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Higher Education in Africa: Achievements, Challenges and Prospects

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Contents

PREFACE	3
INTRODUCTION	9
1. EMERGING ISSUES IN HIGHER EDUCATION	17
The Role of Higher Education in Developing a Culture of Peace in Africa <i>Goolam MOHAMEDBHAI</i>	19
African Universities and Globalization <i>Souleymane NIANG</i>	31
Non-formal Higher Education <i>Pai OBANYA</i>	41
Lifelong Higher Education for All in Sub-Saharan Africa <i>Juma SHABANI</i>	57
2. RELEVANCE OF HIGHER EDUCATION	79
The Role of Higher Education in the Education sector <i>Lameck K.H. GOMA</i>	81
Relevance of Higher Education: Policies and Practices <i>Florida A. KARANI</i>	109
Relevance of Higher Education with Special Reference to East Africa <i>Joseph M. MUNGAI</i>	129
Relevance of Higher Education: The Point of View of the World of Work <i>P. Nalla FALL</i>	153

Strategies for Improving the Relevance of Higher Education: The Experience of Côte d'Ivoire <i>Saliou TOURE</i>	163
3. QUALITY OF HIGHER EDUCATION	177
Quality of Higher Education in Francophone Africa <i>Ousseynou DIA</i>	179
Quality of Higher Education: Conceptions, Contestations and Comments <i>Nico CLOETE</i>	229
Quality of Training and Research in Higher Education <i>Herme J. MOSHA</i>	263
4. MANAGING AND FINANCING HIGHER EDUCATION	295
Management of Higher Education with Special Reference to Nigeria <i>Peter OKEBUKOLA</i>	297
Financing Higher Education and Partnership with Production and Service Sectors <i>Ernest H. WRIGHT</i>	323
Managing Higher Education with Special Reference to Financial Management in African Universities <i>Bikas C. SANYAL & Michaela MARTIN</i>	351
Financing Higher Education in Africa <i>Robert D.D. BLAIR</i>	403
Academic Freedom and University Autonomy <i>Lamine NDIAYE</i>	457

**5. GENDER ISSUES, ACCESS AND EQUITY
IN HIGHER EDUCATION467**

Gender Issues in Higher Education
Penina M. MLAMA469

The Right to Higher Education and Equal
Opportunity Particularly for Women: The
Challenge of our Time
Lydia P. MAKHUBU487

Increasing Access to Higher Education:
The Experience of the Open University
of Tanzania
Geoffrey MMARI517

The African Virtual University Project:
The Case of Kenyatta University, Kenya
Magdallen JUMA533

**6. ACHIEVEMENTS AND PROSPECTS OF
SOUTH-SOUTH AND NORTH-SOUTH
COOPERATION AND PARTNERSHIP549**

The African and Malagasy Council for Higher
Education (CAMES)
Rambré M. OUIHINGA551

The Association of Francophone Universities
and the Francophone University Networks
(AUPELF-UREF)
Bonaventure MVE-ONDO563

The Commonwealth
Cream WRIGHT581

The International Association of Universities
Eva EGRON-POLACK589

7. APPENDICES	597
Declaration and Action Plan for Higher Education in Africa	599
Higher Education for a New Africa: A Students' Vision	617

Preface

Since the attainment of independence by African countries, the higher education sector has been making a great contribution towards national development, especially through the training of human resources required to manage the civil service, the private sector and the development of the educational systems.

Higher education in Africa is characterized these days by a rapid increase in student enrolments and inadequacy of public funds needed to meet adequately the student population growth. This situation is the main cause of the crisis currently besetting higher education in the continent. Quality, relevance, management, funding, access, gender issues and inter-university co-operation are the major challenges posed by this crisis.

The crisis besetting higher education is aggravated by the on-going changes in the economic and social environment, mainly characterized by the globalization of the economy and trade rapid development of knowledge and technologies. Whereas such changes open up new prospects for the development of higher education in Africa, they also pose new challenges.

It is now generally acknowledged that, to meet the challenges facing higher education as well as the present and future needs of ever-changing societies, African countries have to undertake in depth, conceptual and institutional reforms in their higher educational systems.

This book pursues three main objectives: to assess the major achievements made in the higher educational sector in Africa, to identify and analyze the nature and scope of the challenges facing higher education and, more importantly, to propose some strategies for higher educational reforms that would take into account the

socio-economic and political constraints peculiar to each country and region.

The book is based on a selection of the papers presented at the African Regional Consultation Preparatory to the World Conference on Higher Education organized by the UNESCO Regional Office for Education in Africa (BREDA) from 1st to 4th April 1997 in Dakar, Senegal.

I would like to seize this opportunity to congratulate and express my sincere gratitude to Professor F.K. Seddoh, Deputy Director of the Higher Education Division at UNESCO-Paris, who efficiently organized the said Consultation.

I also thank the various persons who contributed to the book, thereby sharing their immense knowledge and experiences with all the stakeholders in higher education in Africa.

I would like to particularly thank Professor Pai Obanya, Director of BREDA, for his encouragement and pertinent remarks which helped to improve the design and presentation of this book.

Finally, I wish to thank Mrs A.L. Quashie-Gueye and Mr. Djimie Boubacar for the patience and attention with which they typed, corrected and edited the preliminary versions of the book.

In the coming years, BREDA will concentrate its efforts on the implementation and the follow-up of the major recommendations of the World Conference on Higher Education which will be held in October 1998 in Paris. In this regard, BREDA undertakes to assist member States and higher educational institutions in Africa in their efforts towards the formulation and implementation of higher educational reforms and policies at national and regional levels.

Juma SHABANI
Senior Specialist in
Higher Education
UNESCO - BREDA

Dakar, July 1998

Introduction

During the last three decades there has been a rapid increase in the number of institutions and student enrolments in the higher education sector in Africa.

In spite of this quantitative increase, higher education in Africa remains one of the least developed in the world. Moreover, the rapid increase in enrolments has not helped to reduce the unequal opportunities of access.

Higher Education has made an important contribution to the national development process in Africa. One of the major achievements consists in the training of professionals required to run the civil service, public and private enterprises and the production of teaching staff required to develop the educational systems.

Since the 1980s, the financial resources allocated to higher education no longer suffice to meet adequately the requirements created by the rapid increase in enrolments. This situation, which has led to a decrease in public expenditure per student, mainly accounts for the current crisis besetting higher education in Africa.

The crisis in the higher education sector mainly finds expression in the declining relevance and quality of education and research, deteriorating infrastructures and equipment, inadequacy of instructional and research materials and the increasingly frequent confrontation between students, workers' unions and higher education management.

In spite of the scope of the crisis and the dwindling efficiency of higher education, it is generally acknowledged that higher education is a profitable national investment, considering, especially, the existing positive correlation between the training of human resources at the university level and socio-economic development.

The need to invest in higher education is also justified by the increasingly important role this sector

is expected to play in the development of other educational sectors.

At the international level, the current socio-economic development trends and strategies are characterized by two main factors: the globalization of the economy and trade which is already influencing the labour market, and the rapid development of knowledge and information and communication technologies.

Even though this situation opens new prospects for the development of higher education, it also poses serious challenges especially at this period characterized by growing graduate unemployment.

In Africa, it is now generally recognized that the contributions made by higher education towards the various economic and social changes should meet four requirements: relevance and quality, the mobilization of adequate and sustainable financial support and development of inter-university co-operation.

These requirements call for reforms that would take account of the following challenge: *How to increase access to higher education and improve its relevance and quality while the current trends foretell the possibility of continued decrease in public expenditures per student.*

This book draws on an in-depth analysis of Africa's experience in higher education and then suggests concrete strategies aimed at meeting this challenge.

The book is prepared from a set of papers presented at the Regional Consultation organized by the UNESCO Regional Office for Education in Africa from 1st to 4th April 1997 in Dakar, Senegal as part of the preparations for the World Conference on Higher Education which will be held from 5th to 9th October 1998 in Paris.

This book therefore constitutes Africa's major contribution to the World Conference on Higher Education whose main objective is *to establish the fundamental principles that will serve as the basis for in-depth global reforms in higher educational systems in order to enhance their contribution to the promotion of sustainable human development and peace.*

The book is composed of six parts and two appendices.

i.) Emerging Issues in Higher Education

The current societal changes and trends in economic and social development indicate that the early years of the 21st Century will be characterized by the persistence of phenomena such as globalization of the economy and trade, rapid development of knowledge and technologies and the proliferation of social conflicts and wars.

Such a situation makes it necessary for African universities to undertake adequate reforms by developing dynamic training and research institutions that could address these phenomena and offer each individual the opportunity to gain access to lifelong higher education.

This section proposes reforms that are likely to meet the above-mentioned requirements. The reforms suggest, in particular, a redefinition of the functions of universities and a more appropriate articulation between formal and non-formal higher education.

ii.) Relevance of Higher Education

As indicated in the UNESCO Policy Paper on "Change and Development in Higher Education", it is generally acknowledged that the relevance of higher education should be analyzed in terms of its role and place in society, its missions, relationships with the world of work as well as the State and public sources of funding and its interaction with other levels and forms of education.

It is noticed that, since the 1980s, there has been a perceptible decline in the relevance of training and research in higher educational institutions in Africa.

This section defines and analyzes principles that should serve as the basis for the formulation of policies aimed at enhancing relevance. These principles are illustrated through the development plan for higher education in Kenya and the experience of Côte d'Ivoire in higher educational reforms.

The section also examines the linkages between higher education and the world of work and recommends the establishment of partnership between higher educational institutions and enterprises in order to meet the needs of enterprises during the development of curricula and to ensure that students and teachers are offered opportunities for research, training and retraining within the enterprises.

Finally, this section discusses the role of Higher Education in the development of the educational sector. In view of the rapid development of scientific knowledge and the important role science plays in production processes and technological development, it is recommended that African universities give particular attention to the production of efficient science teachers and to the improvement of science education in primary and secondary schools.

iii.) Quality of Higher Education

Even in the absence of accurate data allowing for an objective assessment of achievements made in the higher educational sector in Africa, several indicators point to the fact that the quality of education and research has gradually deteriorated in recent years.

This section discusses issues concerning the enhancement of the quality of education, research and services to the community. It presents linguistic and philosophical concepts of quality and the related political, economic and educational requirements. The factors influencing quality are identified and the impact of internal and external inputs on quality is also analyzed. Also assessed is the quality of the major products of higher education, i.e. results of student examinations, research and services.

In another development, this section examines the proposals formulated by the South African Commission on Higher Education with respect to quality and presents an in-depth study on the quality of higher education in Francophone Africa.

iv.) Managing and Financing Higher Education

The inadequacy of public financial resources is the main cause of the crisis besetting higher education in Africa. That being the case, to reduce the effects of such crisis, it is necessary to improve the management of available resources while exploring other sources of funding.

This section presents a historical overview of the techniques of management and how such techniques can be applied to higher education. It identifies and analyzes performance indicators, policies and decision-making models that could help improve the management of higher education.

Also examined are the techniques of financial management and methods of financing higher education in the public sector. The various techniques presented above are illustrated with appropriate practical examples experimented in some African universities.

Some reforms are also proposed with a view to improving the financial base of higher education.

v.) Gender Issues, Access and Equity in Higher Education

A detailed review of studies conducted recently and the results of conferences/seminars/workshops organized on themes concerning access, equity and gender issues in higher education in Africa are presented in this section.

The review reveals among other aspects, that:

- in the course of the last two decades, several actions have been taken to improve gender equity in higher education. Such efforts led to an appreciable increase in the number of women enrolled in higher education;
- women are under-represented in the science and technology sectors as well as in the highly specialized disciplines leading to careers at the university level.

Some concrete proposals are formulated with a view to enhancing access and equity, particularly through the promotion of open and virtual universities.

vi.) South-South and North-South University Co-operation and Partnership

In recent years, the development of university co-operation has been facilitated through the strengthening of economic and political integration processes, the globalization of the economy and trade and the rapid expansion of information and communication technologies.

As indicated in the UNESCO Policy Paper, it is now recognized that university co-operation should be based on genuine partnership, mutual trust and solidarity.

Such co-operation should particularly help to strengthen institutional capacity, promote resource-sharing and exchange of knowledge and reduce the phenomenon of brain drain.

This section reviews the achievements and prospects of the following organizations with respect to the planning and implementation of university co-operation and South-South and North-South partnership:

- African and Malagasy Council for Higher Education (CAMES);
- Association of Francophone Universities and Francophone University Networks (AUPELF-UREF);
- The Commonwealth;
- International Association of Universities (IAU).

vii.) Appendices

Appendix I features the Declaration and Action Plan for Higher Education in Africa. This document was adopted at the African Regional Consultation Preparatory to the World Conference on Higher Education which was held from 1st to 4th April 1997 in Dakar, Senegal.

The document identifies priorities for the development of higher education in Africa and proposes

concrete strategies for a speedy and effective materialization of the said priorities.

The document covered in Appendix II was adopted at a forum of African student associations organized from 23rd to 25th March 1998 in Accra, Ghana. This document highlights the students' vision on the role of higher education in the building of a new society.

We hope that this book will furnish useful information to research fellows, political and administrative authorities entrusted with the formulation and implementation of higher education policies.

