambique's new higher education law was adopted in November 2002. It substantially increases the autonomy of public institutions, giving them a large degree of control over curricula matters, finances, hiring, enrollments, even legal ownership of their land and buildings. But at the same time it seeks to make them more accountable for the quality and relevance of their programs.

Perhaps surprisingly, some resistance to the reforms came from Mozambique's leading institution, Eduardo Mondlane University (EMU). EMU had already won much international praise for reforms it had set in motion internally several years earlier. But now the institution appeared reluctant to submit to a national plan drawn up by a small, new ministry.

Minister Brito and her colleagues went to great lengths to win over those skeptical about the reforms. They promoted university seminars with the help of the "academic champions" they had earlier identified. And they tried to interest the mass media in the issues, informing them of developments, and inviting them to all the consultations as stakeholders in their own right.

Ms. Brito says the approach paid off. A lively and rather well informed public debate about the issues has emerged. Gradually people have begun to accept the concept of university accountability. "Recently there was a reported case of fraud in university exams," she says. "Three years ago people would have asked what the government was doing about it. Now the newspapers are asking what the Rector is doing."

Mozambique is benefiting from a USD 60 million World Bank loan to help develop its higher education sector, currently the largest World Bank loan to an African country for that purpose. As is typical for World Bank loans for African nations, this one has very easy terms; no interest is charged and only about one-third of the principal will have to be repaid. Mozambique also receives considerable assistance for higher education from Sweden, the Netherlands, the Ford Foundation, and others.

"We look to our partners not only as financiers," says Ms. Brito, "but also as sources of knowledge. We invited them to all the debates. They had ideas to contribute. But most of all they had to understand and believe in what we were doing. By the end of the day the plan became as much theirs as ours." The minister says the baseline study of the state of higher education carried out in the late 1990s was a crucial element enabling Mozambique to plan the sector's development. "If you don't know where you are going, then the donors' ideas become impositions."

Ethiopia too has been struggling to make its higher education more responsive to the country's needs. The Derg, the hardline Marxist military junta that overthrew Emperor Haile Selassie in 1974 and was itself overthrown in 1991, treated the universities alternately to repression and neglect. The result, according to Dr. Teshome Yizengaw, Vice Minister for higher education at

Ethiopia's Ministry of Education, was a precipitous fall in the quality of the country's already outmoded higher education.[10]

The consequences are grave in a country in which almost two-thirds of the population of 64 million is illiterate, and famine periodically visits with its train of suffering and death. "With their out-of-date orientation and worn out traditions," says Dr. Teshome, "higher education institutions in Ethiopia have deprived our country of the opportunity of getting out of poverty and underdevelopment."

Shortly after assuming office in 1994, the newly elected government began examining how to increase access, make curricula more relevant, and bring about more effective institutional management. A national conference at Debre Zeit in 1996 identified some of the key shortcomings of the system. Steps have been taken to revise curricula, particularly by obtaining and adapting relevant curricula from other countries. Faculty members are being sent abroad, especially to India, for advanced training, and expatriate professors have been invited to make up for a shortage of qualified teaching staff. Over 380 university lecturers, mainly from India, served during the 2002-03 academic year. Student evaluation of faculty has been introduced. State funding for all levels of education has increased significantly.

Until the year 2000, Ethiopia had just two universities. Subsequently, four new ones were established in different regions of the country. Private higher education institutions are now encouraged, and some 37 private colleges and institutes have been established.

Like Mozambique, Ethiopia organized a series of consultations with stakeholders across the country, and the education ministry has tried to get the six public universities and five colleges to implement a number of reforms. However, the results have been spotty. Twice a year the heads of the higher education institutions have been invited to discuss the reform agenda at the ministry in Addis Ababa. "Some of them took it seriously;" says Dr. Teshome, "and some of them simply took the action plans back to their university and just filed them. The government is making lots of investment in the sector, but it has not been getting enough response."

Since the summer of 2002, the ministry has tried to force the pace. An important step in this process was the June 2003 approval of new higher education legislation by the national parliament. The Ministry organized several conferences of university administrators and ordered institutions to produce progress reports on how they were carrying out the required reforms. Most of the eleven tertiary institutions dutifully reported progress. But, in a situation reminiscent of the resistance at Eduardo Mondlane University in Mozambique, Addis Ababa University (AAU), Ethiopia's leading institution, balked. "The administration told staff this was a government initiative being imposed on the universities," says Dr. Teshome. The AAU's top administrators were promptly replaced by the Ministry.

After years of repression and turmoil in Ethiopia, observers speak of a deep resignation and apathy among Ethiopian tertiary institutions. The suppression of a peaceful student protest in April 2001 only reinforced the perception that disagreements are resolved by force. When students at Addis Ababa University refused to end a strike supporting their demands for an independent association and the removal of police from the university, security forces invaded the campus and attacked them. A riot ensued in the city, during which 41 young people were killed by soldiers and police.

