

Tertiary Distance Learning in Africa

**October 20-22, 1997
Saint-Louis, Sénégal**

The eleventh meeting of the Working Group on Higher Education (WGHE) established under the Association for the Development of Education in Africa was held in Saint-Louis, Sénégal on October 20-22, 1997. The meeting was planned and carried out as a joint activity with the Association of African Universities (AAU). The Université Gaston Berger de Saint-Louis graciously hosted the event.

The main theme of the meeting was “Tertiary Distance Learning in Africa.” Discussion was organized around two major surveys of current tertiary level distance learning activities, one for francophone and lusophone Africa and the other for anglophone Africa. The former was generously undertaken for the meeting by the French Secrétariat d’Etat à la Coopération, while the latter was contributed by the Commonwealth of Learning. In addition, ten other short papers were presented. The meeting included a presentation by the Université Gaston Berger on its strategic development plan, and the now traditional consultative meeting concerning the Association of African Universities activities and work program. The meeting agenda appears as Attachment 2.

The meeting was attended by 43 persons (see Attachment 3), including representatives of 14 international development partners, representatives of 9 African universities and distance learning institutions, 3 international higher education experts, 3 AAU staff, and delegations from the Government of the Gambia, the Senegalese Ministry of National Education, and the Université Cheikh Anta Diop de Dakar.

The Rector of the Université Gaston Berger, Prof. Ahmadou Lamine Ndiaye, opened the meeting and welcomed the participants on behalf of his young university, which opened in 1990. He emphasized the interrelation and mutual dependencies of the various levels of education, and summarized the important contributions of higher education. Among these, teacher training, curriculum development, policy analysis, performance evaluation, and educational research were highlighted. Rector Ndiaye also recounted the causes and consequences of the university crisis in Africa, and summarized the roles and contributions of both the AAU and the WGHE to these challenges. He concluded by underscoring the main messages of *Revitalizing Universities in*

Africa: Strategy and Guidelines, particularly the value of participatory strategic institutional planning as the most effective response.

Prof. Narciso Matos, Secretary General of the AAU, offered his welcome to the participants and expressed his appreciation to the UGB organizing committee for the excellent meeting arrangements. He stressed the importance of promoting higher education quality and relevance, as well as institutional capacity building, in support of Africa's economic and social development.

The WGHE coordinator, Dr. William Saint of the World Bank, echoed these expressions of welcome and appreciation. He briefly summarized the 7-year history of the WGHE. He saw the Group's substantial research and publications on African higher education and consensus building around promising approaches like strategic planning as major contributions. He concluded by stressing the importance of the meeting theme on distance learning, noting that it holds the potential to increase access to tertiary education in Africa at acceptable levels of quality and cost.

Strategic Development Plan - Université Gaston Berger

The UGB strategic development plan was presented by Prof. Ndiawar Sarr, Vice President of the University Assembly. The university was established in 1990, inaugurated in 1996, and currently enrolls 2,100 students. It is organized around four teaching and research institutes: applied mathematics and informatics; economics and management; law and political science; arts and social sciences. The Université Gaston

Berger is intended to be a development oriented university that can eventually address the particular economic, social, and agricultural problems of the sahelian region. Multidisciplinary studies are encouraged and there is a strong emphasis on entrepreneurship training.

In contrast to most universities in francophone Africa, students are selected through a competitive admissions procedure. This practice has rewarded the university with student success rates of 70% to 80%, thus promoting cost-effective education.

As the result of strategic planning undertaken last year, the university has defined its mission as an information resource center for the community, the region, and the nation. To this end, it plans to computerize library resources, establish an information sharing network based on Internet, and offer network subscriptions to the surrounding community. A proposed national (and eventually regional) center for research and training in multi-media education would act as the arm for university extension activities in support of teacher training, improvements in pedagogy, and regional business activities. A UNESCO chair has been established to support the information technology aspects of this plan, and the university statutes have been revised to facilitate the university's mission. To improve institutional management, a small institutional development unit will be set up to track student performance, to monitor the evolving needs of local labor markets, and to build an alumni support network for the university.

AAU Consultative Meeting

The AAU Secretary General distributed copies of the Association's work program,

audited accounts, and draft annual report for 1997. He requested comments and feedback on the content and format of the latter. Participant reactions suggested that the report format is acceptable, but that the document might contain more information.

Prof. Matos highlighted the transition of the AAU's old core program begun in 1993 to a new one started in mid-1997. He noted that the AAU is moving from a series of discrete projects towards an integrated and strategically grounded program. He then summarized new developments as incorporated into this new work program.