**EMERGING ISSUES IN HIGHER
EDUCATION**

CHAPTER 1

The Role of Higher Education in Developing A Culture of Peace in Africa

Goolam MOHAMEDBHAI*

1. INTRODUCTION

We should perhaps start by defining what we mean by peace. One could give a narrow interpretation of peace as being just freedom from, or cessation of, war and civil disorder. But peace should be considered to be much more than that. Peace also means non-violent resolution of conflict and the establishment of universal values such as respect for life, human rights, liberty, equity and justice. It means the ability of all components of the population of a country to lead a decent and healthy life in a safe and sustainable environment, with opportunities for economic, educational, social and cultural development.

Statistics abound to show that Africa is a continent where peace is severely threatened. Africa is in crisis on all fronts : economic, social, environmental, political and religious. There is hardly any sub-region which is not suffering from the aftermath of social instability, war or conflict. The result is that Africa alone accounted for 6 million of the world's 13 million refugees in 1996⁽¹⁾. AIDS is taking a heavy toll on human life, environmental degradation and increasing population are putting a strain on natural resources and there is a rise in religious fundamentalism. Perhaps more than in any other continent in the world,

*Vice-chancellor, University of Mauritius.

establishing a culture of peace has become a priority for Africa.

Higher educational institutions generally, and universities in particular, train young professionals and future leaders through teaching programmes, throw light and create knowledge through research activities, and provide community service through outreach programmes. Such institutions in Africa can therefore play a meaningful role in developing a culture of peace, and in redressing the present situation. And in so doing, they can assist politicians, religious/community leaders and international organisations such as the United Nations system in achieving the same goal.

This paper attempts to show how, through their teaching, research and community service activities, higher educational institutions in Africa can help to create a culture of peace. It also highlights on-going peace-related activities in various institutions.

2. TEACHING

The training of teachers for primary and secondary schools is a major higher education activity in Africa and it is known that the values, skills and knowledge imparted by teachers largely determine the quality of education and influence the attitudes of the pupils. This is particularly true at the primary level, for the early years of childhood are the most significant in the development of attitudes and social skills. In Mauritius, for example, it is believed that the fact that young children of all races and religions have an opportunity to study together and to make friends at all levels of schooling, but specially at pre-primary and primary schools, is one factor that contributes to the social harmony that reigns in a multi-racial and multi-cultural society. Teachers must therefore be trained to inculcate the values and attitudes that foster tolerance, create respect for cultural, ethnic and religious diversity as well as human rights, and encourage peace. To equip them for that task they must

follow courses in multi-cultural education, ethics, human rights, including the Universal Declaration, rights of the child and methods of co-operative learning.

Colleges and institutes of education are also responsible for devising school curricula. These institutions must ensure that the school curricula address local, regional, and international issues and problems of peace, and human rights.

At university level there are various ways of promoting a culture of peace through teaching programmes. First, appropriate peace-related modules could be included in existing courses in various fields such as political science, international relations, history, sociology, social work, religious studies, management studies, education, law, communication studies, psychology, anthropology, etc. The idea is to give a peace dimension to each one of these courses. For example, "Alternative Conflict Resolution" could appear as a module in the law degree course ; "Preventive Diplomacy" in the degree course in political science ; and "Inter-ethnic Coexistence" in the sociology degree course. Indeed, it should be possible to introduce peace-related modules in almost all university courses, including those in science and engineering.

Such modules already exist in courses offered at several African universities. The University of Durban-Westville, for example, offers peace studies specialisation in the honours year of their degree course in political science. The African Centre for the Constructive Resolution of Disputes (ACCORD) has recently compiled modules on peace education in courses in 30 universities in the southern African sub-region⁽³⁾. A similar exercise could be carried out in other sub-regions and the curricula of the modules shared among universities interested in introducing them. New modules could also be created. Moi University's Centre for Refugee Studies, established in 1990 in response to the plight of the very large numbers of displaced persons within the great lakes region of

eastern Africa, introduced the following three modules on forced migration studies in their undergraduate course in the School of Social, Cultural and Development Studies : Refugees in the context of Political Theory, Refugees in Global Transformation, and Human Rights and Refugee Problems. To date, some 450 graduates of the School have followed the modules⁽⁴⁾.

In addition to modules in existing courses, specific courses, either at degree or postgraduate level, should also be mounted to address targeted problems related to peace in Africa. One important area where a need for such courses is being felt is refugee studies. As mentioned earlier, Africa is facing a serious problem of refugees and is in dire need of young people who have been specifically trained to handle their complex situation and who, unlike expatriates, are culturally attuned to their requirements. Moi University will be starting a one-year postgraduate Diploma in Forced Migration Studies in the 1997/98 academic year. The course is designed for mid-career public servants, officers of various organisations as well as those who intend to pursue academic careers. The Association of African Universities (AAU) and the United Nations High Commissioner for Refugees (UNHCR) are also planning to mount a two-year programme in Refugee and Humanitarian Studies at African Universities. The objective of the course is *"to develop in African nationals appropriate management skills and culture relevant to problem solving in the refugee and humanitarian fields, while at the same time minimizing or obviating the need for expatriate managers in humanitarian crises on the continent"*.

A second important area for mounting courses is conflict prevention and management. ACCORD, which is associated with five historically black South African universities, has devised draft course outlines for a three-year undergraduate course and a one-year course in Conflict Studies⁽³⁾. The curricula have been modelled on similar courses offered in the U.S., Europe, Asia and Australia, and also on conflict resolution methods used

in Africa. The courses will be starting in the five associated universities, and the draft course outlines will be shared with other African universities.

Another approach to developing a culture of peace in African universities is to "regionalise" or even "internationalise" academic activities. Students must be made to understand the interdependence of countries in the region from a political, economic, social, cultural and ecological standpoint. They must appreciate the different African cultures and values, and be aware of the historical background of the countries in the region. They must also have a good understanding of the acute problems facing the region, such as increasing population, environmental degradation, violation of human rights, spread of diseases such as AIDS, etc., and be in a position to discuss and propose solutions to them. They must equally appreciate the global interdependence of countries and the effect of international politics on the region. They must know about the role and functions of major international organisations, specially those of the United Nations system. All students, whatever their discipline, should follow in each year of their course, an optional module related to the region, e.g. a language from another sub-region, history or politics of the region, human rights studies, environmental problems facing Africa, etc. By having understanding of the countries in the region they would later be in a better position, whatever their career or profession, to address issues affecting peace in the region.

Exchange of university students among universities, either for short periods during vacation or for longer periods of one or two semesters, is another excellent way of promoting peace and understanding. This would be even more beneficial if the exchange occurs between countries with different (or even opposing) cultures and beliefs. Several international student exchange programmes exist and African universities should make full use of them. Exchanges of students among universities within the African region should be particularly encouraged. African

universities should also encourage enrolment of students from other countries in the region.

The Model United Nations (MUN) is a programme run essentially for secondary school students where groups of students assume roles of diplomatic delegations of UN member States and debate major issues on the international agenda at a mock UN General Assembly. The MUN is organised nationally, regionally and internationally. It gives an excellent opportunity to students to understand the working of the UN system, to appreciate the political stand of various countries and, above all, to discuss fundamental international issues relating to the environment, social and economic development, human rights and political instability. Since its introduction in secondary schools in Mauritius a few years ago, the MUN has been acclaimed as a programme which creates international understanding and which broadens the outlook and improves the communication skills of the participants. This programme should be extended to all African universities as it has enormous potential in developing a culture of peace in Africa. the AAU could play a lead role in promoting the programme with the collaboration of appropriate UN agencies.

An indirect but effective approach to developing a culture of peace in Africa is for universities to ensure that every opportunity is given to women to enrol on university courses. Female enrolment is known to be low in most African universities. The mother is the primary agent for inculcating in the child values and attitudes that foster tolerance, understanding and respect for others, and an educated mother is much better-equipped to do so than an uneducated one. Also, through their influence on their children and family on matters related to education, health and cultural values, educated women can have an extremely positive impact on the family and society. Provision of higher education to women must therefore be considered a priority in Africa. AAU is conscious of this need and has a gender sensitization programme in its core programme of activities for the period 1997-2000.

3. RESEARCH

With so many conflicts in the region, African academics have a rich field for research on conflict management. Areas that could be studied include an assessment of the underlying causes of a particular conflict, identification of the main differences (cultural, ethnic, political) which led to the conflict, which conflict resolution techniques were used and how successful they were, etc. It is accepted that conflict is an integral part of human life and cannot always be avoided. Indeed, it can be positive at times in promoting creativity and change. Conflict can exist in a peaceful environment, provided it is prevented from degenerating into violence. Research on origins and management of conflicts can inform policy makers on how this can be achieved.

Conflict resolution has been practised in Africa for decades, but experiences learnt from successful or unsuccessful interventions have not been properly researched and documented. Such research is vital for management of future conflicts. It is interesting to note that ACCORD in South Africa is proposing to publish, twice yearly, *The African Journal on Conflict Resolution*, the first conflict resolution journal in Africa.

Another important area for research in Africa is the refugee problem. It is essential to research on root causes and consequences of population displacements, the plight of the refugees in the foreign country, the management of refugee camps, the role of women in these camps, the education of refugee children, and the re-settlement of refugees in their home-country at the end of a war. Moi University's Centre for Refugee Studies is about to complete two major research programmes on the politics of refugee policy in Kenya and the administration and coordination of humanitarian intervention and assistance in Kenya, Uganda and Tanzania⁽⁴⁾. African researchers in universities located in countries with refugee problems

should follow the initiative taken by Moi University in this area of research.

UNESCO, through its Culture of Peace Programme, has given a significant boost to research and other academic activities in peace studies by the creation of UNESCO Chairs for the Culture of Peace. A Chair has been established at the University of Durban-Westville in South Africa⁽⁶⁾. Another Chair is to be created at the University of Cocody in Côte d'Ivoire⁽⁷⁾. The latter will carry out research and postgraduate training in order to promote democracy, human rights, a spirit of tolerance and other values pertinent to establishing lasting peace. The creation of such Chairs enables an institution or sub-region to coordinate, focus on and promote peace studies. This has already happened at the University of Durban-Westville, which has also set up a Gandhi-Luthuli Peace Institute, named after two internationally-acclaimed leaders who promoted non-violence as a means of achieving peace. The institute seeks to promote peace through research and dissemination of the theories, principles and strategies of non-violence.

There are a number of countries which are multi-racial, multi-ethnic and multi-cultural and which therefore would appear to have the necessary ingredients for conflict ; and yet, these countries have a long history of stability, peace and harmony. My own country, Mauritius is one of them. The Carribean is another region. It would be useful to study the socio-cultural context of such countries to understand the underlying causes of stability and to see whether these can be transposed to areas with similar set-up but which are conflict-ridden.

The areas of research identified above are essentially related to war or conflict. However, absence of peace can also result from other factors such as economic or social instability. There is, for example, an increasing rate of crime and insecurity in cities in Africa. What are the causes for this ? Is it due to increasing population and the migration from the rural areas? Is it related to drugs? Religious fundamentalism

is also on the rise. What are the factors that can cause religions to create division and hatred rather than peace and harmony? Democratization has been hailed in many countries on the continent. Has it been introduced too quickly? Has it been beneficial or has it given rise to yet other sources of crisis? All these are fertile grounds for research for universities and research institutes in Africa and their findings can assist policy makers in taking necessary steps to promote a culture of peace.

4. SERVICES TO THE COMMUNITY

The organisation of conferences, workshops and public lectures by universities is an important way of imparting information and sensitizing the public on various issues related to peace. This is done by many universities in Africa. The University of Juba in Sudan organised a conference on Peace and Development in 1993⁽⁸⁾. Participants included academics, intellectuals and government officials. The conference was an opportunity for frank discussion on a number of sensitive issues regarding peace in Sudan. Moi University's Centre for Refugee Studies organises, in collaboration with UN agencies, the government, NGO's and churches, peace building seminars having as objectives to promote reconciliation and reduce conflict and to impart techniques of conflict resolution among community leaders⁽⁴⁾. The International Association of University Presidents (IAUP) set up a joint IAUP-UN Commission on Disarmament Education, Conflict Resolution and Peace some years ago, and the Commission has held several conferences on peace in different parts of the world⁽⁹⁾. The Africa and Middle East Council of the IAUP organised a Seminar on "The Universities' Role in Establishing World Peace" in Egypt in February 1997. Topics covered included new concepts in promoting peace, experiences and mechanisms for promoting peace in Africa, economic development and world peace.

Universities could also organise short courses of a few days' duration on various topics such as mediating disputes, conflict management, human rights, the democratisation process, management of refugee camps, etc. The target groups for these courses could include parliamentarians, military personnel, diplomats, community/religious leaders, civil servants and officers of NGO's. The survey carried out by ACCORD reveals that quite a few universities in the southern African region are already running such courses. ACCORD itself is proposing to run short courses on preventive diplomacy, peacekeeping and conflict resolution⁽⁵⁾. Interested persons could also be allowed to follow, together with full-time university students, relevant modules offered in the undergraduate and postgraduate courses.

In those areas which are affected by displaced persons, an important outreach activity of universities could be to provide comfort to refugees. The needs of refugee in the camps include better shelter, provision of improved quality of water, education of children, health care, etc. University students from various disciplines such as science, engineering, medicine, education, agriculture, sociology, psychology could all bring some positive contribution to such camps by spending their vacation period assisting the refugees. Students of Moi University⁽⁴⁾ are involved in such an exercise. Such a programme would not only benefit the refugees, but also the students who would become aware of the refugee crises and might even bring some of the problems to the campus for further study, for example through projects or dissertations.