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[10] Teshome Yizengaw, "Transformations in Higher Education: Experiences with Reform and Expansion in Ethiopian Higher Educaiton System." 2003. (conference keynote address available at www.worldbank.org/afr/teia)

"The Ministry's vision is a good one," says one western education specialist who has closely followed developments in Ethiopia. "But they don't have adequate capacity to manage the reforms, so the tendency is to try to dictate." This expert adds, "what they mean by consultations is: you call in the stakeholders, tell them your idea, ask if they have any questions, and then tell them to follow it."

Yet many countries appear less committed than Ethiopia to a deep reform of their higher education systems. Senegal, for one, seemed to be committed in the mid-1990s but has since backed away from the challenge. At the time, its largest institution, the University of Dakar, was in bad shape. It was run-down, over-crowded, and plagued by frequent strikes by faculty members and students. The French tradition of automatic university admission for all high school graduates who want it—practiced in most of francophone Africa—had led to a heavily over-populated campus. At Dakar the problem was compounded by the presence of a number of persons enrolled as students for years, who did not attend classes, but lived in student residences—sometimes with their families—and benefited from various university services.

To tackle these problems, the government, with support from the World Bank, organized a "national consultation on higher education," with stakeholders from across the country. The exercise appeared very successful at identifying what was wrong with Senegal's higher education and pointing toward solutions, including the imposition of greater financial discipline on the country's two universities, which were eating up large sums from state the education budget.

Senegal then negotiated a USD 26 million loan with the World Bank to finance the identified reforms. The loan ran from 1996 to 2003, but the Bank has been very disappointed with the results. The Bank even suspended the loan for 18 months and ended up withholding USD 2 million altogether, after Bank officials concluded Senegal was not implementing the agreed measures. This backsliding appeared to be linked to a change of government halfway through the loan's disbursement period. In particular, Bank officials noted, Senegal had not taken what would have been a highly unpopular step of reducing student stipends, a major drain on public resources.

Observers say that higher education in most of francophone West Africa is burdened with problems similar to those found in Senegal: a rapid expansion of enrollments and high costs per student (driven by welfare entitlements) that have left systems rundown and impoverished. Moreover, few serious efforts have been undertaken to make study programs more relevant to the needs of the countries where they are situated. Stronger programs in such areas as agronomy, tourism, applied sciences, and technology, among others, would probably help support local economies. And limited resources might be better used if there were a more diversified tertiary system, with study programs of varying lengths. But most students remain attracted to traditional long degree programs in the humanities, law and the social sciences—where high unemployment plagues these graduates. The need for more conscious attention to innovation and reform is evident.

In many countries, policymakers face Solomon-like choices when deciding how to divide up limited education budgets among primary, secondary and tertiary education. This is especially so in countries with very low literacy rates. In Niger, for example, less than half of all children receive even a primary education, and less than 10% of women can read and write. In such countries, a strong argument can be made against continuing to funnel large sums from the state budget into long, tuition-free university programs in the humanities, and in favor of re-directing part of these funds to developing shorter, less costly programs more geared to local needs. [11]

[11] Diallo, Bouli Ali, "Improving Women's Participation in Higher Education: The Case of Abdou Moumouni University of Niamey." 2003. (conference paper available at www.worldbank.org/afr/teia)

With enrollments across Africa on a seemingly unstoppable upward trajectory, many countries there—as elsewhere in the world—are thinking about asking students and their families to contribute to the costs. Education authorities are increasingly coming to see such "cost sharing," as it is often called, as the only way to rescue foundering tertiary systems and provide a basis for sustainable improvements. Such moves are almost always opposed by students, and frequently become the subject of political controversy. As noted above, various African nations already have some experience with volatility of this issue.

Ethiopia has just instituted a "graduate tax," according to Dr. Teshome, the Vice Minister. Under it, students are required to pay for a portion of their education costs, but only after they have finished their studies and hopefully obtained employment. Such schemes exist in a few developed countries; Australia's Higher Education Contribution Scheme is often held up as a model. But many observers are skeptical whether such a system can work in a poor country without functioning income tax or social security systems. Dr. Teshome admits it will be hard to keep track of graduates' earnings in the informal sector, but he says that when graduates find civil service jobs, or employment with larger companies, it should be possible to oblige employers to report their earnings. Nevertheless, the Ethiopian government's willingness to experiment with new financing strategies is indicative of similar attitude changes in a growing number of countries.

In Nigeria the federal universities expect to be granted increased autonomy under proposed legislation, which should include the right to introduce tuition fees. Nigeria's university leaders are virtually unanimous that such fees are necessary to improve the poor state of their institutions. They point to the growth of fee-charging at generally lower-quality private institutions as proof that many young people are willing and able to contribute to the cost of their education.