First, considerable emphasis will remain on development of university *leadership and management* in the months ahead, but attention will shift from the training of chief executive officers to the senior managers who support them. Second, a new initiative will seek to promote the *quality and relevance* of higher education programs by fostering dialogue on approaches and instruments for quality assurance and performance monitoring. The search for a viable way of promoting centers of excellence forms a second thrust of this undertaking. Third, as the result of recent discussions with the Forum of African Women Educationalists and several donors, it appears possible that the AAU may be in a position to hire a program officer to oversee the design and provision of *gender sensitivity* programs for its member universities. Finally, an AAU proposal to analyze the role and contributions of African universities within overall national education systems remains without funding for the moment.

Prof. Matos explained that AAU staff exchanges would henceforth be used only to reinforce core areas of the work program, such as quality assurance or gender sensitivity. Likewise, the higher education management research program will be more closely integrated into the leadership and management development program by using the research results to prepare case studies and simulations for the training of senior university managers.

In the following discussion, the necessity of revitalizing graduate degree programs in African universities was stressed as a sustainable response to the region's needs for capacity building in training and research. The practice of overseas training in donor countries is no longer a feasible or sustainable solution.

In closing, the Secretary General summarized four specific AAU activities for which funding is sought. One was a regional survey on current practice and lessons learned in inter-university collaboration for graduate training programs. This would be a possible discussion paper for the next WGHE meeting. The second was to build the AAU's own capacity to promote and support quality assurance among its member universities through staff training, a survey of existing quality assurance practices, and a small fund to enable intra-regional technical assistance in this area. The third was to establish an Internet-accessible, bi-lingual data base on African higher education at the AAU. (WGHE members subsequently supported the use of funds available to the Working Group for this purpose.) The fourth was greater donor support for the existing AAU staff and student exchange

program, which henceforth will be used to reinforce the AAU's main program themes.

Box 1. THE CASE OF MADAGASCAR

Distance learning has a long history in Madagascar. It began prior to independence through cooperative programs with French institutions. The country's first president actively supported this initiative, and the country's first faculty of law was established as a result. National educational reform undertaken in the 1980s recognized that the demand for tertiary education far exceeded supply. This led to the decentralization of university campuses, continued development of distance learning, and the creation of a national center for distance learning in 1992. At the University of Antananarivo, 8,000 out of 20,000 students are engaged in distance learning. Today the country possesses 20 regional distance learning centers. Audio visual materials are now being used to complement written course content. In 1996 radio cassettes were first used with live facilitation by disciplinary specialists in the regional centers. First cycle diplomas are recognized as equal to the equivalent university diploma. For the second cycle a differentiated degree is awarded (based on stronger vocational content) which is recognized for employment in the public service.

Tertiary Distance Learning in Francophone and Lusophone Africa

Mr. Pierre Faugère, on behalf of the French Secrétariat d'Etat à la Coopération, introduced the analytical survey of distance learning experience in francophone and lusophone Africa which the Secretariat had generously commissioned for this meeting. The presentation was made by Ms. Régine Thomas, author of the study.

Ms. Thomas explained that her report was based on an extensive literature review and a follow-up questionnaire survey distributed to institutions in 27 African countries. She made field visits to Côte d'Ivoire and Burkina Faso. An Internet search was also conducted.¹

An analysis of the responses indicated that only two francophone countries--Madagascar and Mauritius--have enunciated national policies on distance learning in place. In a number of other countries, in spite of long experience with distance learning, there is no national policy.

Distance learning programs pursue different goals in different countries. The most common use is for the training and upgrading of teachers in primary and secondary schools. As a means of delivering university level education, distance learning is much less commonly used. In this area the Congo appears to be the most experienced, having provided correspondence courses throughout the sub-region from 1970 to 1990. Madagascar increasingly employs distance learning in the education of first-year university students. The University of Abidjan has experimented with satellite-linked training in math, information science, and the sciences provided by French universities.

Among those institutions responding to the survey, correspondence courses have been the most common method of instruction.

¹ Régine Thomas, *Formation à Distance au niveau de l'enseignement supérieur dans les pays d'Afrique francophone et lusophone*, with Jean Valérien, Paris: Secrétariat d'Etat à la Coopération, Direction du développement, August 1997.

These practices, which in some cases involved little more than the mailing of lecture summaries to students, are gradually being abandoned due to their limited effectiveness. Growing use is being made of specially prepared distance learning materials associated with a teacher/facilitator who guides periodic group discussions.²

Box 2. THE CASE OF DJIBOUTI

Djibouti, with a population of 550,000, is too small to support a national university. However, it is using distance learning to build its capacities in the education sector. Distance learning is being used to upgrade primary school teachers, and to offer vocational education. It has established Internet sites in both areas which allow teachers to consult by e-mail with advisers in French universities. In 1996 two-year post-secondary program for science and math teachers was launched and results have been encouraging. Future plans call for the creation of a distance learning training center and the establishment of a national pilot experience linked to the World Bank's Africa Virtual University, with initial offerings in economics, management, and information science.