Academics in African universities can also provide leadership and enlighten the continent by grouping together and taking a common stand on the major issues affecting peace in Africa. On their own, in their own country, their voice may either not be heard or be stifled, but a joint position can have considerable impact not only in Africa but throughout the world. For example, in 1986, an international multidisciplinary team of specialists met in Seville,

Spain and presented "The Seville Statement on Violence", a scientific statement which defied the commonly-held belief that war is a biological necessity, argued that it is in fact a social invention and propounded that peace can be invented to replace it⁽¹⁰⁾. Is it not possible for leading African academics, supported by their colleagues in other universities of the world, to meet and present a statement on some of the burning issues affecting peace in Africa ?

5. CONCLUSIONS

Through their teaching, research and outreach programmes, higher educational institutions in Africa can assist in developing a culture of peace by ensuring that society develops the right attitude of tolerance and understanding, that is free from prejudices and misconceptions, that is well-informed and that has the ability to critically, objectively and intelligently assess past and present crises.

It would appear that universities in many parts of Africa have embarked on peace programmes. These, however, are not well-documented. It is imperative that a thorough survey of all peace-related activities in African higher educational institutions be carried out so that the information can be shared and other institutions can benefit from them. Such a survey could be undertaken under the aegis of the AAU.

Through the creation of UNESCO Chairs for the Culture of Peace it has been possible to coordinate and promote peace studies in a couple of sub-regions in Africa. Such UNESCO Chairs should be created in other sub-regions of Africa.

It can be argued that many universities in Africa are themselves beset by internal crises and conflicts, and that they are therefore ill-positioned to promote peace. It must, however, be realised that universities are a reflection of the society in which they are located. By taking on the responsibility for promoting a culture of peace in their country, universities can perhaps find solutions to their own internal problems.

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CHAPTER 2

African Universities and Globalisation

Souleymane NIANG*

The 21st century will, undoubtedly, turn out to be a century of convergence and solidarity. It will be a century of convergence for a true dialogue between cultures, and a century of solidarity towards a humanistic reunion of "give and take" usher in "universal civilization".

Such is the negro-african meaning of the internationalization or globalization processes underway as globalization is internationalization within a universe shrinking down to a global village as the result of breakthroughs in the areas of communication and transportation.

Based on this approach of the rapid changes affecting societies and nations, educational and training systems should be redefined, beginning first and foremost with the Higher Education system.

In this respect, African universities should reckon with - for its part, Cheikh Anta Diop University has already reckoned with - the issue of globalization taking into account two essential components, namely cooperation and global development by redefining their education and training strategies based on a re-assessment of their missions.

The university, which is essentially the privileged place where knowledge is elaborated and transmitted, in other words, a center for the development of skills and the promotion of research, should from now on grow into an international forum for scientific meetings

* Rector, Cheikh Anta Diop University, Dakar, Senegal.

and exchanges and cooperation. It should develop into a center for peace, solidarity and development - oriented educational strategies and promote awareness of environment issues.

But education - and primarily the education of young people - involves an educational reference which is dependent on at least two interconnected couples : a political scientific - objective couple and a philosophy-finality of education couple.

The first develops the educational policy on the basis of a number of objectives to meet for the satisfaction of national development requirements while the second inspires and guides the policy of education in accordance with the position of man in society or in accordance with the values of civilization determined by a number of objectives and views relating to a global scientific philosophical framework in which man has pride of place.

The educational system to be built should therefore, through a global anticipation of changes resulting from the heralded or unexpected rapid changes in the 21st century, put in place new dynamic structures for training and research able to manage such quick-paced transformations in universities, promoting peace for development.

Indeed, for us Negro Africans, the issue is development, in other words, an improved quality of life in a physical and cultural environment in full bloom and connected to democratic areas congenial to freedom and solidarity and, again, where man retains a central position.

It is to be noted that, in general, the total development of a particular society is assessed with two parameters: the moral, spiritual and humanist parameter, on the one hand, and the physical, scientific and technological component on the other.

The first one, which could be determined by the average level of humanistic culture mastered by the people in a given society, corresponds to an internal blooming of the individual, which maybe observable but not palpable.

The second, which can be assessed by the average scientific culture of the people in a given community corresponds to the external blooming of individuals and to the quality of the environment they live in.

This two-pronged integral development must be the basis for a new humanism, a humanism essentially and primarily aimed at the blooming and full development of man as an individual within society. Indeed, through its universalistic missions, the University should give to each and every individual the opportunity to live fully in order to contribute to the blooming of all within human and geographic spaces congenial to growth and democratic freedom and promoting the development of skills and competitiveness. *This is the first international function of the university. It is a function conducive to the emergence of an orderly and interdependent global village within a humanistic environment.*

The conditions required for this integral development imply that society is provided with the appropriate humanist structures to groom men and women to better shoulder their social responsibilities and rise up to the standards of the moral values of civilization, and with the scientific and technological structures required for setting up operational and effective systems of development and transmission of knowledge.

These conditions also require the existence of structures for order and control to establish and ensure the stability of academic centers offering quality education and training. The lack of such structures which enable institutions to prevail and prevent the encroachment of political grouping upon academic centers generally results in recurring disturbances and unrest. And these turbulences do not certainly favour reflection and innovation for the quality research and training opening doors to the job market offered by enterprises, a prospect which is likely to spur young people to hard work, to make them aware and responsive to the "duty to study" resulting from the famous "right to study".

It is therefore necessary to devise the appropriate conditions, rules and regulations to build stable centers congenial to peaceful academic pursuits and academic freedom and to establish participatory structures to promote concertation towards developing transparent strategies of administrative and pedagogical management. Such structures should also be adequately equipped to offer quality services to the community.

Finally, these conditions show the extended diversity of national and continental development centers, account for their growth discrepancy and the need for cooperation resulting from an internationalization of Education.

Consequently, on the African continent and in most third world countries, the humanist and cultural component of development is, at least, as strong as in developed countries which are generally viewed as the models in terms of development. It is, however, less conspicuous and revealing than the second component. Indeed because of constraints related to the need for survival and peoples and nations' obsession with physical development, the second component appears as the most visible yardstick of development. However, in Africa and in other third world countries, this component is weak, even dangerously weak, as compared to developed countries. The role and duty of African universities is to internationalize the component and strengthen it accordingly while contributing, at the same time, to reinvigorating the spiritual and humanist component in the North. *This is the second international function of the university, a function involving the transfer of science and technology for an integral development in the 21st century.*

Consequently, as of today, Africa and the other third world countries should strive to strengthen the second component since the real issue now is first and foremost for our nations to be producers of science and technologies. In other words, they should, in the 21st century, develop into cultural centers able to contribute to the transfer and extension of science

thanks to their universities which, for the purpose, will have been restructured into regional development universities, and also thanks to an international cooperation sustained by centers of academic solidarity and scientific exchanges, and congenial to these transfers of knowledge in this ending 20th century which already marks "year zero" - or the starting point - of a new mode of sharing knowledge.

To come back to the centers of development, it should be noted that they are closely connected and dependent upon national educational systems since their characteristic components are determined by the cultural levels of exchanges. Hence the urgent need for an education raising awareness to development issues based on the appropriate pedagogical strategy and approach from nursery school to the university. This pedagogy will have to take into account the new cyberspaces and the numerous opportunities offered by distance-learning systems to "open" and operate decentralized, virtual regional university centers. This approach will also take into account the specific training and education needs required for a sustainable development.

Today, one of the primary missions of the University in Senegal is, once again, to be a true and genuine development-oriented University engaged and involved in a renewed international cooperation and a necessary intercultural dialogue among scientist communities.

Therefore, African universities are uncompromisingly required to restructure and reform themselves and, so doing, elaborate optimal growth educational strategies, selective science policies capable of fully developing their potential for creativity, to reorganize and re-map their national environment - both cultural and physical - in order to pave the way for a full development of women and men.

The academic reform to be implemented should accordingly lay emphasis on the renovation of pedagogical structures based on organized strategies to promote improved working conditions for students. These strategies should offer students operational and

effective teaching and supervisory bodies in a scientific environment adequate enough to stimulate effort and innovation in a permanent quest for knowledge and know-how adjusted to national concerns, and with the determination to be counted among the best of a generation of future productive scholars and researchers attuned to modernity and aware of the human condition. These teaching and research strategies will be determined by the nature of the new streams to be created and of the syllabi to be developed during the implementation of the reform. They will be adapted to the life and social conditions of students.

These new aims and objectives, naturally and within the framework of the reform projected, require the University to have full control over enrolment flows so as to satisfactorily manage the regular and smooth promotion of students through the various levels of university education.

A control of enrolment flows should not, however and in any way, imply a strict selection of students but rather a selection-orientation based on the criteria of equity and equal opportunity sustained by the operation of a wide range of public and private higher education institutions whose registration capacities should be maximized.

The same aims and objectives also require faculty members to be further qualified and better equipped academically and to be immersed in the sciences of education for an improved pedagogical training.

As a result of the above, African Universities are called upon to seriously challenge and reassess their routine practices and traditions in order to develop new strategies conducive to teaching and research policies capable of stimulating creativity and fostering the emergence of new forms of thought. *This is the third international function of the University, that is, a function of reform and restructuring within stable academic centers for the emergence of skill training strategies in development-oriented Universities well poised at the crossroads of the knowledge-disseminating information highways.*

To this end, it is imperative to weave relations and create international links based on a new spirit of cooperation contributing to establishing a true center of "give and take", in other words, a dynamic space gathering together men and women in pursuit of a modern humanism, a space of partnership aware and respectful of peoples' cultures and respective geniuses. With such a partnership, each and everyone will be an agent and operator of exchanges within an institutional framework in which genuine concertation will be the rule while - even if the terms of exchange are unequal - precluding any notion of assisting or redeeming imperiled structures and bodies. Based on this new approach for co-development cooperation, the process of exchange should, ultimately, be profitable to all, as the partner universities will be the very catalysts of the exchanges.

In his introduction to the third volume of the "Liberté" - series in 1977, Leopold Sedar Senghor already emphasized the need for a new world cultural order and a new partnership based on "cooperation between the two worlds, the developed one and the one in the process of developing". In this respect, he wrote : "What is therefore at stake, in the last quarter of this century, is the dialogue among cultures whereby each race, each nation, each civilization will receive and give at the same time, for every man and woman to bloom personally while developing".

The partnership thus defined appears, in the internationalization framework, as a humanist cultural component for cooperation firmly establishing man in the center of the development process and reasserts Diderot's thought whereby "Man is the only point of departure and the only point of return"., or, to quote Senghor, "Man is at the inception and at the end of any development process".

Accordingly, there is the need to move a new operational mode, one based on co-development or mutual development cooperation by interconnecting regional centers of skills into networks of international

relations for an inter-cultural dialogue of scientific communities.

These networks would give priority to determined cooperation among all communities in order to establish sustainable partnership links.

The involvement of African Universities in these networks should result in a better training of students, in an improved efficiency of the promotion of faculty and in the designing of a regional status for research in order to foster the emergence of large-scale scientific centers. This status would sustain a policy geared at re-energizing numerous regional learned societies which are now dormant. The policy would, at the same time, bolster and spur a type of African integration adapted to the internationalization of higher education. Specific regional teaching programmes could thus be developed and attached to multilateral professorships of academic skill and competence. Networks of this type already exist within AUPELF-UREF and professorships of this nature - such as the one specializing in education sciences at the Dakar Higher Teacher Training School -ENS - are funded by UNESCO. These efforts should be strongly supported in a sustained manner within the framework of an inter-state co-development cooperation.

This new mode of co-development cooperation - and not cooperation-relief - ascribes a new finality to cooperation. In other words, cooperation should no longer be viewed as an effort to be gradually faded until it is phased out in time but, it should rather be conceived as an ever present, ever living initiative since it is a humanistic and forward - looking venture in the framework of a true multilateral partnership whereby the objectives of co-development are periodically re-assessed and redefined based on the inevitable socio-cultural changes affecting peoples and nations.

This humanistic cooperation should, primarily, ensure the mobility of men and women, and first and foremost the mobility of young people.

It should, therefore, establish areas of cultural convergence and exchanges among all young people in

the world so as to produce sustainable links of solidarity and brotherhood among young people eager to engage in this new mode of cooperation through a re-assessment of North-South cooperation policies.

These North-South exchanges will only be fruitful and generate hope if, once again, African Universities are capable of restructuring themselves into strong regional centers of knowledge as part of a wider policy of African integration for development.

These restructured regional universities which has made access to young people uncluttered by local barriers and boundaries, will gain strength and vigour by internationalizing themselves in order to promote a true transfer of science and a genuine dialogue among cultures and civilizations. *This is the fourth international function of the university, which is a function of mobility and exchanges for a humanistic and interdependent partnership cooperation toward a "Global civilization".*

Young people are attentive to these issues of the globalization of development. They are also aware and wary of the need to strengthen the international solidarity to be established for a new partnership. They are ready for an open humanistic cooperation capable of taking up the challenges of the future so as to contribute to the ushering of the "Global Civilization", within environments of peace and freedom, for the development and blooming of men, all men and women, at the dawn of the 21st century.