University leaders are frustrated that the government has shirked from taking responsibility for such a move, which would be politically unpopular. Prof. Abdullahi Mahadi, Vice-Chancellor of one of Nigeria's biggest federal institutions, Ahmadu Bello University, says he expects tuition payments to become the second-biggest source of university support after the government. But, he adds, "It will be virtually impossible to charge fees unless the government makes a pronouncement on it."

His fears appear well founded. The University of Ibadan was closed for the first half of 1999 by a student strike called to protest the introduction of so-called "municipal fees." Those fees, set at USD 50 per year, were to pay for water, electricity, and other services that had been disconnected several times when the institution could not pay its bills. The strike ended with a compromise agreement to reduce the fees to USD 20.

Similar scenarios have been repeated across Africa. When the administration of Abdou Moumouni University, in the Niger capital of Niamey, announced a doubling of registration fees to a total of USD 20, students staged a two-month strike at the start of the 2002-03 academic year. "There is a French tradition," says the Rector, Prof. Bouli Ali Diallo, "that studies should be completely free." In the end, the fee increase remained, and students returned to their classes.

The worst way to introduce new fees appears to be by announcing them from one day to the next without consulting stakeholders or trying to explain the need for—and expected benefits from—such a move. A couple of years ago the University of Togo faced a budget crisis triggered by a reduction in state support. The rector responded by increasing annual student fees overnight from USD 10 to USD 100. Some 40 percent of students promptly dropped out. "It was disadvantaged students who couldn't pay and had to leave," says Komlavi Franciso Seddoh, director of

UNESCO's Division of Higher Education, and former rector of another Togolese institution, the University of Lomé. "It should have been done gradually." The remaining students closed the university with a strike for several months. In the end, government authorities asked the university to cut the new fee in half, and most of the students returned.

According to Bruce Johnstone, Professor of Higher and Comparative Education at the State University of New York at Buffalo, "cost-sharing is being embraced by more and more governments throughout Sub-Saharan Africa—although slowly and cautiously, and frequently limited to its easier and more politically acceptable forms. At the institutional level, small fees are being introduced, food services are becoming self-supporting, fees are being charged for evening or summer or other 'special' courses and programs, and facilities and equipment are being offered for rent." [12]

More ambitiously, a growing number of institutions, largely in East Africa, have introduced parallel sections for fee-paying students, alongside the traditional government-sponsored students who do not pay. This strategy has raised significant revenues for the universities that have adopted it. But it remains controversial. Probably the most striking example, says Prof. Johnstone, is the adoption by Makerere University, in Uganda, "of an aggressive policy " of recruiting large numbers of fee-paying students. The policy, alongside improved management and introduction of demand-driven courses, has had a tremendous impact, according to a World Bank/UNESCO Task Force: "During the 1990s, Makerere moved from the brink of collapse to the point where it aspires to become again one of East Africa's pre-eminent intellectual and capacity-building resources, as it was in the 1960s." [13]

Since its decision to recruit fee-paying students in the early 1990s, Makerere has grown extremely rapidly. Undergraduate enrollment increased from 3,361 in the 1993-94 academic year, to 22,000—the large majority fee-paying—in 2003-04. One consequence has been increasingly overcrowded facilities.

Prof. Sawyerr, the AAU Secretary General, acknowledges that this policy has indeed saved the institution, turned paltry faculty wages into some of the best on the continent, and allowed the modernization of many of the teaching programs. Yet he says the institution's apparent new focus on earning revenues through a continuous expansion of fee-paying programs, is worrying. The improvements have been achieved "in a manner that seems to threaten the quality of the teaching and learning environment." There are signs, he adds, "of a decisive move towards the privatization of a public institution."

The worst of all worlds is when an institution develops a way to earn extra revenue only to have state respond by lowering its support by the same amount. "This is a big disincentive to earning money," says Prof. Ngwabi Bhebe, the Vice-Chancellor of Midlands State University in Zimbabwe, which has opened parallel fee-paying sections.

In Rwanda, the Kigali Institute of Science and Technology experienced the same governmental response. "We protested to the president [of Rwanda, Paul Kagame]," says Silas Lwakabamba, rector of the institution, "and the ministry relented."

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[12] Johnstone, Bruce, "Higher Education Finance and Accessibility: Tuition Fees and Student Loans in Sub-Saharan Africa." 2003. (conference paper available at www.worldbank.org/afr/teia)

[13] Task Force, *ibid.*

"Essentially, one has to make a deal with government," says Dr. Johnstone, the professor of comparative education from the State University of New York. "You have to be able to convince the Ministry of Finance that it is in the interest of government policy to allow the university to keep the extra revenue in order to stop the terrible problem of faculty members having to work second and third jobs."