The use of telematics for tertiary distance learning is limited but expanding. The TELESUN program in Cameroon is action research designed to test and validate a system of televised multimedia science teaching in which five European universities collaborate with the University of Yaoundé. The FORST (Formation à la recherche en Santé du Travail) program, launched by

McGill University in Canada, is piloted by Benin in four other francophone countries. It is based on a distance learning strategy reinforced by sustained communication between instructors and students via the Internet. The RESAFAD program, established by French Cooperation in six francophone countries, provides a specialized Internet-based support network in methodologies for the design, implementation, and dissemination of distance learning materials and products. In Djibouti, televised distance learning is used to train teachers of mathematics, supported by Internet information sharing and staff exchanges with a partner university in France.

Capacities for the development of distance learning materials and programs are quite limited. Specialized training centers for distance learning exist only in Madagascar and Mauritius. However, Togo and Congo are now setting up university based distance training programs. Côte d'Ivoire is conducting a feasibility study in this area.

Among the programs reviewed, success is clearly linked to several factors. Fundamental among them are the existence of an articulated national policy on distance learning, support for distance learning by the nation's political leadership, and the recognition of distance learning degrees by the public service in their assessments of employee applicant qualifications. Other important factors include the availability of professionally trained distance learning staff to manage the program, the complementary use of several different kinds of media, and the existence of follow-up and support programs for learners to reinforce teaching.

² UNESCO, AUPELF, and the Agence de Coopération Culturelle et Technique ("Agence de la Francophonie") are reportedly preparing an inventory of all existing distance learning course materials available in the French language.

Not surprisingly, the main difficulties encountered by programs tend to be the absence of the very factors which promote success. These include the absence of an accepted national policy, the lack of high level political support for distance learning, no formal recognition of distance learning degrees within the country, inadequately trained distance learning staff, insufficient management autonomy in terms of control over program staff and budget, and poor domestic infrastructure (e.g., roads, postal system, telecommunications).

The future prospects for distance learning in Africa are broadly optimistic. Interest in the field is expanding rapidly as governments and institutions struggle to expand enrollments under severe budget constraints. Conditions for expansion appear particularly conducive in Côte d'Ivoire and Burkina Faso. Concurrently, political leaders are becoming more aware of the potential uses of distance learning to boost the quality of teaching in basic education, to offer learning opportunities to disadvantaged adults, and to extend education services into the more remote areas of their countries. As telecommunications infrastructure steadily improves, experience with the Internet is growing. This is also nurtured by various specific programs such as RIO, the Leland Initiative by USAID, UNITAR, REFER, RINAF, and Healthnet. In the specific area of tertiary distance learning, the World Bank's African Virtual University and AUPELF's Francophone Virtual University are pilot projects that bear watching.

In conclusion, awareness of the potential of distance learning as an effective delivery system for higher education in Africa is growing rapidly among African political and

educational leaders, but more slowly among donor agency staff. It appears certain that distance learning will become a major component of African tertiary education in the decade ahead. Yet the development of distance learning in Africa is likely to be quite different from experiences with open universities and similar undertakings in the north. In Africa, it is possible that tertiary distance learning may exist in the absence of a national university, or it may be highly decentralized, or it might be based on multi-country cooperation in meeting common interests. Incipient cooperation already exists between Mauritius and Madagascar. The potential for joint efforts between Côte d'Ivoire and Burkina Faso is evident. Distance learning clearly will have an important role in Africa, but this role is not yet very well defined.

Tertiary Distance Learning in Anglophone Africa

A companion survey of 150 [?] tertiary distance learning institutions in anglophone Africa was presented by Prof. Peter Kinyanjui of the Commonwealth of Learning (COL), which had graciously undertaken this study at its own expense as an in-kind contribution to the WGHE meeting. He noted considerable similarities between the two studies in terms of their principal conclusions. But he explained that time had not permitted the survey responses to be analyzed and organized into a data base, and he proposed that the WGHE take on this responsibility.

Prof. Kinyanjui began by explaining that many distance learning programs have grown out of the traditional universities as

efforts to address problems of access, equity, and cost-effectiveness. A range of institutional models for delivery have emerged from these experiences, including single mode distance learning universities (e.g., the University of South Africa); dual mode universities (e.g., universities of Nairobi and Zambia); dedicated open universities (e.g., Tanzania, Zimbabwe); single-purpose teacher education institutions (e.g., VISTA in South Africa, the University College of Education of Winneba in Ghana); private commercial institutions (e.g., Rapid Results College), and consortium arrangements (e.g., African Virtual University, COLISA in South Africa). He observed that interest in consortia approaches is growing.

In this context, the Commonwealth of Learning has assisted African nations in the training of specialized staff, design of national programs, and the development of local teaching materials. The COL's counterpart for francophone Africa is the *Consortium International Francophone pour la Formation à Distance - CIFFAD*, which is sponsored by the l'Agence de la Francophonie (ACCT).