It is in this spirit that Cheikh Anta Diop University of Dakar chose to reform and restructure itself positively and to establish the conditions of its redynamisation by redefining a new policy of forward-looking development within peaceful and orderly academic centers provided with humanist and scientific bodies, ordered and modern management structures ready and prepared for international cooperation, with areas of solidarity and intercultural dialogues.

To fulfil the above-mentioned objectives, a reform has been underway for two years now with three major directions and aims:

- to gradually establish the new university bodies taking into account internationalization trends :appropriate streams and teaching programmes for learners, pedagogical strategies more consonant with the ends of education, improved research-development systems, modernized systems for the management of human and material resources;
- to redynamise the participatory bodies for concertation and internationalization with the establishment of internal structures and relationships for a broad and extensive dialogue with the academic community and social partners ; networks of external and international relations for cooperation taking into account the globalization of issues and the necessary mobility of men and women ; networks of relations and communications for an improved dissemination of information;
- To permanently breathe life and enliven the university campus to give back to the academic world its privileged role as a creative center ever active and resonant with scientific conferences, lectures, seminars and colloquia; to further establish the university in its function as a center of cultural exchanges and solidarity.

With all the above, Cheikh Anta Diop University equips itself with the required means and tools to construct a stable environment of centers of knowledge and know-how in order to provide high quality training and research-development to promote the positive participation in the universal meeting of "give and take" paving the way to a new humanism in the 21st century.

CHAPTER 3

Non-Formal Higher Education

PAI OBANYA*

1. INTRODUCTION

The current crisis in higher education in Africa is part and parcel of a larger education sector crisis, which is in itself a sub-set of an overall societal crisis. One solution that has often been suggested to the societal crisis in Africa is to adopt approaches that are "original", meaning that innovation has to be promoted.

With special reference to the on-going education sector crisis, it has often been said that the major problem is that of *relevance* from the philosophical, sociological, psychological, historical, and geographical considerations. This is a way of saying that (in conception, design and execution), education in Africa has been inappropriate and unresponsive and so cannot serve the needs of society.

One way in which the problem of relevance has been approached in the past is through attempts at "articulation" between informal, non-formal, and formal approaches to education. In concrete terms this means that school-engineered education should be closely related to (and should draw inspirations from) the principles and methods of knowledge transmission and personality development of the wider society.

Applying this approach to higher education, would require that the formal practices of universities and

*Director UNESCO Regional Office for Education in Africa (BREDA)
.Dakar-Senegal.

other higher institutions be complemented (and in fact enriched) by the non-formal practices and principles of the wider society. This paper seeks to suggest ways in which this can be done by highlighting (a) the key aspects of traditional African practices (b) the practices of islamised societies in Africa, and (c) emerging trends in contemporary civil society.

2. TRADITIONAL AFRICAN HIGHER EDUCATION

It has been said by some commentators on the prevailing crisis in higher education that the problem is mainly that of numbers, that everyone wants to go to the university, while in fact not everyone is suitable material for that form of education. That point is valid but incomplete, for *while university education may not be appropriate to the needs of everyone, every human being needs higher education.*

This distinction between *higher* and *university* and *tertiary* education is important. The terms 'university' and 'tertiary' are relatively very clear and this paper will not dwell on them. We will therefore attempt to pay particular attention to the concept of *higher education*.

It is perhaps necessary to place the concept in "opposition" to tertiary and university education. Tertiary education assumes a structured hierarchy of educational opportunities, usually in the form of a pyramid with a wide base and a very narrow apex. This translates the realities of a structure that squeezes people through a competitive, selective system for which only a few are able to get to the top.

University education assumes high level, specialised general and professional education destined for "philosopher kings". This normally exists side-by-side with other forms of tertiary education designed to absorb the "doers" (as opposed to the "thinkers"), often destined for "middle level positions", according to Anglo-saxon literature on the subject.

Higher Education, on the other hand accepts the realities of *education for life*, in all its ramifications. This sees life as "living", that is going through all

stages of life and learning all the way by adapting, adjusting, acting, thinking, producing, inventing, participating in societal life and contributing to the evolution of one's society.

The concept also accepts the reality that the process of education needs to have a foundation phase, during which young persons are enculturated (progressively assimilated into the cultural norms of their milieu). It is also the phase during which the young is initiated to the basic life skills of survival and of exploring new ways of solving life problems.

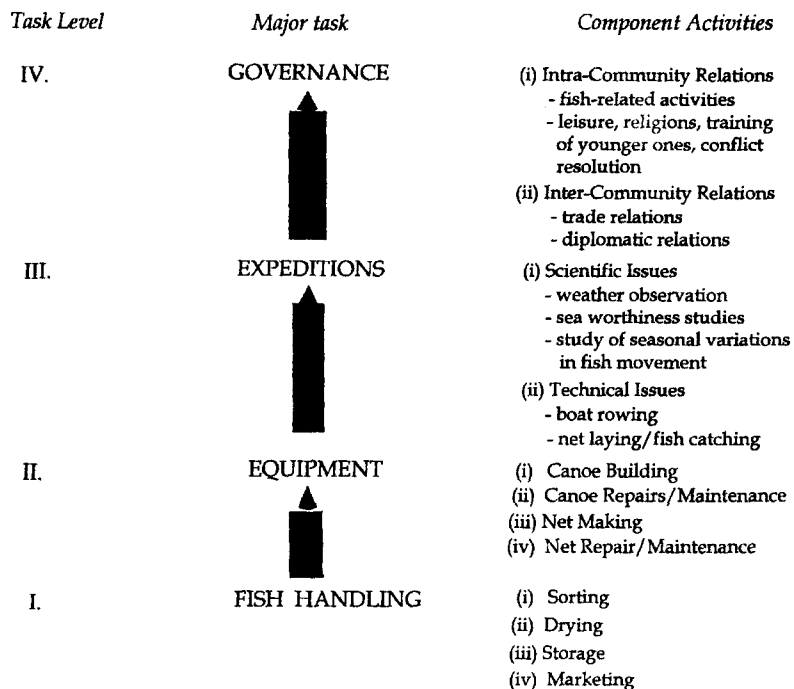
In other words, higher education in the true sense of the term, is expected to build on a foundation of what is today known as basic education. This is the stage that involves enculturation (or the acquisition of basic skills) and opening up the mind, learning to use the hands, i.e. what in contemporary language is referred to as learning-to-learn skills.

To this foundation is added whatever the young person does to fit in to adult life and all its challenges as well as the skills the individual continues to acquire throughout life. Higher education therefore is that phase which consolidates and builds upon basic education to make the individual really *live*: i.e. function as a productive member of society, earning a living, contributing to societal progress, etc.

Illustrative Examples

My own work with the *Gunu* people of Lagos State in Nigeria illustrates the point that, in traditional societies, higher education is accessible and available to *all*. In this fishing community, activities related to fishing are categorised into a hierarchical order of complexity, indeed a taxonomy in the four levels illustrated in figure 1.

Fig. 1 : A Taxonomy of Fishing Tasks among the Gunu of Nigeria



For each level, there is a sustained process of education (verbal instructions, demonstrations, learning-by-doing, mastering of appropriate sacrifices, songs, proverbs, techniques of team work and interpersonal skills). Each level of the taxonomy is roughly equivalent to a specific stage of life: level one for children and adolescents, level two for older adolescents and young adults, level three for adults (and some adolescents) and level four for older persons.

Sex roles are also very distinctly ascribed, with women at various stages of life engaging in a specific set of activities. At the fish handling level (level i), children of both sexes take charge of sorting, adolescent boys and girls are in charge of drying, older men and women take care of storage, but marketing is reserved mainly for women (the *grandmas*).

What is important here is that the duties concerned with subsistence fishing among the Gunu are learned as part of an overall enculturation process. Every person has to pass through each stage and each stage corresponds roughly with a phase in the individual's life. There is practically no way in which an ethnic Gunu can perform tasks at a higher level without going through initiation and sustained practical experience at the lower levels. This is because every constellation of lower level skills is a foundation to learning the higher level ones.¹

A second example, taken from the work of Hampaté Bâ, is summarised in a 1993 UNESCO/BREDA publication in the following words.

"Historically, non-formal forms of higher education have always been with Africans. Each traditional society had its hierarchy of learning tasks, which people accomplished at different times within their life span. Among the Peulh (Fulfuldé or Fulani) of the Sahel zone of West Africa, for example, the life of an individual was supposed to be made up of nine cycles of seven years each in the course of which one was expected to become a sage at about 64, after which the period of decadence sets in. The social and practical skills supposed to be learnt during the first four cycles of ascendancy ($7+7+7+7 = 28$ years) can be likened to be the pre-school, primary, secondary and tertiary levels of modern forms of formal education."²

It is worth drawing attention to a few interesting features of traditional approaches, as illustrated in the above examples. First, education (and in this particular case, higher education) is closely linked to the *life* (i.e. social and cultural norms and practices as well as the major occupational concerns) of society. One advantage of this is that education did not turn its beneficiaries into expatriates.

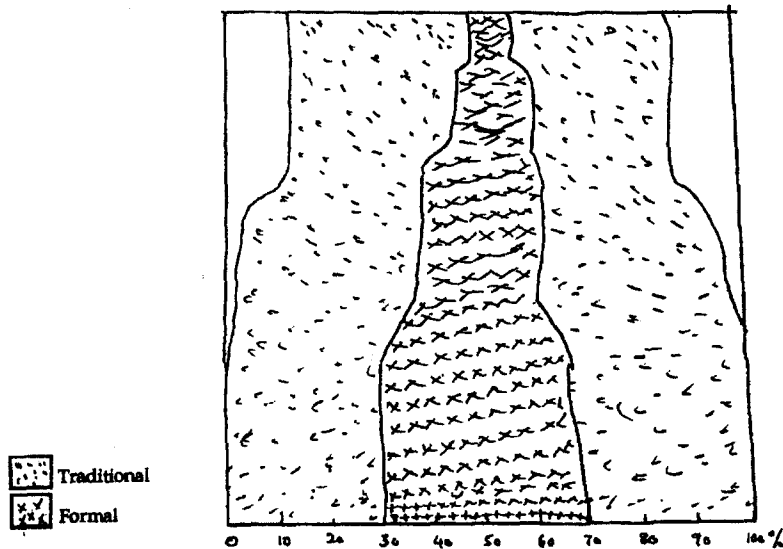
Second, higher education (as was said earlier), is made to build on the knowledge, skills, values, and

attitudes learnt at the lower phases of education. This has the advantage of making every phase of education not terminal, but preparatory to more advanced phases.

Third, every member of an age-grade (or cohort) goes into education and goes through it at each stage of life, along with every other member of the age group. There is thus no room for such coinages of econo-centric analysis of education like *drop out*, *repetition*, *wastage*, *completion*, *survival*, etc.

The last point is important because it destroys the other dangerous notions related to seeing the educational structure only as a pyramid. This is illustrated in figure 2, where the bottle-shaped inner section represents the contemporary practices which seek mainly to ensure that only the selected few will get to the apex of the pyramid.

Hypothetical Access, Progression and Completion Rates in Traditional and Formal Education



The outer section does not represent a perfect square because of 'drop out' due to such natural causes as deaths, incapacity, or emigration. It represents what would happen in cases where opportunity and improved

access to higher education were to be actively promoted. In practice, this usually translates into a "squeeze out" syndrome which progressively blocks access to education to large numbers of eligible aspirants.

3. THE EXAMPLE OF ISLAMISED AFRICAN SOCIETIES

The influence of Islam is not uniformly spread across Sub-Saharan Africa. It ranges from almost complete hold to little or no influence. The issue here is however not the extent of the spread of Islam, but the organisation of higher education in those parts of Africa where Islam has wielded considerable influence. While the practice has varied from place to place (Mauritania, Senegal, Northern Nigeria, Somalia, Zanzibar; etc.) the following common features can be observed.

- i. Islamic higher education emphasises scientific, technical, professional, and humanistic education, *but* ethical and religious values were embedded in all programmes. The advantage is that the beneficiaries of higher education imbibed the values of service to society.
- ii. Respect for the learned person, and concomitantly for learning was highly upheld. This is a virtue that is progressively being lost in contemporary African societies for two main reasons: increasing emphasis on materialism, and the econo-centric idea of linking education directly with paid employment. In other words as unemployment spreads and respect for material wealth increases, disaffection for education tends to grow.
- iii. The institution (in this case the MOSQUE) was everything to the immediate community. It served as a school, a library, a place of worship, a centre for cultural and artist activities, and a venue for the personal and social contact as well as for leisure activities. One advantage of this is that 'town and gown' were intimately linked.

Sankoré (the medieval institution in Timbuktu) was able to rub shoulders with other centres of learning of its time. Islamic higher education is still alive in other parts of Africa, except that they are often not fully considered as part of the mainstream of the national higher education picture. Such centres as Touba in Senegal and the Great Mosque of Zanzibar are still places which harbour learned men in the same way as the Christian monasteries of the middle ages.