The University of Nairobi in Kenya opened its first parallel sections for fee-paying students in 1998. Since then its regular students have periodically protested against the policy. But the approach has been immensely useful in raising badly needed additional revenues, and the university has drawn some lessons about how best to apply the policy.

The university decided to act in the mid-1990s after a six-month faculty strike against poor pay and conditions, followed by a reduction in government support, left the institution in a severe financial crisis. As a first step, a wholly university-owned company was established to carry out business activities as a way to get around restrictions on entrepreneurial activities by public universities.

In 1998 the University of Nairobi first recruited paying students were into its MBA program. There was much demand, and paying students were soon recruited into Law, Commerce, Education, Medicine, Pharmacy, Dentistry, Engineering, and Computer Science. By the 2003-04 academic year, the university admitted more so-called "Module II" (i.e., fee-paying) students (14,880) than "Module I" (i.e. non-paying) students (13,000). Revenue from student fees now accounts for 33 percent of the university's total income.

Yet many Module I students oppose the recruitment of candidates with lower admission scores, but with money to pay for their studies. They went out on strike for two months against the new practice at its inception. In 2000, Module I students trying to chase away paying students fought running battles with police on the university's 1950s campus where tropical greenery blends with African architecture. "These protests are inevitable," says Kenneth Goga, a graduate student in international studies. "It is necessary for students to keep pressure on the university not to dilute academic standards."

Prof. Crispus Kiamba, Vice-Chancellor of the University of Nairobi, says the monies generated through fees have been used in a "transparent and credible" way, and this has helped lessen opposition to the practice.[14] The largest part of the earnings has gone to increasing the salaries of faculty members. Funds have also be used to address various other university needs, including finishing several construction projects started with government funds and then stalled, including classrooms, lecture theaters and student residences. Decisions concerning use of the money are made on the basis of "intensive discussions at many levels of the University," says the Vice-Chancellor.

Prof. Kiamba admits, however, that often "the university management had perhaps not carried out adequate consultations with and involved students and staff." A recent decision by Kenya's newly elected government, that staff and student representatives must be included on all university boards and councils, should help. Yet the University of Nairobi is still feeling its way. Recently the Law Faculty decided to increase sharply the number of paying students it enrolls. But the university senate decided that the Law Faculty had not adequately consulted with students and staff, and sent the proposal back to the Faculty for further consideration.

[14] Kiamba, Crispus, "The Experience of the Privately Sponsored Studentship and Other Income Generating Activities at the University of Nairobi." 2003. (conference paper available at www.worldbank.org/afr/teia)

Students often have another reason to oppose the introduction of parallel fee-paying sections. They see it, probably correctly, as the thin end of a policy that will sooner or later oblige all students to pay for their studies. Although introducing fees for some—but not all—students is politically easier (generally it provokes much less protest), many educators believe that fees for all is a more equitable policy.

Prof. Johnstone believes that with African institutions in dire need of more funds, a system requiring some students to pay "is vastly superior to no tuition [payments] at all." Yet like a growing number of educators, he says the best system is one that requires all students to pay, while providing grants or loans to those who need assistance. Systems that require fees from only some students have a number of disadvantages, according to Prof. Johnstone:

1. "They tend to reinforce…the underlying ideology of entitlement that continues to reject the very notion of cost-sharing—even though senior policymakers in most of these countries know that many parents are, in fact, already paying significant tuition fees through the fee-paying tracks as well as even greater fees to the growing number of private institutions."
2. "They are, at least arguably, inequitable in that the students most likely to attend 'free'—that is, at the expense of the taxpayer—are the children of the most advantaged, many of whom could and would pay a modest tuition fee. As Sawyerr notes from an unpublished study by Musuri: "An oft-cited danger of the introduction of fees at Makerere is an increase in the gap between the 'haves' and the 'have-nots' in access to higher education. Larger numbers have been admitted, but access has not broadened."[15]
3. "The differences in actual academic abilities, and even more so the differences in academic *potentials*, between the lowest scoring of the 'winners' (i.e. those who just make it into the limited *fee-free* places) and the highest scoring of the 'losers' (i.e. those who score just below the cut-off point on the entrance examination and can attend only by paying fees) is probably slight and possibly immaterial. Expressed another way, it is nearly certain that there will be considerable overlap around this *admission margin*, with the best of the fee-payers inevitably outperforming academically the worst of those attending free from fees."
4. "Finally, depending on the validity and integrity of the system of selection for the limited *fee-free* places, the very considerable stakes involved in getting one of the fee-free places introduces the possibility (indeed, almost the inevitability) of corruption somewhere in the process."

According to Prof. Johnstone, when China introduced tuition fees at its public institutions several years ago, it first adopted a policy in which only some students were required to pay. However policy makers soon concluded that having all students pay for their studies would be more reasonable. So, in the country's characteristically no-nonsense approach, the policy was simply changed without further ado.