Prof. Kinyanjui stressed that the role of government is essential to success in this area. Political leaders need to appreciate and value distance learning as a delivery alternative. Greater investment in the training of distance learning specialists is needed. Attention to measures for promoting quality assurance in this expanding field are clearly required, as are means for determining the equivalence of degrees.

It appears that teacher training is most effectively carried out on the job using

distance learning techniques. This allows integration of theory and practice, and can reduce the time in residence required to produce a teacher.

In concluding, Prof. Kinyanjui emphasized the explosion of interest in distance learning among the anglophone countries of Africa. As evidence of this, he stated that the University of Namibia has recently decided to become a dual-mode institution, a Botswana College of Distance Education was established this year, and the Open University of Zimbabwe was created a few months ago.

Discussion. Lively discussion followed these two presentations. Participants were eager to understand the achievements and limitations of these distance learning experiences, the extent of dependency on foreign experts and institutions, the comparative educational outcomes between traditional and distance learning students, and particularly the costs of this delivery mode. They also inquired about the role of the new ADEA Working Group on Distance Education/Open Learning.³

In response, the presenters underscored the failure of governments and donors to invest sufficiently in staff training and capacity building, and the consequent absence of a critical mass of distance learning proponents on the continent. Research on comparative educational performance of students suggests that there is generally little difference between distance learning and traditional students. The actual costs of

³ Established in April 1997 and coordinated by the Tertiary Education Commission of Mauritius (fax: 230-212-6473; tel. 230-212-8986).

distance learning in Africa have not generally been studied, and there is clearly a need to do this. As one reference, the unit cost per student per year in Madagascar is roughly USD 40. Another reference is the British Open University, where unit costs are about one-third those prevailing at traditional universities. In all cases, the speakers stressed, distance learning requires a considerable initial investment in staff training and the development of teaching materials. These costs will tend to decline as enrollments increase.

General discussion was followed by a panel review of the day's presentations. The panelists underscored the following main points derived from the various papers:

- Distance learning is a highly attractive means of expanding access to tertiary education, or of filling specialized "gaps" in local teaching programs.
- The mainstreaming of distance learning is linked to "Education for All" goals. The stimulated growth in demand for basic education will soon outstrip available facilities for expanding secondary and tertiary enrollments. In this case, distance learning must be viewed as a core component of the education system rather than as a marginal activity.
- The key issue is not cost, but the quality of the courseware. Care must be taken to avoid the inappropriate transfer of teaching materials across dissimilar programs. To achieve quality, a teamwork approach is essential, as is good management.

- The issue of costs can be a misguided concern. Costs can be raised or lowered by a range of variables such as total enrollment, degree of government subsidy, and the extent to which existing facilities and staff are used in the process.

African Virtual University

The African Virtual University is a pilot program launched earlier this year by the World Bank. It is a tertiary distance learning program based on the use of interactive telecommunications. Its goal is to raise the quality of teaching programs in key disciplinary areas to a competitive international level, to provide stable learning programs which are not vulnerable to the strikes and campus closures that have characterized many African universities in the 1990s, and to expand access to higher education in cost-effective ways.

The AVU program will be implemented in three phases. During an initial phase (mid-1997 to mid-1998), the teaching technologies and organization of the delivery system will be tested using short courses in math, physics, and nursing (see Attachment 1 for a recent AVU progress report). This pilot experience is now underway in twelve anglophone universities.⁴ In early 1998 they

⁴ Addis Ababa University, Kenyatta University, National University of Science and Technology (Zimbabwe); the universities at Cape Coast, Dar es Salaam, Legon, and Kumasi in Ghana; Makerere University, Martyrs Catholic University, and Uganda Polytechnic in Uganda, the Open University of Tanzania, and the University of Zimbabwe.

Box 3. FRANCOPHONE VIRTUAL UNIVERSITY

In 1987 AUPELF established a university composed of French speaking higher education networks. Called by its French acronym, UREF, it was intended to function as a university without walls promoting institutional collaboration in research, teaching, and information exchange. UREF subsequently developed numerous videodisks, compact discs, data bases, and knowledge resources in support of this purpose. Telematic centers were later created in 25 different countries to provide Internet access and also e-mail communication. This is commonly called REFER (the electronic network of French-speaking countries). Building upon the REFER structure and extending the UNISAT university distance learning program via satellite (3^{ème} cycles in law, health, and biotechnology), the Francophone Virtual University seeks to utilize modern information technologies serve the teaching, research, and information access needs of francophone Africa. During 1998 experimental distance learning courses will be offered in agronomy, business management, chemistry, law, mathematics, medicine, and physics. On this basis, a formal program of tertiary studies will be set up by the year 2000.

will be joined by a dozen francophone universities. By mid-1998, three Portuguese speaking universities will come on line. During a second phase

(mid-1998 to mid-1999), actual degree courses will be offered. In a final phase, the proven methodology will be franchised to interested public and private institutions in Africa.