The situation in Egypt is slightly different from what has just been described, as the country which has a good number of "modern" Islamic higher institutions. Al-Ashar University in Cairo does make pronouncements on Islamic and cultural issues that are considered as authoritative as those of supreme courts in Western culture. In addition to their strong emphasis on Islamic fundamentals and Koranic studies Al-Ashar also offers courses in Agriculture, Engineering, Dentistry, Pharmacy, Law, Mass Communication and the basic sciences. It has in fact been described as "the one remaining fully non-Western institution", (in the modern world) ... but whose "science faculties are now organised along European lines".³

However, the point here is not to describe Islamic universities. We are more concerned with highlighting the ways in which their unique features can be capitalised on, as one of the possible approaches to tackling some of the problems of contemporary higher education in Africa.

4. TODAY'S CIVIL SOCIETY

Africa owes its survival (in spite of severe onslaughts like the slave trade, colonisation, neo-colonialism, structural adjustment, misrule, civil strife, dictatorships, and pseudo-democracy) largely to the resilience, adaptability and dynamism of the civil society. That the spiritual entity known as Africa can remain alive (in situations of no-hope) is a sign that it has been all the time a learning society. If the society

was not learning, people will not be adapting to changing times, getting tougher and more creative as the conditions get more and more strangulating.

The principles of traditional education have been discussed by many commentators and analysts of education in Africa. It has been emphasised, over and over again that traditional forms of education has a lot to teach present day practitioners and policy makers. It has even been said that there is nothing 'new' or 'progressive' in the pedagogical ideas of Pestalozzi, Dewey, etc. that these ideas had always guided the practice of African traditional forms of education.⁴

Again, this paper is not concerned with recalling the points that have been made by earlier writers on the merits and demerits of Africa traditional education. We are instead concerned with ensuring the continuity of selected traditional practices in modern times and more particularly in post-basic education as practised in the non-formal sector of society.

Western Africa (from Cameroun to Mauritania) is well known for its *traditional apprenticeship system*. One major characteristic of the system is that there are no failures. An apprentice learns first by observing and assisting older apprentices, then goes on to work under close supervision, and later is allowed to work with the very minimum of supervision. Errors are corrected on the spot and the learner is guided throughout the period of apprenticeship. In some trades apprentices have one day a week on which they produce something of their own for sale.

A second feature of the apprenticeship system is that learning takes place within societal settings. The apprentice is in close contact with clients and progressively learns to produce goods and services that will meet societal needs.

Third, the apprenticeship system encourages character training. The apprentice is trained to be a team player, to respect seniors, to obey social norms. Breaches of social contract are considered even more serious than failure at performing technical tasks.

Fourth, a network of solidarity is usually built into the learning process: solidarity between the individual apprentice and the entire team of apprentices, and (at the time of graduation) solidarity with the wider clan of practitioners of the same trade.

A fifth characteristic is the wide variety of trades covered by the apprenticeship system. While formal technical schools cover a narrow range of wood/metal work, electrical and plumbing trades, and business-related studies, the range in the non-formal sector is unbelievably wide. One has only to walk along a major street in any 'popular quarter' of a West African city to take an incredibly large count. On every front door one is likely to see a signboard advertising a different trade (see Box 1).

**Box 1: An Illustration of the Wide Variety of Trades
in the West African Apprenticeship System**

- Gold smithing/black-smithing	- Driving
- Bakery/confectioneries	- Pottery making
- T/V-radio repairs	- Iron works
- Watch repairs	- Photography
- Video-film making	- Printing
- Cain work	- Stonework
- Hair dressing	- Block/brick making
- Leather work	- Horticulture
- Soap-making	- Glassworks
- Food processing	- Traditional medicine
- Upholstery	- Textile dyeing
- Panel beating	- Typewriting
- Carpentry	- Wood carving
- Tailoring	- Metal work
- Masonry	- Weaving (cloth)
- Vehicle mechanical works	- Textile trade
- Plumbery	- Trading in general
- Electrical installation and repairs (in buildings)	- Catering
- painting buildings	- Music
- Painting vehicles	- Entertainment/theatre
- Vehicle electrical works	- Bicycle repairs
- Battery changing	- Motorcycle repairs
- Tyre repairs	- Newspaper selling
- Debt collection	- Shoe making/repairing
- Basket work	- Laundry
- Refrigeration and air conditioning maintenance	

Sixth, and perhaps the most striking feature of the system is that since there is no hiatus between home and school, since apprenticeship takes the form of progressive enculturation into a means of livelihood, since the system thrives on a strong solidarity network and since the trades are closely tied to societal norms and needs, unemployment, on graduation, is minimal.

The system has been adapting to changing times, as its way of ensuring the endurance and resilience of the wider society. One major change has been the level of formal education of new recruits into the apprenticeship industry. There is a stronger emphasis these days on literacy and numeracy and even on formal educational certificates. This is as a result of (a) the expansion of basic education, (b) the need for each practitioner to remain competitive in a shrinking market, and (c) the influx of relatively well educated persons into the non-formal entrepreneurial sector.⁵

Related to this is an increasing attempt to 'white collar' the system. Some countries (e.g. Togo) have accorded official recognition to diplomas awarded by the non-formal sector and have consequently attempted to harmonise methods and content of training. Some of the training programmes now include elements of language, mathematics and general studies. There are even cases in which graduation ceremonies involve the use of academic gowns.

An interesting new development is that of continuing education for master craftsmen. In the case of an on-going project in Togo, master tradesmen spend one day a week in a centre where they are exposed to new techniques, fabricate appropriate tools, and exchange ideas on different aspects of their trades.

More interesting still is the upsurge of a variety of higher institutions of the non-formal type. These institutions design courses for secondary school leavers in four broad areas: informatics/secretarial studies, management, catering and technical subjects.

Informatics is quite a popular area of study and anybody with the very basic notions of the subject and with any type of computer at all, seeks to create a

"school". Whatever the quality of these "schools" they do attract large enrolments.

The same can be said of management courses which tend to focus mainly on accounting, and marketing, probably the areas in great demand in the labour market. Most of the initiators of management courses claim affiliation with some institutions in Europe. There is usually a good mix of full-time, part-time, tailor-made, day/evening courses, to cater for a wide variety of needs.

Purely technical courses (like the Institut Voltaire d'Enseignement Supérieur Technique et Professionnel, IVESTP in Abidjan) are relatively few in number, but more and more institutions of this type are being established.

These "modern" non-formal institutions are attractive to students and parents for a number of reasons. First, they are not as selective as formal higher institutions. Second, they tend to offer a second chance to persons squeezed out of the formal sector. Third, they tend to emphasise hands-on experience (the inculcation of skills which can be immediately put into use).

The major problem here is the wide range of standards, in terms of facilities and quality of programmes. This new development should not however be dismissed off-hand. New "streams" are in fact springing up everyday, as the fashion design schools of Lagos or the new high institutes for information and communication studies in Dakar and Abidjan. There is an urgent need to build on these and related initiatives, as a way of broadening access to higher education.

The organised private sector has in fact also shown an interest in the development of non-formal higher education in some countries. Thus, the chambers of commerce in Senegal, Burkina Faso, Mali, Cote d'Ivoire, etc. run evening courses for secondary school leavers on a variety of commerce and industry related disciplines. There are also programmes at the post-graduate level, like the Lagos Business School in

Nigeria which emphasises analytical skills and hands-on experience for persons already involved in business either as employees or as entrepreneurs.

5. THE NON-FORMAL AS AN ANSWER

The stand of this paper is that the non-formal alternative could be an answer to (a) providing increased access to higher education, (b) creating a learning society in Africa, ensuring education for all at all stages of life, (c) solving the problem of unemployment and (d) improving the relevance of formal higher education.

It is therefore necessary that the development of non-formal higher education in Africa should not be left to chance, to zigzagism, to uncontrolled, unstructured, uncoordinated, undirected growth. This can be done in a number of ways: more intensive studies of the system, appropriate policy guidelines, improved collaboration with the formal system, and according formal societal recognition to on-going non-formal initiatives.

There is a need, first of all, to have a head count of what exists in the civil society as provisions for non-formal higher education. This can be followed, if not accompanied by more in-depth survey of what goes on in existing institutions: the range of training opportunities offered, funding, clientele, possibilities of the insertion of the beneficiaries of existing structures into productive life, etc.

A logical follow-up to such surveys will be the development of appropriate policy guidelines. The process should, as much as possible, be participatory, involving a wide variety of stake-holders even in the formal sector of higher education. Policies should also aim at encouraging the non-formal initiatives, instead of stifling them.

The formal sector of higher education will have to be deeply involved in the development of the non-formal, beginning with their assistance with the studies already discussed. It is even likely that the

results of such studies can help in enriching programmes and practices in the formal sector.

Universities should also contribute to capacity building in the non-formal sector of higher education. A good starting point will be the strengthening of management capacities and the enrichment of the scientific and general education component of non-formal training. Furthermore, universities can collaborate with structures in the civil society in developing and running appropriate life-long learning programmes for the wider population. One can even go a step further and suggest accreditation arrangements between non-formal higher education initiatives and universities. This is already happening in Nigeria, where a number of professional training programmes initiated by private small-scale institutions are certificated by the consultancy services of universities.

The non-formal sector would be an imaginative option for industrial attachment for students in universities and other tertiary institutions, as a mean of exposing students to the real world of work and the real economic sector of the future. The cross-fertilisation which can result from such an arrangement will benefit both sides. Non-formal institutions will benefit from the analytical/scientific outlook of young eggheads, and the latter will benefit from exposure to the conventional wisdom of the society-level practitioner.

There is a role also for the organised private sector which can help in organising non-formal operators into cooperatives, to enable them pool their resources together for greater efficiency. Special arrangements can be made to help the funding of non-formal higher education through loans, taxes, fund-raising within the civil society, etc.

6. CONCLUSIONS

This paper was inspired by the current crisis in higher education, which a 1993 UNESCO/BREDA publication described as relating to relevance,

diminishing resources, management, funding and ever-rising numbers. In addition to what other writers have said on the subject, we feel that the area of higher education is one in which "articulation" between the formal, the non-formal and the informal has to be vigorously pursued.

Africa should, by all means, reform its universities: programmes, policies, teaching-learning methods, management, funding, improved policy framework, improved regional cooperation, etc. Reform of universities will not however be the end of the attack on the crisis facing higher education in Africa today. A rich mine exists in the emerging non-formal structure of higher education, a structure which has the advantages of drawing heavily from age-long practices (including aspects of their Islamic heritage of Africa), of being more easily accessible and affordable, of being flexible and adaptable in its organisation, of being more demand-oriented, and which has the potential of complementing the formal sector of higher education.

Much still remains to be done to develop existing non-formal initiatives and to orient them to become better able to meet the needs of the 21st century. The point of this paper is that efforts in this direction should be given an official boost as an integral and essential part of on-going efforts to reform higher education in Africa.

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CHAPTER 4

Lifelong Higher Education for All in Sub-Saharan Africa

Juma SHABANI*

1. INTRODUCTION

Since the early 1990s, UNESCO has been trying to promote a worldwide reflection on the role and trends of higher education and the challenges to be met by the sector at the threshold of the 21st Century.

The results of this reflection which led to the publication of a policy paper entitled "Change and Development in Higher Education" (UNESCO 1995a) confirmed the fact that Sub-Saharan Africa has been undergoing a deep crisis mainly characterized by a rapid increase in student enrolments and the inadequacy of financial resources needed to address such growth.

Faced with the challenges posed by such a crisis, the African countries formulated and implemented several policies and strategies aimed at revitalizing higher education.

Unfortunately, such efforts have not made it possible to meet all the needs and expectations of an African society that is undergoing a rapid and perpetual change.

The current socio-economic development trends indicate that the early years of the 21st Century will be characterized by the persistence of phenomena such as the globalization of economy and trade, the

* Senior Specialist in Higher Education, UNESCO Regional Office for Education in Africa (BREDA) Dakar, Senegal.

democratization of political regimes and the rapid expansion of knowledge and technologies.

If it is true that these phenomena open new perspectives, it should be noted that they also pose new challenges to Higher Education in Africa.

These challenges call for new reforms. The current trends of higher education indicate that lifelong education for all will occupy a central place in the planning and implementation of the said reforms.

2. THE CURRENT SITUATION OF HIGHER EDUCATION IN SUB-SAHARAN AFRICA

In the last two decades, the trend of higher education in Sub-Saharan Africa was mainly characterized by a rapid increase in student enrolments and financial constraints that culminated

in a decrease in public expenditure per student.

2.1. Increase in Student Enrolments

In most developing countries, higher education is the education sector that experienced the most rapid expansion in the course of the last two decades.

During that period, student enrolments in higher education was much faster in Sub-Saharan Africa than in any other part of the world.

However, in spite of this rapid increase in enrolments, certain indicators showed that, *of all the regions of the world, Sub-Saharan Africa presents the least developed system of higher education.*

i) Higher education enrolment ratios

In 1993, the enrolment ratios of the 18 to 23 age-group was 2.4% in Sub-Saharan Africa against 18 in Latin America, 13.2% in the Arab States, 8.2 in South-Eastern Asia and 51 in the developed countries (UNESCO 1995b).

ii) Number of students per 100,000 inhabitants

In 1991, this number exceeded 5,000 in North America and 2,500 in practically all the developed countries. In Sub-Saharan Africa, this ratio was less

than 100 students per 100,000 inhabitants, which means that the chances of young people pursuing higher education were 25 times lower in Sub-Saharan Africa than in the developed countries (UNESCO 1995a).