Mozambique plans on introducing a tuition fee for all students. "Our goal in the long term," says Ms. Brito, the higher education minister, "is to raise tuition fees (currently all students at public institutions pay approximately USD 100), know the true costs, eliminate inefficiencies, and have a loan and fellowship scheme so that people are not excluded because they come from poor families."

[15] Sawyerr, *ibid*, p. 57.

Unit-cost studies are currently being carried out at Mozambique's four public institutions to determine the true costs of providing education in the different disciplines after eliminating such inefficiencies as lecturer absenteeism and poor maintenance of equipment. Minister Brito envisages that tuition payments, and loan schemes, will be established first in Masters and Doctoral programs, since graduate students in Mozambique are typically already employed and earning fairly good salaries. She is also trying to persuade the country's banks to establish special savings accounts into which parents could contribute over a number of years towards the eventual cost of their children's university education—a practice that is common in the United States.

Prof. Johnstone offers the following list of observations about what works and why, when policymakers decide to ask students or their families pay part of the costs of their education:

1. "Sub-Saharan African universities and other tertiary level institutions need to supplement their limited governmental, or taxpayer, revenues with revenues from parents and students."
2. "These revenues should take the form both of user charges for governmentally- or institutionally provided lodging and food, and of tuition fees to cover a portion (say, one-quarter) of institutional costs of instruction."
3. "Given the inevitable political resistance to cost-sharing, a multi-year progression of stages should be presented, with further shifts of costs on to parents and students clearly supplemental to governmental funding, and tied as much as possible to: (a) improvements in the quality of higher education, (b) expansion of opportunities and enrollments, and (3) extension of participation and accessibility to hitherto under-served populations."
4. "Universities must actively and transparently continue seek efficiencies (even at some dis-accommodation and pain) that minimize the per-student costs of instruction without jeopardizing quality."
5. "The imposition of a tuition fee should be accompanied by a program of means-tested grants, drawing on clearly identifiable and verifiable characteristics (i.e. proxies for income) such as parental occupation and educational levels, prior schooling, and type of housing."
6. "A single-track, up-front tuition fee (albeit one that can vary by institution and/or by program) is preferable to a dual track system that rations a small number of tuition-free places according to measured academic preparedness—and thus inevitably rations according to the social class of the aspiring students."
7. "Politically-acceptable language and euphemisms for tuition fees such as 'contributions' may be necessary, but should not have the effect of substituting a larger (albeit deferred) contribution from students for an up-front contribution (a tuition fee) expected from parents (to the limit of their financial abilities to pay). Similarly, an expected student contribution via a student loan program (income contingent or otherwise) is probably a good step, and it may be a way to accommodate an up-front tuition for some students. But it should not be adopted as a wholesale substitute for an upfront tuition to be collected wherever possible from parents or extended families."
8. "The setting of tuition fees should be as de-politicized as possible. Countries should consider an independent (albeit politically accountable) board, buffered from both the government and the universities and other tertiary institutions, to establish the base year tuition fee[s] and also to establish annual increases thereof."

9. “A student loan program should be designed to collect (according to the present value of the reasonably-expected repayments discounted at the government’s borrowing rate) something close to the amounts lent—less losses from defaults and other purposefully designed *subsidies* or *repayment forgiveness* features.”
10. “Student loan programs must be equipped with legal authority to collect, technology to maintain accurate records, collectors who can track borrowers and verify financial conditions, advisors and repayment counselors in the universities, and the ability to enlist both the government’s tax-collecting authority and employers in the collection of repayments.”
11. “An income contingent repayment mode should not be employed unless incomes can be reasonable verified. If income contingency is politically necessary, it should not be the ‘default’ repayment obligation, but rather an optional means of payment that requires the borrower to demonstrate that he/she can discharge the repayments by paying a percentage of earnings from a single employer that represents the a dominant earnings stream.”
12. “Mechanisms need to be added to the repayment process, especially if the repayment mode is a conventional fixed-schedule mode, to accommodate borrowers whose earnings are low, either temporarily or permanently. In short, a conventional loan needs the same kind of genuine *low earnings protection* that is presumed to follow by definition from an income contingent form of repayment obligation.”
13. “A loan program needs to have a collection agency that is viewed as professional, incorruptible and technically expert. Universities and other eligible tertiary level institutions must be enlisted as partners in the program, especially in impressing upon the student recipients that loans are legally enforceable obligations that must not be taken lightly or used in excess, and in keeping track of the borrower’s whereabouts, at least during the in-school years.”