The present AVU pilot courses were harmonized for course content by curriculum experts from Africa, and the courses are continually being modified based on feedback from students and teaching staff. The courses are a mix of live broadcast

lectures and pre-recorded tapes. A talk-back system functions via e-mail for student questions and discussion. Textbooks are also used. Examinations are given and marked by local university lecturers.

On the basis of the first four months of experience, various achievements have been registered. Students taking an AVU summer calculus course performed better than similar students taking a traditional university course. Early efforts to expand course offerings into business related areas have encountered a favorable response. Cost-sharing requirements have encountered no resistance so far. Most importantly, considerable student enthusiasm and ownership is visible. At Kenyatta University, students have organized an "AVU Cyber Club."

Discussion. Participant interest was strongly evidenced by many questions and comments. Speakers noted the strong potential of the AVU approach to improve tertiary learning in Africa. One person saw indications that AVU has tried to be responsive to the kinds of concerns expressed about it in the January 1996 WGHE meeting. GTZ reported that it was testing courses based on interactive compact discs. Others argued for greater coordination and exchange of experience between anglophone and francophone AVU experience. Particular concerns included the need for capacity building in this area, and for Africans to quickly acquire the skills to control course content and course transmission. The need for considerable behavioral changes among students in terms of class attendance, punctuality, daily homework, and class participation was also observed.

Open University of Tanzania

Following several feasibility studies, the Open University of Tanzania was founded in 1993. It began in 1994 with 766 students enrolled in BA programs for education and business management. Courses in Sciences (B.Sc.) and Law were added in 1995 and various other course options are under development. One innovation has been a foundation (or bridging) course which enables unqualified applicants to acquire the qualifications needed for university entrance. By the end of 1997, 4,800 students were enrolled. These include teachers plus court magistrates, policemen, and military officers who study law. Some 11% of students are women, a portion that is far below initial expectations.

The Open University has tried to build on existing experience, borrowing heavily from course content developed in Kenya and at the Indira Gandhi Open University of India. A strong staff development program is now in place, and six staff are now pursuing overseas graduate degrees in distance learning fields. Local development of courseware in law, science, and home economics has begun.

The Open University works in close collaboration with Tanzania's two traditional universities. It makes use of their laboratories during the long vacations for student practice in the sciences. It has a full time staff of 35 plus 95 collaborators from the other two universities. Student fees are roughly \$120 per semester. The first cohort will graduate in 1999.

In closing, the university's Vice-Chancellor, Prof. Geoffrey Mmari, underlined two main

lessons learned to date. First, don't "reinvent the wheel." Use existing proven materials whenever possible in order to get the program up and running. Second, strong political support from national leaders is an essential requirement for success. In Tanzania, two presidents and one Prime Minister have been active proponents of the Open University.

Distance Learning in Burkina Faso

Distance learning has a long history in Burkina Faso. It began with radio programs for primary students in the 1960s. It quickly expanded to include various forms of teacher training, which remains a primary focus. A National Literacy Institute was established in 1974 to provide radio and television programs in local languages for newly literate students, and for secondary education students studying national languages. The use of distance learning at the tertiary level is limited mainly to correspondence courses (e.g., banking, business management, agriculture). However, the University of Ouagadougou hosts a SYFED-REFER site with full Internet connectivity (see Box 3), will start in 1998 a distance program in law in collaboration with a French university, and it serves as one of the pilot sites for the African Virtual University. Several other initiatives are now in the planning stage.

Box 4. DISTANCE LEARNING IN SOUTH AFRICA

South Africa possesses a long history of distance learning experience. Four large public providers of distance learning programs, complemented by a range of colleges offering teacher education, enroll over 225,000 students. Five major private providers, as well as many smaller ones, are also active. The South African Institute for Distance Education is responsible for specialized staff development. A National Association of Distance Education Organizations now boasts over 60 members. Partnerships and cooperation among them are increasing. The largest of these is the Confederation of Open Learning Institutions of South Africa (COLISA). One-third of the country's practicing teachers are involved in some form of distance learning. Government has recently defined national policy for distance education which ends separate provision and moves towards full system integration. Policy also highlights expansion, quality assurance mechanisms, local tutor centers, increased use of different technologies, and the need for a national planning capacity for distance learning.

At this point, these disparate and growing distance learning activities are generating a felt need for national coordination. Development of a national policy on distance learning is therefore being pursued. Adaptation of teaching materials to local languages and culture has been and will continue to be a fundamental characteristic of all distance learning activities. There is a rising belief in the country that educational development cannot proceed without distance learning.

Vista University, South Africa

Recent government white papers designed to transform basic and higher education in South Africa following the end of apartheid specify a clear role for distance learning. It is viewed as an integral part of the education delivery system, and distance learning techniques are to be mainstreamed at all levels. However, substantial improvements will be required, as distance learning in South Africa suffers from low success rates, weak programs of student support, inefficiencies linked to a large number of courses with low enrollments, and over-reliance on the correspondence mode.