These figures suggest that Sub-Saharan Africa should increase student enrolments considering, especially, the ever-growing demand for access to higher education, and the established correlation between the development of higher education and socio-economic development. *However, it seems that such a strategy should not be implemented within the current structures of higher education if African countries do not want to worsen the decline in the quality of education and graduate unemployment.*

It is noticed that the increase in enrolments did not occur at the same pace in the different regions of Sub-Saharan Africa. It was much faster in French-speaking Africa. Indeed, between 1960 and 1983, the enrolments were multiplied by 40 in French-speaking Africa and by only 16 in the English-speaking countries (World Bank, 1988).

The rapid increase in student enrolments in the Francophone countries is due to the combined effect of at least four factors, namely:

- the rapid increase in the number of secondary school leavers;
- the lack of selection at the time students enter universities;
- the low internal efficiency;
- the generous student-aid policy which encourages students to extend their stay at university because of the uncertainty of finding job upon completion of the courses.

Of course, such a quantitative expansion should be matched with a corresponding increase in infrastructures, facilities, teaching staff and scientific and instructional materials so as to meet the requirements of quality with respect to training and research. Unfortunately, that has not been the case.

For example, during the 1991-92 academic year the University of Yaoundé in Cameroon, which opened its doors in 1960 with 500 students, had 45,000 students with facilities planned for 5,000.

In Francophone Africa, it is usual to see a lecture hall designed for 800 students crammed with as many as 3,000. It is also noteworthy that such lecture halls hardly provide an enabling environment for teaching, as they have more in common with markets or sports stadia than with places for reflection.

Under the circumstances, access to knowledge is largely determined by the students' ability to arrive 3 or 4 hours in advance to occupy the best place so as to hear the lecturer.

As a result of the limitation of academic infrastructures and shortage of human and material resources, the quality of education has declined.

Indeed, several institutions were already forced to cancel practical and field work. More recently, the University of Benin in Lome, Togo decided to cancel the requirement of a master's thesis at the end of university studies at the Faculty of Economics and Management.

2.2 Public recurrent expenditures on higher education

i) Level of public expenditures

During the last three decades, Sub-Saharan Africa invested a lot of funds in the development of its higher educational systems, mainly through external assistance and loans.

However, as indicated in a study carried out by the Association of African Universities on cost-effectiveness and efficiency in African Universities (AAU 1991), it appears that since the 1980s, *the public funds allocated to higher educational institutions no longer suffice to meet adequately the requirements created by the rapid increase in student enrolments.*

Nevertheless, the indicators used to measure the financial commitment of a country in the areas of education, namely :

- the public funds earmarked for education as a percentage of total government expenditure and as a percentage of the GNP; and
- the percentage of the education budget allocated to higher education show that Sub-Saharan African countries continue to allocate substantial resources to the running of higher educational institutions.

The financial outlay of Sub-Saharan Africa in the education sector is the highest in all the regions of the developing world.

In 1991, Sub-Saharan Africa spent 5.7% of its GNP on education against 3.7 for South-Eastern Asia (UNESCO 1995b) although the latter enjoyed a higher rate of economic development.

During the same period, Sub-Saharan Africa invested 0.9% of its GNP in higher education. This is a major effort, considering that many developed countries do not go that far.

The Federal Republic of Germany, for instance, spent 0.6% of its GNP on higher education whereas the figure stood at 0.5% in the case of France (Orivel 1988, Tedga 1988).

African countries are currently experiencing a difficult economic situation due especially to the increase in external debts and their servicing, the lowering of prices of raw materials and agricultural products, devaluation of national currencies and implementation of structural adjustment policies.

Under the circumstances, African governments are no longer able to increase the financial resources they have been allocating to higher education. Hence, the public expenditures per student should necessarily be reduced to enable African States to respond adequately to the increasing demands for access to higher education.

Actually, according to the World Bank estimates, the average public expenditure per student in higher

education in Sub-Saharan Africa dropped from US\$ 6,300 in 1980 to US\$ 1,500 in 1988 (World Bank, 1995).

The inadequacy of resources which found expression in the deteriorating infrastructure, inadequate facilities and shortage of academic staff and teaching materials led to the decline in the quality of higher education and research.

This situation poses a major challenge to African countries, namely: how to increase and improve the quality of higher education when the public expenditures per student should continue to decrease.

It appears impossible to meet such a challenge without undertaking an in-depth reform of the organization, structures and policies regarding the financing of higher education.

The new policies should reduce or abolish the subsidization of student social services and further encourage students to accept the principle of cost-sharing.

However, such policies should provide adequate financial opportunities to the needy but deserving students to enable them to pursue their studies.

Fees paid by students represented 36% of the recurrent expenditures in Chili, 40% in Jordan and 46% in South Korea (World Bank, 1995).

In Sub-Saharan Africa, it is noticed that the anglophone countries are doing much better than the francophones in mobilizing resources from students.

In Uganda, for example, the fees paid by students of Makerere University represented 15% of the recurrent budget of the University (Makerere University, 1996).

In Botswana, Ghana and many other anglophone countries, subsidies to student feeding costs have been abolished and the restaurants themselves privatized (World Bank, 1995).

In Francophone Africa, the fees collected from students represented less than 1% of the university recurrent budgets and the student social services are still subsidized.

ii) The structure of public expenditures

In Sub-Saharan Africa, a substantial part of the budget for higher education is often allocated to activities which are not directly related to the implementation of the institutional missions. This refers, in particular, to scholarships and various subsidies to student social services.

Funds allocated to student scholarships and welfare represented 6% of the recurrent budget in Asia and 14% in the OECD countries (Organization for Economic Co-operation and Development).

In Sub-Saharan Africa, these expenditures absorb 55% of the recurrent budget for higher education in francophone Africa against 15% in Anglophone Africa (World Bank, 1995). *Statistical data available show that no other region in the world spends on student social services as much as does Francophone Africa.*

Initially, the main objective of the scholarship system was to motivate qualified persons to enrol in higher educational institutions to enable their countries to produce the personnel required to perform duties in the civil service and public enterprises.

Today, the job saturation in the civil service and the emergence of the graduate unemployment phenomenon show that the above objective is fully attained.

Therefore, the current student scholarship policies should be reviewed especially since nowadays the training received contributes more towards increasing the private benefits of students than ensuring the social profitability of higher education.

During the last two decades, Anglophone Africa implemented a series of reforms in the student assistance policies. Even though the effectiveness of these reforms is not yet clearly established, it is acknowledged that one of the achievements of the reforms is that they convinced students to accept to the principle of cost-sharing.

3. THE CONSEQUENCES OF THE CRISIS IN HIGHER EDUCATION

The combined effect of the rapid increase in student enrolments, the inadequacy of public expenditures invested in higher education and the structure of public expenditures led to a series of phenomena which contributed to the deterioration of the effectiveness and efficiency of higher educational institutions.

These phenomena found expression in the following aspects:

- deterioration of working conditions and the quality of academic staff and researchers;
- brain drain;
- deterioration of infrastructures and facilities;
- decline of research;
- lack of instructional and research materials;
- increased graduate unemployment and, more generally, the decline in the relevance of higher education;
- the decrease in internal efficiency;
- strained relations between student associations, workers' unions and higher education management.

Several studies and publications on these phenomena have been carried out in recent years (cf. Saint, 1992, Tedga, 1993, UNESCO 1994, UNESCO 1997).

In this section, we will present briefly the state of relations between student associations and higher education management to particularly illustrate the fact that the development of higher education in Africa also calls for co-operation between the various stakeholders.

Relations between student associations and higher education management

During the period following the achievement of independence by African countries, the student associations affiliated to the one-party political systems played a crucial role in the political

emancipation of the African countries. At that time, relations between the associations and higher education management were based on solidarity and support to the governments' political actions.

In Francophone Africa, this period coincided with the time when scholarships were automatically granted to each student and jobs were guaranteed for each graduate.

As indicated above, since the 1980s, the development of higher education has been characterized by a rapid increase in student enrolments and inadequacy of financial resources. *This situation resulted in the deterioration of student accommodation systems, the decline in the quality of food and modification of criteria for the award of scholarships.* The period also witnessed increasingly strained relations between student associations and higher education authorities that found expression in frequent strikes which were countered with more violent repressive measures.

With the advent of multi-party regimes in Africa, students' protests are no longer limited to scholarships and food. In fact, students are now more and more involved in political protests.

Students' protests have rarely focused on the quality of education. It is also noticed that, in recent years, student associations have mainly been responsible for the decline in education quality.

For example, at the University of Cocody in Côte d'Ivoire, the last student strike led to the reduction of the 1997/98 academic year almost by half. This situation prevented the lecturers from completing their teaching programmes. Moreover, the students of the University never denounced the current practices that contribute to the development of a culture of mediocrity e.g. the various instances of fraud in examinations, the behaviour of female students who attracted teachers so as to obtain good marks, students who sat examinations or wrote master's theses in place of others for remuneration, etc..

The frequent strikes in universities also discourage the development of South-South university co-operation.

In the private institutions in particular, where the programmes necessitate students' financial participation, it is noticed that the student associations' main objective is to promote education quality. In such institutions, the students are motivated to complete their training more quickly so as to reduce costs. Under the circumstances, the students shun any action that might disrupt their education or compromise its quality.

The challenges currently facing higher education call for a redefinition of the roles of the various stakeholders - student associations, workers' unions, governments, higher educational institutions and donors - in order to help the institutions fulfil their missions effectively.

One of the essential conditions for the smooth functioning and proper management of higher education resides in the promotion of co-operation between the various stakeholders.

Such partnership in the higher education sector should not be constrained; it should constantly be adapted to trends in the university environment.

A document recently published by the World Bank in collaboration with the Association of African Universities (World Bank, 1997) proposed published the roles of universities, governments, donors and the World Bank in order to revitalize universities in Africa.

It is necessary and urgent to redefine the roles of the other stakeholders in particular the student associations, the parents and the trade unions.

4. STRATEGIES IMPLEMENTED IN RESPONSE TO THE CRISIS IN HIGHER EDUCATION

African countries have been formulating and implementing various policies and strategies, sometimes with the assistance of the international

community, in order to meet the challenges posed by the crisis in higher education.

It is generally acknowledged that anglophone countries made greater efforts in finding solutions to the crisis.

In this chapter, we will present briefly the various strategies implemented to meet challenges in terms of relevance, quality, funding and sub-regional co-operation.

4.1. Relevance

As indicated in the UNESCO Policy Paper on Change and Development in Higher Education (UNESCO, 1995a), the relevance of higher education should be assessed in terms of its role and place in the society, its missions, relationship with the State and public sources of funding and its interaction with the other levels and forms of education.

Today, the need for relevance is becoming more important as the job saturation in the civil service, graduate unemployment and changes in the job market make it imperative that higher educational institutions produce graduates who are not only able to constantly update their knowledge and learn new skills but also to create jobs instead of claiming them as a right.

Besides, Sub-Saharan Africa is currently beset with a series of problems whose resolution calls for some intellectual contribution from higher educational institutions. These include social conflicts, ethnic strifes, intolerance and violation of human rights.

The anglophone countries implemented the following strategies in order to meet the challenges related to relevance.

i) Diversifying higher educational systems, forms of education and training programmes

The diversification process found expression in the establishment of specialized universities, vocational training institutions, open learning and distance education as well as private and virtual universities. For instance, Nigeria currently has 37 universities,

including Universities of Science and Technology and Universities of agriculture. Kenya has a dozen or so private universities whose student population represents more than 10% of the total enrolment in the 5 public universities.

For a long time, in Francophone Africa, the trend was to integrate all the higher educational institutions into one national university.

ii) Curriculum reforms

Most of the anglophone countries have established curriculum development institutes to help higher educational institutions to constantly adapt their curricula to changing trends in the job market. They also trained qualified personnel in curriculum design, development and evaluation.

iii) Research

Research is considered as an essential function for the promotion of social relevance in higher education.

It is generally acknowledged that anglophone countries made greater efforts to develop research. In most English-speaking universities, student enrolment in post-graduate programmes represents more than 10% of the total student population. The ratio is much lower in the French-speaking countries. For example, in 1994, the students enrolled in post-graduate programmes at the National University of Côte d'Ivoire represented only 0.5% of the total student enrolment (Shabani, 1996).

In terms of publications, this gap finds expression in the fact that 3 anglophone countries - Nigeria, Kenya and Sudan - produce 70% of the total publications of Sub-Saharan African (Saint, 1992).

4.2. Quality

Even in the absence of a strong database for an objective assessment of the trend of training offered by African universities, several indicators show that the quality of training has gradually fallen in recent years.

It is also acknowledged that the ability of higher education to provide quality education depends ultimately on the quality of the teaching staff, students as well as its infrastructure, facilities and the academic environment.

In order to improve the quality of higher education, the anglophone countries implemented the following strategies:

i) Selective admission to the university

The selection criteria are mainly based on the teacher-students ratios and the real capacity of the academic infrastructures. In Kenya, only 6% of the students qualified to enter university are enrolled in the country's 5 public universities.

In Francophone Africa, the selection concerns only the so-called "Grandes Ecoles" which are mainly engineering schools.

ii) Quality assessment and enhancement

The anglophone countries have also set up various structures to assess and promote education quality. They have also established teaching and learning units to provide further training for university teachers.