"The worst thing you can do," adds Prof. Johnstone, "is to give the loan and expect that in six, seven, or eight years, the student will voluntarily come back and say: 'How can I pay it back?' That's not going to happen." There are, on the other hand, steps that can improve repayment rates. In the late 1990s, Prof. Johnstone points out, the United States cut the default rate on its student loans from 15 percent down to about 5 percent. This was accomplished by such measures as: exit interviews with university counselors upon graduation, repayment deferral if the graduate is unemployed, enlisting parents as loan guarantors, and the cutting off of federally-guaranteed loans to students at low quality private institutions.

Several African countries have established loan systems in recent years. In most cases, however, few loans were ever repaid. "The African landscape is littered with the bones of failed loan programs," says Prof. Johnstone. "But usually one can see the reasons in poor management or conception."

When tertiary institutions have embarked on major reform, one leg of their strategy has typically been greater entrepreneurship. They have found ways to sell training, research, and computer services to companies and public administrations. And they have often turned loss-making non-academic services, like cafeterias and bookstores, into self-sustaining businesses that sometimes even generate small profits for the university.

One institution that has taken a lead in entrepreneurial activities is the Kigali Institute of Science and Technology (KIST). Founded in 1997 as Rwanda's first higher education institution of

technology, it soon found a number of niche markets where great demand was expressed for services it was positioned to provide. Many of Rwanda's trained people were killed or fled during the genocide of 1994, leaving large unmet needs for specialist skills, particularly in high-tech areas. In addition, Rwanda's largely rural economy could benefit from many types of appropriate technology.

"Realizing that the curricula for conventional universities did not result in immediate solutions for community-related problems in Rwanda," says Engineer Albert Butare, academic Vice-Rector of KIST, "and realizing that no models existed elsewhere that could be adapted, KIST tried right from the onset to combine conventional teaching with appropriate technology transfer initiatives. Heads of departments tried to come up with different initiatives within their respective areas."

"Some technological initiatives started to attract market attention, particularly renewable energies, wastewater management and food-processing. KIST management decided to consolidate these efforts under one unit, the Centre for Innovations and Technology Transfer." [16]

The Centre has developed an impressive list of appropriate technology products: low-cost hand and foot-powered water pumps, capable of lifting water as much as 9.5 meters for irrigation purposes in rural areas without electricity; rainwater-harvesting systems for areas without adequate piped water; a dual crop dryer that uses either sunshine or biomass (such as rice husks, sawdust or firewood); solar water heating systems; more efficient cooking stoves; and biomass plants in which the resulting methane gas replaces almost two-thirds of the firewood otherwise needed for cooking or water heating.

Rwanda has numerous prisons, which are crowded with persons still awaiting trial on charges of participating in the genocide that took the lives of an estimated 800,000 citizens. KIST is constructing bio-latrines in several of them, to render this waste less harmful to the environment, while producing methane gas to replace part of the USD 1 million worth of firewood that the government must purchase for its prisons each year.

According to Eng. Butare, "President [Paul] Kagami has said to schools and prisons, 'why are you wasting money with expensive firewood; why don't you talk to these people at KIST?' Just that, helps us a lot."

Before the establishment of KIST, Eng. Butare worked at two different technology institutes in Tanzania. He says that scientists there also developed good types of devices representing simple, appropriate technology. But he notes, some of their prototypes stayed on the institutes' shelves and never got much use. "Typical academics!" moans Eng. Butare, shaking his head. "They didn't go into the community to see how the devices were used or might be marketed."

At KIST, "our Department of Entrepreneurship works hard to market developments," he explains. Feedback from the institution's community development officers, many of whom are women, has led to various modifications. Lighter vegetable oil presses, for example, have been designed for easier use by women. The officers also work with rural women's groups, helping them improve their businesses with the aid of simple technological improvements. As a result, some groups have started supplying restaurants with fruit juices, dried mushrooms, tomato concentrates, jams, and honey by introducing better food-processing devices and techniques that guarantee more consistent quality.

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[16] Butare, Albert, "Income Generating Activities in Higher Education: The Case of Kigali Institute of Science, Technology and Management." 2003. (conference paper available at www.worldbank.org/afr/teia)

"People come to us from local groups," says Eng. Butare, "and tell us, for example, 'we have passion fruit. Do you have some food-processing technology that can add value to it?' " With Rwanda's economy poorly developed, and few jobs available, the Institute's students also receive training in basic business skills so that they will be better equipped to start their own businesses.

On the more hi-tech side, KIST established an Information and Communication Technology Centre, which has become the country's second biggest Internet service provider, as well as a major supplier of software, World Wide Web services, and training. Another major source of income is the provision of paid part-time studies for working adults. In 2002 KIST generated 35 percent of its budget from its various entrepreneurial activities. By 2008, this figure is projected to surpass 50 percent.

But is it good for an educational institution to focus so intently on business? "The idea that pursuing aggressive income generating activities in an academic setting will compromise the quality of education is not correct," insists the Vice-Rector. "This is an old, conservative idea."