As explained by Vice-Chancellor Hugh Africa, Vista University provides dual-mode instruction. It offers national programs for teaching training and upgrading based on distance learning, and serves as a non-residential multi-campus university for urban blacks. It currently enrolls 10,200 students in its five faculties of Arts, Sciences, Economics and Management, Law, and Education. Some 86% of students are African, and 70% of students are women.

At present, Vista is establishing student support centers to boost student performance, investing in capacity building for courseware design, and moving towards an increased use of information technologies. Quality assurance mechanisms have been introduced in the effort to achieve international norms in education.

Future plans call for enrollment growth of 6.5% annually in the effort to meet the country's rising expectations for tertiary education access. Additional student support centers will be established, and collaboration with other institutions in the use of their facilities as a Vista "campus" is being

pursued. Finally, the training of trainers program in distance learning will be strengthened.

Box 5. TELISA

Technikon, SA is the country's distance learning polytechnic. It enrolls 80,000 students and offers 220 different certificates and diplomas. A major current undertaking is the Technology Enhanced Learning Initiative for Southern Africa (TELISA), which seeks to work regionally through public and private partnerships to expand access to educational information technology and to the Internet.⁵ Activities also include non-educational applications in the areas of business, marketing, and community development. TELISA proposes to establish information clearing houses in Southern African countries, which will support educators' access via Internet to curriculum information relevant to participating countries and institutions. It also involves working in conjunction with community structures to facilitate the introduction of on-line community learning centers and training of educators to improve access to skills and infrastructure.

University of South Africa - UNISA

Founded in 1946, UNISA is South Africa's oldest and largest distance learning institution. To date it has produced over 100,000 graduates, among them Presidents Mandela of South Africa and Mugabe of Zimbabwe. Current enrollment exceeds 120,000, of which 54% are women. UNISA students tend to be older and their average age is 31 years. However, 27% of students are aged 18 to 24 years engaged in full-time studies. This latter group is a new and not well understood phenomenon.

⁵ For further information, visit the TELISA home page at <http://pgw.org/telisa>

Prof. Max Dockel, Vice Principal for Research and Planning, summarized lessons learned from the UNISA experience. Prerequisites for success include good national infrastructure in post and telecommunications, effective management (the timely completion of activities builds student confidence), and a reliable information system in order to trace the progress and assess the performance of each individual student.

Good design of courseware is the most important factor in determining student success. This is best carried out through a team approach that integrates consideration of didactics, language, disciplinary content, and examination goals. Effective course delivery demands reliable communications, effective tutor training, and a range of hi-tech to low-tech options which can be adjusted to local circumstances. Courses in the social sciences, education, law, and mathematics lend themselves most easily to distance learning approaches. Courses in the sciences and fine arts are more challenging, as they require laboratories and practical work in equipped physical sites which increases costs and needs for management coordination.

University of Potchefstroom, South Africa

Potchefstroom is a public university with a strong tradition of Christian higher education and enrollments of about 10,000 students. In 1995 it began to develop distance learning programs in response to identified

specific market opportunities. These include a Bachelor in Business Administration offered in collaboration with the California State University (Dominguez Hills), nursing courses, and an MBA launched in 1997. A course in recreation and tourism management will begin in 1998. The MBA course makes increasing use of interactive compact discs, and students are able to dialogue with their instructors via a Lotus Notes e-mail system. Yearly tuition charges range from \$600 for the BBA to \$1700 for the MBA.

Vice Principal Albert Viljoen highlighted various lessons from this initial experience. First, the basis of good student performance is well-designed inter-active study guides. The cost for developing materials for one new course is around \$40,000. Second, learner support programs significantly boost student learning achievements (the university has 22 study centers where students meet with tutors twice a month). Third, distance learning experiences can be used to improve the teaching of traditional residential courses. Fourth, quality control must be exercised at each step of the delivery process (i.e., course design, delivery system, technology employed, student support, and examinations). Finally, inter-institutional collaboration is essential to avoid costly duplication of staff and structures. For example, facilities at some residential universities are used by distance learning students for bi-weekly study meetings. Likewise, student support centers maintained by other distance learning institutions can be shared.

Discussion

Based on these presentations, participants observed that francophone Africa appears to be lagging behind the anglophone countries in its development of distance learning. Capacity building seems to be more advanced in Eastern and Southern Africa. There is consequently a need for much greater exchange of information between the two regions. One knowledgeable observer pointed out that the judicious selection of existing courseware is the best way for a new program to get started. The adoption of existing materials of recognized quality eliminates delays in obtaining accreditation and minimizes the risk of initial mistakes. The use of experienced staff as advisers in setting up new programs saves both time and money. Once programs are established and local capacities are in place, then courseware can be modified or re-designed to better serve local needs and interests.