4.3 Student Aid policies

Unlike the situation in the francophone countries where almost every student can apply for scholarship, in the anglophone countries scholarships are granted to a very limited number of students on the basis of the students' academic performance and the national priorities in terms of human resource development.

Moreover, the amounts of scholarships are relatively low in anglophone countries. In Ghana for example, full scholarships are granted to all post-graduate students and to a group of undergraduate students representing 4.5% of the best students of the 4 public universities.

Half-scholarships are given to students enrolled in "relevant" disciplines like Agriculture, Computer Science and Engineering.

Quarter-scholarships are offered to students pursuing "essential" studies, particularly Accountancy, Medicine and Banking.

In 1994, the rate of a full scholarship was estimated at \$200 per year.

During the same period, the rate of a monthly scholarship in Gabon was estimated at \$250 for undergraduate students and \$300 for post-graduate students. Moreover, every student received an annual allowance of \$360 (Mve-Ondo, 1993).

In general, the scholarships offered by anglophone countries are not enough to cover the various students expenditures. To correct this situation, the Government of Ghana decided in 1971 to start a student loan scheme. Today, the loan is supposed to help students to meet their food, equipment and personal expenses.

In 1994, the maximal amount of the loans was estimated at \$200 per year. Loans were given at a commercial interest rate of 19.5% but the Government paid 16.5% of the interests. The maximal period for reimbursement was 10 years.

Student loan schemes are still fraught with recovery problems. *All the same, one of the major achievements of these programmes lies in the fact that they encouraged the students to accept the principle of sharing the cost of their training.*

4.4. Sub-regional co-operation

It is well known that, at the national level, African countries do not have the critical mass of expertise required in the various areas of teaching and research, particularly in the priority areas of development.

This situation led to the creation of centres of excellence and other sub-regional training and research institutions.

In the area of sub-regional co-operation, it is worth mentioning the rich experience and remarkable achievements made by the francophone countries especially through the creation and management of the so-called "Ecoles Inter-Etats (Inter-State Schools)

which are sub-regional training centres funded through African sub-regional co-operation arrangements.

5. LIMITATIONS ON STRATEGIES IMPLEMENTED AND THE NEED FOR NEW REFORMS

It is noticed that despite the great efforts they made, Sub-Saharan African countries have not been able to overcome the crisis besetting the higher educational sector. In certain cases, the policies and strategies implemented to meet the challenges posed by the crisis created profound contradictions. For instance (UNESCO, 1998):

- reception capacities are exceeded whereas there is an increasing demand for human resources;
- there is need to produce more skilled personnel to contribute to their countries' economic development whereas some graduates are still unemployed;
- there is need to increase enrolment in the higher educational sector at a time when university admission is subject to rigorous selection criteria;
- it is necessary to develop research but the budget allocated to research is far inadequate and the current research does not address economic concerns.

This situation suggests that instead of concentrating on the various challenges posed by the crisis, it is rather necessary to undertake reforms that are likely to provide adequate solutions to the actual causes of the crisis, e.g:

- the low institutional reception capacity that makes it impossible to accommodate the ever-growing demand for higher education;
- inadequacy of financial resources required to meet needs created by the increase in enrolments.

The current trends of higher education indicate that lifelong education for all should occupy a central place in the planning and implementation of such reforms.

6. PROSPECTS FOR THE 21ST CENTURY: LIFELONG HIGHER EDUCATION FOR ALL

For the last few years, the environment in which higher education institutions have been operating has undergone many profound changes at the political, social and economic levels.

These changes will have direct implications on the future development of higher education in Sub-Saharan Africa.

A quick analysis of the major trends of the economic and social development process indicates that the early years of the 21st century will be characterized by the persistence of the following phenomena:

- the globalization of economy and trade which already has an influence on the job market ;
- the rapid development of information and communication technologies.

What will be the impact of these trends on the fulfillment of the missions of higher education?

6.1. Training

Taking into consideration the job saturation in the civil service, the low level of development of the private sector and the rapid changes in the job market, it seems that in the near future, demands for higher education will mainly concern the training of entrepreneurs, the updating of knowledge and upgrading of skills for trained personnel.

Under the circumstances, a good portion of the higher educational institutions should be organized as centres for lifelong education for all, for the purpose of updating and improving knowledge and academic qualifications.

These centres which Federico MAYOR, the Director-General of UNESCO, refers to as Universal Universities of the 21st Century, should provide at least the following possibilities (Mayor, 1997).

- *access for all those who are qualified for higher education* in conformity with Article 26 of the Universal Declaration of Human Rights which states that "higher education shall be accessible to all on the basis of merit".
- *access at all stages in the lifetime.*
- *learning systems adapted to all circumstances.*

From the principle of access to all qualified persons at all stages in the lifetime, it follows that higher education should be planned to address the educational needs of all individuals.

The rapid development of information and communication technologies indicates that lifelong education for all could be offered through distance education and open learning systems, academic credits, evening classes, part-time courses, post-graduate training programmes or through an appropriate combination of these programmes:

- a vocation to educate and no longer to train alone. Lifelong higher education for all should enable students to learn to do and to create job opportunities instead of claiming them as a right.

The recent experience of the Open University of Tanzania, Makerere University in Uganda and some universities in Nigeria shows that Sub-Saharan Africa has the necessary resources to provide quality education in the context of lifelong higher education for all.

Lifelong education for all should change radically the process whereby curricula are designed for higher educational institutions. Initial training should take into account the existing and future opportunities for in-service training required to help graduates adapt to and even anticipate the changes occurring in the job market.

The undergraduate programmes should provide sound basic training and these should be completed with flexible specialized courses of study.

In fact, as observed by Tunnermann-Bernheim (1991), in a changing job market technical knowledge is

quickly outdated; hence, a professional who has acquired a broad intellectual exposure through general training is easier to retrain at a cheaper cost than one with a high level of specialization.

The training of entrepreneurs and retraining of personnel will confer important private benefits on students who will thus have the opportunity to develop their individual careers and chances in life. *In this context, it will be relevant to ask students to share the cost of their training.*

As illustrated by the experience of Makerere University in Uganda, the resources thus mobilized could be used to improve the working conditions of teachers and to purchase materials and equipment required to promote quality education.

6.2 Research

In a society characterized by a rapid expansion of knowledge and technologies, African Universities, through research, should engage further in the production, adaptation and use of new knowledge to promote the social relevance and quality of higher education to ensure that higher education responds more effectively to the current and future societal needs.

The level of specialization required by the rapid expansion of knowledge and the shortage of qualified researchers at the national level suggest that African countries should revive the idea of developing centres of excellence and consider the possibility of creating regional research universities. The UNESCO Chairs and UNITWIN networks could play an essential role in this regard.

6.3. Services to the Community

In the area of services to the community, particular attention should be given to civic education to especially promote human rights, tolerance and a culture of peace and democracy and develop the capacity to live together in multicultural and multi-ethnic African societies.

Certain African universities have already initiated teaching and research programmes on several themes concerning the social conflicts plaguing Africa.

In the area of peace for instance, some initiatives have been taken at three different levels : national, regional and international. In this section ,we will present briefly some of these initiatives:

i) National level

One of the immediate consequences of the prevailing wars is the proliferation of refugees and displaced persons.

In 1990, the scope of this phenomenon prompted Moi University in Kenya to create a *Refugee Research Centre* to particularly enable the national and international communities to better understand and manage problems concerning refugees and displaced persons.

At present, the University offers training modules on "Forced Emigration" at the undergraduate and post-graduate levels. The post-graduate programmes are mainly designed for civil servants and staff of Non-Governmental Organizations (Mohamedbhai 1997).

ii) Regional level

Some funds provided by UNDP enabled four universities in the Great Lakes Region to organize a symposium on peace in the region in May 1998 in Bujumbura (Burundi).

The objective of the symposium was to enable lecturers and researchers to make an in-depth assessment of the situation and propose peaceful and sustainable solutions to the crisis besetting the region.

One of the major resolutions adopted at the end of the symposium called for *the creation of a University research Centre on the Management of Conflicts in the Great Lakes Region.*

iii) International level

African Universities receive substantial support from UNESCO and the International Association of University Presidents (IAUP).

- For the last few years, UNESCO has been contributing immensely, through UNESCO Chairs and the UNITWIN programme, towards research capacity building of African Universities in the area of peace.
- Since 1996, IAUP has organized in Egypt three international conferences on the role of the university in the promotion of peace: Luxor 1996, Aswan 1997 and Alexandria 1998. These conferences enabled the African Universities to share with other universities various information, data and experiences on peace-related education and research.

At present, IAUP is planning to implement the following programmes on the promotion of peace:

- training workshops for lecturers and research fellows;
- research funding;
- publication of case studies.

These programmes will help African universities to develop the capacity required in order to provide to the society opportunities for lifelong peace education.

7. CONCLUSION

Higher education in Sub-Saharan Africa is undergoing a crisis that poses major challenges with particular regard to quality, relevance, management and funding.

The policies and strategies implemented to meet these challenges have not made it possible to overcome the crisis. It is therefore necessary to undertake new reforms.

The current trends in the development of higher education indicate that lifelong education for all should occupy a central place in the said reforms.

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**RELEVANCE OF HIGHER
EDUCATION**

CHAPTER 5

The Role of the University in the Education Sector

Lameck K.H. GOMA*

1. INTRODUCTION

That the university has a role in the education sector is acknowledged everywhere. However, the actual nature, extent and significance of the university's role is contingent upon particular circumstances: local needs, available resources, good planning, political support and competent leadership. Furthermore, whether such role is readily and widely accepted and valued by the society at large will depend on the standing of the university and the esteem in which the institution is held by that society.

The modern university, wherever it exists, is a leading part of the education system of a country. Indeed, there is a very close interdependence between the university and the other levels of education. Without a sound primary and secondary system, higher education has no solid basis. For the university, therefore, no responsibility of it is greater than that of contributing to the maintenance and continuous improvement of the system of which it is the leading part.

In considering what the university does, can and should do, to contribute to the improvement and enhancement of the quality of education, we should always be mindful of the fact that the coherence of the education system is an indispensable reality. Accordingly, any forward-looking vision of education

* Former Vice Chancellor, University of Zambia.

and any adequate education policy must consider the education system as a whole.

In this contribution, the topic is considered under three subheadings: (1) *Quality Education Under Siege*; (2) *The University to the Rescue*; and (3) *Prospects for New Role for the University*.

2. QUALITY EDUCATION UNDER SIEGE

There can be no doubt that one of the predominant concerns about the educational enterprise in Africa today is the deterioration of quality. In a vast number of countries, the standards of education have declined greatly and the entire education system is at stake; while for some countries, the education provided has always been poor. The factors - both external and internal - that have contributed and continue to contribute to the state of education in the continent are many and varied and they are well known and familiar to

African educationalists. But we should never tire of speaking about them; because, in this matter, silence is not the best way of advancing the cause of good education and what that means for the development and progress of the African continent.

Precarious conditions and resources confront the educational enterprise everywhere in the African continent. As a consequence, the impressive quantitative and qualitative educational advances achieved since independence are now seriously threatened. The root of this extremely complex problem is the unprecedented economic crisis that has afflicted Africa for more than two decades now, combined with the explosive population growth.

Unquestionably, the combination of demographic and economic factors impacts severely on the quality of education. Quality education is expensive (Hallak, 1990). It requires textbooks, equipment, and teaching materials, and teachers must be trained and paid. Some non-salary cost elements are determined by markets -- worse, international markets -- and have to

be paid for in hard currencies (*ibid.*). Africa's rapid population growth certainly creates serious problems for education. For the growth of educational places to keep pace with the growth of school-age children, more schools, teachers, books, and other inputs are required each year, in order to prevent a decline in the quality of the education provided. The pervasive and deepening economic decline and the attendant complex of the debt burden, political and injudicious shifts in priorities, have created irresistible pressures on governments to limit or diminish public-sector expenditure. Accordingly, the capacities of governments to support the provision and development of education have been severely affected. For most African countries, the last decade and a half has been a period marked by attempts to adjust to a series of internal and external adverse economic shocks (ADB,1996). However, a particular casualty of adjustment programmes in the region is education.

The consequences of these adverse circumstances have been catastrophic in many countries. Thus, it has been difficult for many countries to provide enough teachers, enough school places, enough in the way of materials to maintain quality. Education facilities at all levels -- and in particular, at the university level -- have deteriorated enormously in most countries. Moreover, even in those rare cases, where resources exist, these are often not used efficiently. Because the increase in the supply of teachers has not kept pace with enrolments, in many countries the available teachers are severely overburdened and work in overloaded facilities. Under such conditions quality suffers. Although, in the context of adjustment programmes and the dictates of the World Bank, much emphasis is given to primary education, the changes introduced are very often superficial and their impact limited. Often the quality of the education provided at the primary and secondary levels remains quite poor, and its impact on increasing the productivity of school-leavers is limited (ADB,1996). At the university level,

conditions are often worse, as most university campuses are today in a state of total disarray.