In fact, if a common theme can be found among the case studies presented at this regional conference, it is probably this: that traditional university policies and practices are losing their relevance in the context of rapid social and economic changes in the 21st century, and that tertiary institutions in Africa, much like their counterparts around the world, are actively in pursuit of the innovation and modernization necessary for them to meet the evolving expectations of their societies and their governments. To this end, African universities are challenging long-established procedures and successfully devising “things that work” as they find new ways to meet their historic mission of teaching, research and community service. The intent of this conference has been to recognize, support and accelerate this positive process.

AGENDA

A training conference on tertiary education in Sub-Saharan Africa

Improving Tertiary Education in Sub-Saharan Africa: Things that Work!

Accra, Ghana
September 22 – 25, 2003

www.worldbank.org/afr/teia

MONDAY, SEPTEMBER 22

6:30 – 8:00 p.m. ***Official Opening.*** Short welcoming statements by the four host representatives followed by the official opening by the Minister for Higher Education (Ghana), the Honourable Elizabeth Ohene. Venue: Homowo Conference Centre, Adae Kesie conference hall.

8:00 – 9:30 p.m. ***Welcome Reception***. This social reception includes a non-commercial "book bazaar" for distribution of institutional publications on African tertiary education. Venue: "Ghanaian Village" (seaside), La-Palm Hotel.

TUESDAY, SEPTEMBER 23

Session 1:
8:45 – 10:30 a.m.

Keynote Address: Venue: Adae Kesie conference hall.

Introductory Remarks: Birger Fredriksen, Lead Adviser on Education, Africa Region, World Bank.

Purpose of the Conference and Introduction of Keynote Speaker: Akilagpa Sawyerr, Secretary General, Association of African Universities.

***Keynote Speech*:** "Transformations in Higher Education: Experiences with Reform and Expansion in the Ethiopian Higher Education System." Dr. Teshome Yizengaw, Vice Minister for Higher Education, Ethiopia.

10:30 – 11:00 a.m. ***Coffee/Tea Break***

Session 2:
11:00 – 12:30 p.m.

Political Economy of Change in Tertiary Education

Chair: Jamil Salmi, World Bank

- Lusophone System: Mozambique (Lidia Brito)
- Anglophone System: Tanzania (Mathew Luhanga)
- Francophone System: Burkina Faso (cancelled due to non-submission)

12:30 – 2:00 a.m. ***Lunch Break*** ***Venue: Bali Hai Restaurant***

Session 3: ***Improvements in the Climate for Innovation***
2:00 – 3:30 p.m.

Chair: Narciso Matos, Carnegie Corporation

- Report on Higher Education Innovations in Sub-Saharan Africa (Njuguna Ng'ethe, University of Nairobi)
- Ho Polytechnic, Ghana: Promoting Innovation (George Afeti)
- Université de St. Louis, Senegal: Promoting Innovation (Ndiawar Sarr)

3:30 – 4:00 p.m. ***Coffee/Tea Break***

Session 4: ***Discussion Groups (3): Stimulating Innovation***
4:00 – 5:30 p.m.

Group 1: Conference Hall (simultaneous translation), Chair: Boulli Ali Diallo
Group 2: Odwira Room (English only), Chair: Jamil Salmi
Group 3: Kundum Room (English only), Chair: Narciso Matos

WEDNESDAY, SEPTEMBER 24

Session 5: ***Improvements in Management Efficiency***
9:00 – 10:30 a.m.

Chair: Arnold van der Zanden, Government of the Netherlands

- Institutional management: Contracting non-academic services to private providers (Daniel Mkude, University of Dar es Salaam).
- Institutional management: Decentralized cost centers (Patrick Fitzgerald, University of Witswatersrand).
- System management: Use of a funding formula to promote efficiency improvements (Pundy Pillay, South Africa).

10:30 – 11:00 a.m. ***Coffee/Tea Break***

Session 6: ***Improvements in Financing***
11:00 – 12:30 p.m.

Chair: Pierre Seya, African Development Bank

- Overview on finance and accessibility: (Bruce Johnstone, Higher Education Financing and Accessibility Project)
- Case study of Cost-Sharing: University of Nairobi (Crispus Kiamba)
- Case Study of Income Generation: Kigali Institute of Science and Technology (Albert Butare).

12:30 – 2:00 p.m. ***Lunch Break*** ***Venue: Bali Hai Restaurant***

12:30 – 1:30 p.m. Meeting of teams from Southern Africa: *Announcement of Zambezi Forum on Higher Education* (Peter Materu, World Bank).
Venue: Bugum Room.

Session 7: ***Discussion Groups (3): Financing and Management***
2:00 – 3:30 p.m.