Several speakers stressed the value of collaborative partnerships as the most cost-effective means of program development, noting that distance learning is too often a highly competitive sphere which shuns cooperation. One participant inquired whether the South African institutions could identify a fluent French speaker to facilitate communication and exchange of experience with francophone countries, and received an affirmative response. All of the speakers agreed that distance education requires a paradigm shift from teaching to learning. This change must guide approaches to both course design and pedagogy.

Summary Panel

A panel of participating experts was asked to summarize the main conclusions of the meeting. They underscored the following points. First, distance learning holds the potential to expand access to quality higher education at affordable cost, and it should therefore be an integral part of any educational system. Second, development of distance learning programs should be based on partnerships and institutional collaboration so as to accelerate development while minimizing costs. Third, greater donor persistence is needed in demonstrating the viability of distance learning; donors should experiment, take calculated risks, be flexible, trouble shoot, and leverage support for these programs. Fourth, governments and donors should give priority to capacity building in the field of distance learning through the training of trainers, investment in course design, improving of program management, and overall political support. Fifth, national telecommunications agencies and the private sector should be involved in all planning for distance learning. Sixth, expensive technology is not necessary to produce good distance learning results if there is technical capacity and political commitment.

Decisions

As a result of the meeting's deliberations, WGHE members recommended the following actions. The WGHE coordinator was charged with fund-raising and implementation follow up associated with these recommendations.

1. *Synthesis Report*. The survey of anglophone distance learning activities by the Commonwealth of Learning, together with the francophone survey and the ten case

studies presented at the meeting, should be synthesized into a single analytical overview with accompanying institutional summaries by country to facilitate networking. The resulting report should be distributed in both French and English, and made available to the new ADEA Working Group on Distance Education.

2. *AAU Web Site*. Recognizing that some 21 African universities now possess Internet connectivity, and that many others will soon join them, WGHE members supported the proposal to use funds available to the Working Group to underwrite the establishment of a bilingual web site on African higher education information that would be maintained by the Association of African Universities. The site is expected to contain basic information on the AAU's member institutions, summaries of significant research and reports, and a calendar of regional higher education events. A capacity for on-line conferencing is also foreseen.

3. *AAU Inventory of Regional Cooperation Arrangements in Graduate Training and Research*. Wishing to have a well-considered discussion paper as the basis for the next WGHE meeting on "Inter-University Cooperation in Graduate Training," WGHE members felt that the inventory of experience proposed by the AAU should be encouraged. However, they voiced general concern that the current terms of reference are not sufficient for this purpose, and mandated the WGHE coordinator to work with the AAU and other group members to sharpen them prior to the release of any funding for this purpose. They further suggested that, if funds permit, the survey should be extended

to cover donor policies and practices with regard to in-country and overseas training.

To facilitate the marshaling of resources for the Working Group's planned work program in 1998, the Coordinator requested participating donor agencies to earmark a portion of their 1998 contribution to the ADEA specifically for the activities of this Working Group.

Next Meeting in Ouagadougou, Burkina Faso

The next meeting of the WGHE is confirmed for November 3-5, 1998 at the Université de Ouagadougou in Burkina Faso. The theme of the meeting will be "Inter-University Cooperation in Graduate Training." Discussion will be structured around the AAU inventory of current experience with inter-university collaboration (see above), and analytical case studies that will be prepared under the sponsorship of SIDA/SAREC, GTZ, UNESCO/BREDA, AUPELF-UREF, and the African Capacity Building Foundation. At this meeting, proposals for the future work program of the Working Group on Higher Education will also be considered.

Box 6. National University of Rwanda Strategic Plan

The Ministry of Education and the National University of Rwanda jointly organized a national debate among stakeholder groups in July 1997 to redefine the university's mission. The four-day meeting covered the university's mission and objectives, institutional autonomy, organizational re-structuring, and management of scarce resources. Principal recommendations were to professionalize academic cycles and increase the portions of practical and field work for students, rationalize and consolidate academic programs, privatize the management of student feeding and accommodation, review the need and mechanisms for student grants and loans, establish a pedagogy development service for staff, promote publicly the need to educate women, initiate discussion on national research priorities and funding modalities, and guarantee university autonomy through appropriate legislation and regulations.

Useful Websites in Higher Education

Agence de la Francophonie/CIFFAD:

<http://www.francophonie.org>

Association des Universités Partiellement ou Entièrement de Langue Française:

<http://www.aupelf.fr>

Association for the Development of Education in Africa:

<http://www.bellanet.org/partners/adea>

Association of Universities and Colleges of Canada:

<http://www.aucc.ca>

Center for International Higher Education, Boston College:

http://www.bc.edu/bc_org/avp/soe/cihe/Center1.html

Commonwealth Higher Education Management Service - CHEMS:

<http://www.acu.ac.uk/chems/chems.html>

Commonwealth of Learning:

<http://www.col.org>

International Association of Universities - IAU:

<http://www.unesco.org/iau>

National Center for Education Statistics (USA):

<http://nces.ed.gov/index.html>

REFER (the francophone electronic network)

http://www.aupelf.fr/refer_ct/accueil.html

South African Universities Vice-Chancellors' Association:

<http://www.unisa.ac.za/sauvca/sauvca.htm>

UNESCO Statistical Yearbook:

<http://gopher.unesco.org/general/eng/stats/index.html>

World Bank:

<http://www.worldbank.org>

The African Virtual University Pilot Phase

Current Status

Activities being carried out under the pilot phase consist of the delivery, by satellite, of credit and non-credit instructional programs, from universities and educational institutions in the United States and other developed countries. The World Bank has financed the supply and installation of satellite receive terminals at 12 universities in English speaking African countries. Seven of these are already installed and operational in Ethiopia, Kenya, Uganda and Zimbabwe. The remaining five are being installed in Ghana and Tanzania.

The pilot sample of participating African partner institutions includes public and private universities, large and small, located in the capital cities and in the countryside. Another twelve satellite receive terminals will be installed in six French speaking countries in time for the start of the January 1998 semester. By April 1998, three more sites will be installed in Portuguese speaking countries.

A first year undergraduate course (a calculus I from NJIT) was broadcast in the summer months of 1997 (July 16 to August 29) to students at KENYATTA University in Nairobi, Kenya. The pass-rate from the final examination (graded by the local instructor) was an outstanding 80 percent compared to a mere 40 percent in the traditional delivery mode. A 2 x 4 hours training seminar on "Managing the Purchasing Function" was delivered in April 1997 from the Virginia Polytechnic Institute. This program attracted 265 participants at 7 receive sites in 4 countries. The feedback obtained from participants indicated a strong demand for more seminars.

The first full semester of the pilot phase started October 1 and will run till December 23, 1997. It consists of the delivery of 6 first year undergraduate courses in science (Calculus 1 and 2 from NJIT, Electric Circuits 1 from the University of Massachusetts (USA), and Introduction to Statistics, Internet and Physics from Dublin Institute of Technology (Ireland). The broadcast of the seminar series will commence in November, 1997.

Instructional Package

The AVU undergraduate course package consists of videotaped and live lectures supplemented by class notes, textbooks, and homework. The videotapes and live lectures are broadcast from COMSAT RSI uplinking facilities in Clarksburg, Maryland. Live

sessions are originated in Ku band from US universities on GTE Spacenet 3 and INTELSAT 603 for the Irish courses to a COMSAT earth station which re-transmits the signal to Africa on INTELSAT 515 in C band frequency. In March 1998, the 515 orbital slot (338.7 E) where the soon-to-be-retired Intelsat 515 is currently positioned will be occupied by INTELSAT 803, a recently launched satellite now being tested before entering operations. Satellite capacity for the pilot phase was obtained free from Intelsat till the end of 1997. The required satellite capacity for the broadcast of AVU programs as of January 1, 1998 has been reserved on INTELSAT 803.

In the coming months, Internet-based courses used in free-standing form as well as enhancements to the video-based lectures will be introduced. Some of the additional features being explored relate to groupware with facilities for examinations and quizzes on-line, computer simulated laboratory experiments, etc.

A digital library program to make scientific information available to African students and faculty has been developed. There are ongoing negotiations with a number of content providers (Indexing and Abstracting Services and Full-Text on-line) as well as library gateway providers. Once these negotiations have been successfully concluded, AVU will have an initial subscription for a trial period of one year on behalf of the participating African university libraries which currently have little, if any at all, subscription to scientific journals.

Technical Description

In its present embryonic state, the typical satellite receive terminal at an AVU partner institution in Africa consists of a 4.5 meter antenna, coaxial cabling to the classroom, and a totally redundant receive system in the classroom, i.e. VCR, PC to control the system, high speed data interface, an integrated receiver decoder (IRD), facsimile, printer and UPS. In the coming months, the receive site configuration will be substantially augmented to include Internet facilities and digital library services. The World Bank has donated a large number of used 486 personal computers to AVU for use by students in Africa to access the Internet and for computer instruction courses.

The pilot phase is in essence a beta testing of the current embryonic scheme. Based on feedback obtained from users through the continuing evaluation survey and implementation experience, the design and implementation arrangements will be modified before moving to the operational phase. Additional components will be introduced over the course of the pilot phase as they become ready to make the system more robust, user-friendly, more comprehensive, and cost-effective. The feedback evaluation survey for the AVU pilot phase was developed by a team of consultants from the University of New Mexico and is posted on the Internet at: <http://mtsnmc2.unm.edu/avu/avu.html>. This team will carry out data collection and evaluation and prepare periodic/final reports.