Group 1: Conference room (simultaneous interpretation), Chair: Pierre Seya
Group 2: Odwira Room (English only), Chair: Arnold van der Zanden
Group 3: Kundum Room (English only), Chair: Birger Fredriksen

3:30 – 4:00 p.m. ***Coffee/Tea Break***

Session 8: ***Four Parallel Panels*:**
4:00 – 5:30 p.m.

1. *Improvements in Women's Participation*
Chair: Penina Mlama, FAWE. Venue: Odwira Room

- Overview paper (Grace Bunyi, Kenyatta University, Kenya)
- Université Abdou Moumouni, Niger (Bouli Ali Diallo)
- Université de Cocody, Côte d'Ivoire (Denise Houphouet-Boigny)
- Malawi Polytechnic (Flossie Gomile)

2. *Institutional Policies for Managing HIV/AIDS*
Chair: Alice Sena Lamptey, WGHE. Venue: Kundum Room.

- Overview paper (Barnabas Otaala, University of Namibia)
- Kenya Case: Highridge Teachers College (Margaret Ojuando)
- AAU AIDS Toolkit (Dhianaraj Chetty)

3. *Improvements in Regional Cooperation*
Chair: Prof. Komlavi Seddoh, UNESCO. Venue: Conference room. (simultaneous interpretation)

- The Network Approach: Programme du Troisieme Cycle Interuniversitaire – PTCI (Karamoko Kané, Burkina Faso)
- Cape Higher Education Consortium (James Leatt, South Africa)
- Institute Francophone de Entrepreneuriat, Mauritius (Oumar Karamoko Ndiaye, Senegal)

4. Brain Drain: Key Management and Retention Challenges
Chair: Demissie Habte, World Bank. Venue: Bugum Room.

- Africa and the Challenge of Staff Retention: (Kuzvinetsa Dzvimbo)
- Situation Analysis: Health Professions in Africa (Delanyo Dovlo)
- Discussant: Lola Dare.

THURSDAY, SEPTEMBER 25

Session 9:
9:00 – 10:30 a.m.

Improvements in Access / Lifelong learning

Chair: Kuzvinetsa Peter Dzvimbo, African Virtual University

- Distance education: Open University of Zimbabwe (Primrose Kurasha)
- Development of dual mode capability: University of Mauritius (Azad Parahoo)
- Lifelong learning programs (Fiona Bulman, University of Natal, South Africa)

10:30 – 11:00 a.m. ***Coffee/Tea Break***

Session 10:
11:00 – 12:30 p.m.

Improvements in the Quality of Education

Chair: Paul Effah, Ghana National Council for Tertiary Education

- Pedagogical Skills Development: (Ernesto Mandlate, Eduardo Mondlane University)
- Academic Audit: (Mayunga Nkunya and Abel Ishumi, University of Dar es Salaam)
- Curriculum Reform: National University of Lesotho (N. L. Mahao)

12:30 – 2:00 p.m. ***Lunch Break*** ***Venue: Bali Hai Restaurant***

Session 11:
2:00 – 2:30 p.m

Improving Access to Electronic Information.

Chair: Christine Kisiedu, University of Ghana.

- Report of the findings of seven case studies on bandwidth access. (Teklemichael Tefera, Addis Ababa University)

Session 12: ***New Variations on the African Development University***
2:30 – 4:00 p.m.

Chair: Dzingai Mutumbuka, World Bank

- Kigali Institute of Science and Technology, Rwanda (Silas Lwakabamba)
- University of Development Studies, Ghana (John Kaburise)
- Catholic University of Central Africa, Cameroon (Oscar Eone Eone)

4:00 – 4:30 p.m. ***Coffee/Tea Break***

Session 13: ***Discussion Groups (3)***
4:30 – 5:30 p.m.

1. *Access/Lifelong Learning*.
   Venue: Kundum Room; Chair: Kuzvinetsa Peter Dzvimbo.
2. *Quality of Education*.
   Venue: Odwira Room; Chair: Paul Effah.
3. *New Variations on the African Development University*.*
   Venue: Conference Room; Chair: Dzingai Mutumbuka.
   (*simultaneous interpretation)

Session 14: ***Concluding Panel: "What was most useful to me"***
5:30 – 6:30 p.m.

Chair: Akilagpa Sawyerr, Association of African Universities

[short reflective statements by leaders of three country teams]

Statement from Lusophone Country Team: Mozambique
Statement from Francophone Country Team: Cameroon
Statement from Anglophone Country Team: Zambia

Concluding remarks: Dzingai Mutumbuka, World Bank.

6:30 – 8:00 p.m. *Farewell Reception* hosted by the Ghana National Council for Tertiary Education. Venue: Poolside.

CONFERENCE PARTICIPANT LIST

Burkina Faso

Brahima Ouedraogo, journalist, Radio Nationale du Burkina

Burundi

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