Apart from the inadequacy of material, financial and human resources, there is often also the inadequacy of the educational services themselves, reflected in weaknesses in the management and administration of the educational enterprise, training of teachers and their conditions of work, curriculum development, evaluation of a satisfactory quality. Without an efficient and adequate system of management, administration and supporting services, it is extremely difficult to provide education of a satisfactory quality. Many African countries do not have the capacity for managing the education sector that is commensurate with the complexity and vital importance of the field. Inefficiencies keep both the number of students in school and the quality of education they receive much below what the available funds might permit. School principals or department heads frequently lack the training or resources to be effective supervisors, administrators or managers, and it is not uncommon to find secondary schools without any department heads at all (Hallak, 1990). Principals are thus tied to supervisory duties that they have neither the time nor the technical knowledge to carry out effectively, especially in large schools, and it is difficult to see how even a concerted campaign can succeed in raising standards of teaching under such circumstances.

Whatever the organizational structure that may be chosen, there must be team work and proper consultation, both vertically and horizontally, to ensure that the implications of the educational decisions are properly understood by everyone concerned (GRZ, 1977). Furthermore, the role each person is to play in supporting the implementation of the decisions should be clear at every level. This is not happening in many African countries: as a consequence, efforts aimed at the improvement of education are placed in jeopardy.

It can be said that, whatever improvements may be secured by administrative decision in the conditions under which education is given in the schools, the teacher is ultimately the key person upon whom depends the kind and quality of education provided (Adesina, 1988; GRZ, 1977). The success of any educational endeavour, anywhere, will thus depend, to a very large extent, on the adequacy, commitment, professional competence and resourcefulness of the teachers in the system. But if he/she is to enable his/her students to achieve the best of which they are capable, the teacher should have good command of the subjects he/she teaches and be resourceful in translating his/her knowledge into effective learning experiences for his/her students. Good teaching demands that the teacher should not only possess a correct attitude and adequate knowledge of the subjects he/she teaches but also keep abreast of developments in those subjects and in the objectives and methods of teaching. One of the most pressing problems in practically all African countries is the scarcity of trained teachers with a sense of vocation. The vast majority of teachers are not able to exploit opportunities for their professional growth, because of the unsatisfactory conditions under which they work, or find that such opportunities do not exist. So, they continue with outdated knowledge and teaching methods. Then there is the related problem of the ineffective use of the good teacher. Good schools must be shaped around the exercise of good teaching (Goble and Porter, 1977). But this goal cannot be achieved as long as situations exist in which good teachers are baffled by administrative artificialities, overwhelmed by pressures of time and numbers and by unreasonable and unrealistic assignments.

The training of teachers is critical to the survival of any educational system (Adesina, 1988). It is also the key to the provision of good primary and secondary education. The lack of facilities in many teacher education institutions defeats this expectation. However, there is still the problem of producing and

supplying school teachers with the zeal to teach, which affects the quality of the education given in schools. It may be asked whether the training of teachers at the university and/or in associated teachers' colleges is challenging enough to make them want to teach even before they complete their training. Or is it such that they get discouraged right at the start and during the course of their training? Moreover, a significant number of students who take up teacher training do so because they are unable to gain access to their preferred fields of study.

It is one thing to produce the needed qualified teachers, and quite another to retain them in the educational system. The basic problem is the poor salaries and conditions of service and the lack of incentives to the teachers comparable to those which are available to others outside the teaching profession. In many countries, large numbers of children spend a considerable amount of their time in idleness and out of the classroom, because teachers go on strike, demanding better salaries and conditions of service. In many cases, especially in the urban areas, teachers are heavily involved in part-time enterprises at the expense of their full-time appointments. It is extremely difficult to have the badly needed large numbers of stable, devoted, committed and creative teachers, under the prevailing inhospitable environment. Not only are the teaching brains drained away to other endeavours, but also that many of the teachers remaining in the system are highly demotivated. Quality education cannot thrive under such circumstances.

The curriculum is the core of the type of education provided by a country. Today, we live in a scientific and technological era; more and more importance is being attached to the ability to apply the achievements of science and technology to one's work in confronting the developmental problems of the country. But in a vast number of African countries, the curricula and content of education fail to keep pace, often significantly, with the advance of knowledge, particularly in science and technology. It is abundantly clear that the accelerated

pace at which science and technology are advancing, the emergence of new fields of knowledge and new types of activity, and the increasingly rapid evolution of employment patterns and job qualifications generate in turn the need for curricula responsive to these realities as opposed to those with built-in obsolescence (UNESCO, 1985). However, many countries do not have the necessary resources, both material and human, to keep abreast with the evolving new developments, thereby prejudicing the quality of education given when attempting to be modern.

The problem of curricula with built-in obsolescence occurs at all levels of the educational systems of many countries. At the university level, this means that the other levels of the education sector are negatively affected through the university's specific products in the form of teachers and trainers of teachers coming out of the institution. Accordingly, there is bound to be dissonance between the nature and quality of education provided and the needs of evolving societies.

Many African countries do not have the requisite capacity for evaluation of the quality of education provided; while the scope of continuing research in education is not commensurate with the complexity and vital significance of the field. Much is certainly expected from education, which has complex roots in several scientific and technical disciplines, each with its own body of knowledge (World Bank, 1980). But in an overwhelming number of countries, the base and the capacity for analysis and experimentation in education are grossly inadequate compared with most other fields. Experience has demonstrated that unless education systems are well managed and oriented toward research, they will become obsolete, wasteful, and irrelevant to changing national needs (World Bank, *ibid.*). Many countries lack the analytical and managerial capacity to perceive and implement more efficient methods of expanding and equalizing education opportunities without necessarily sacrificing quality.

It is also true that, even where efforts have been made to improve the curriculum, and hence the quality of education, effective implementation has been seriously frustrated by lack of appropriate educational materials, equipment and other resources. On the other hand, some teachers are so set in the way they function that they are unable to become adaptable to necessary changes brought about by the new curriculum. Obviously, the better the teaching methods imparted, the more difficult the task of the teacher, since better methods require of him/her highly specialized knowledge of his/her subject. So, some resist change. But, while his/her knowledge, methods and expertise are important, the teacher's attitude to the new curriculum is even more crucial and can make the difference between reform on paper and reform in reality. Indeed, it has been said that few reforms in the content of the curriculum and method of teaching are of any value until they are understood and willingly accepted by the teachers who are to apply them. For, as C.E. Beeby has observed, "*[a] teacher using a technique that he has accepted but not understood can, by some strange inverted alchemy, turn the most shining idea to lead*".

It is worthwhile to make reference to some special situations in the continent that have adversely affected the quality of education provided. The education provided for the Black majority in South Africa, under the abominable apartheid system, was markedly inferior to white education (Foreign Policy Study Foundation, Inc., 1981). Physical facilities for blacks were poor compared with those for whites. Textbooks in black schools were not equal in quantity to those in white schools. A serious shortage of teachers existed in black communities; and black schools were chronically overcrowded. The training of black teachers was generally poor. The state expenditure on black education was one-fifth to one-third of that on white education. All this was deliberate and part of the grand design of apartheid.. It was to ensure that blacks remained in a position of inferiority, unable to make

progress within the society or to improve their standards of living. That legacy of poor education for the Black majority lingers on after the official end of apartheid. It will take time and gigantic efforts to correct the situation. This is one of the greatest challenges facing the new and post-Apartheid South Africa. Namibia suffered similar injustices, as it was also under the apartheid stranglehold: so has been the challenge of recovery. A number of African countries have been plagued by political turmoil, civil wars, armed ethnic conflicts and genocide, natural disasters, etc. In many cases, the resulting wanton destruction, pillage and chaos have left educational infrastructures in ruins or abandoned and which deteriorate due to disuse. In some cases, both school children or college students and teachers rarely survive the violence. These events have contributed to the creation of a very disabling environment for the education enterprise in which quality suffers greatly. They have led to the incapacitation of many teachers, at all levels of the educational system, from pursuing their professional calling. Many children/youths have their education savagely disrupted and are denied the opportunity of continuing with satisfactory education, if at all (Goma, 1993). Vast numbers of peoples --millions-- have fled their homes or countries and now live as displaced peoples or refugees elsewhere. In fact, Africa has the largest number of refugees and displaced peoples compared to the other continents.

For many of Africa's refugees, who are compelled by circumstances to live in camps, often in deplorable conditions, the question of education is extremely difficult to imagine. How do you organize classes when there are no classrooms, no teachers and no teaching materials? (Lefort, 1994). Text books, exercise books and the like do not figure among the few belongings that these people packed before fleeing. In their makeshift homes in the camps, the main priorities are the provision of water, food and shelter. In such camps or countries that have been ravaged by conflicts, etc, education for emergency and reconstruction that may

be organized and provided, say, by UNESCO and UNICEF, is never conceived to provide a classical education. *"It's simply a rapid response to an emergency situation, a bridge between the void that was created by the war and a return to normal"* (Lefort, *ibid.*). The question of quality is, therefore, not really a matter of priority. Nevertheless, the low quality of education received in refugee situations should be a matter of serious concern to all those with an interest in African education as a whole.

The general deterioration of the quality of education has grave implications for Africa's quest for development and progress. Poorly educated people will not provide the vision, the knowledge and the workforce that Africa really needs in today's world, in order to fight the pervasive state of underdevelopment.

Poor quality in primary education is a serious matter because this is the only formal education that most of today's African children can hope ever to receive and because the quality of primary education plays a great role in determining the quality of higher levels of education. (World Bank, 1988). There is, therefore, great danger that countries may gradually become populated by increasing numbers of inadequately educated citizens incapable of managing their countries - politically, economically, socially and culturally - in a modern increasingly complex world. They will not be able to defend their countries internationally, which may, thus, not only be grossly marginalized, but also become victims of ceaseless exploitation at the hands of more advanced countries. The consequences of poor quality education now are indeed very frightening in the long run. That is why it is necessary to halt the deterioration of the quality of education and for African countries to make greater and sustained efforts for its improvement and enhancement.

3. THE UNIVERSITY TO THE RESCUE

The Harare Declaration of 1982, adopted by Ministers of Education and those Responsible for Economic Planning, stressed the need for the African Member States *"to ensure that changes in the organization of higher education and its curricula and research activities will enable it to make a more substantial contribution to development and to improvements in the education system"* (UNESCO, 1982). However, as we stand on the eve of the Twenty-First Century, the efforts to translate the Declaration into action, so far, have not been spectacular.

The improvement and steady strengthening of education, in keeping with the aspirations of individuals and the needs of national development in all its forms, requires many things. But first of all, there is a fundamental task which has to be undertaken by countries: namely, the definition of national education policies that are sufficiently precise to be able to help in making decisions and the allocation of funds (UNESCO, 1977). The endeavour, then, requires a wise selection of goals: to what ends should education be directed? It also requires the discovery and use of efficient means: what should be taught and how? It requires decisions as to organization, plant, equipment, and administrative arrangements. It requires co-ordination amongst its several elements. Above all, it requires the presence of an adequate supply of able, dedicated, and professionally competent teachers. And this requires an effective system for the recruitment, pre-service education, and continuous professional development of teachers. The role of the university as regards these matters is multiform (GRZ, 1964).

The nature of the pressures on educational budgets and the impact of austerity on the quantity and quality of educational provision are matters on which the university is clearly quite impotent to exert any meaningful or effective influence at all. The university is equally a mere spectator with regard to the complex

factors of political turmoil, civil wars, armed ethnic conflicts/violence and the consequent refugee situation in the continent, which negatively affects education and its quality in the affected countries and exiled communities. However, as elsewhere, the influence of the university on the education systems in Africa is exerted in three main areas of activity: (1) direct training of classroom teachers for schools and of teachers of teachers (teacher educators), and that of specialists in educational research, planning and administration; (2) design and production of academic programmes for teachers' colleges, and work related to academic and professional improvement of college staff; and (3) the conduct of various types of research to improve knowledge available in the education system and thus improve possibilities for improvement of the system itself.

The vast majority of universities in Africa have Faculties and Institutes of Education as vehicles for the pre-service and in-service training of school teachers and the promotion of educational research. The desire and major effort of the universities in this connection has been to produce large numbers of well-trained teachers. This effort has made it possible for many countries to achieve an unprecedented expansion of education since Independence, the replacement of expatriates by local teachers, and the control of educational systems. In spite of the serious and numerous problems frustrating the educational enterprise, it can be said that the production and supply of teachers by the universities has contributed, in no small measure, to the improvement in the quality of education in many countries, especially where gross shortages of teachers have been prevalent. But there is a continuing challenge to the university: it is not enough for university lecturers to tell undergraduate teachers in training that theirs is a dedicated and national service. This enthusiasm and dedication must be demonstrated to them by their teachers both in the professional and academic courses (Fafunwa, 1971a).

The raising and maintenance of professional standards of school teachers must be reflected in teacher education programmes and the quality of those who execute them, i.e., the teacher educators. Teachers' colleges are the main institutions for the training of teachers, anywhere, particularly for the primary education level. But those who teach in them, the teacher educators, are the products of the university. Some of these colleges operate as associated institutions of the university and their certificates are underwritten by the university. This association not only enhances the status of the colleges and that of their graduates, but also the quality of the education given, to the ultimate benefit of schools where the latter go to teach.

The school teacher, whether trained in the university or the teachers' college, should not be satisfied with either his/her present knowledge or his/her professional competence: on the contrary, to be good and to remain so, he/she should make every effort to develop further in order to grasp new techniques and knowledge and cope with the rapidly changing environment and society of which he/she is part. The university has sought to offer and provide opportunities to teachers for their academic and professional growth and improvement. However, general impoverishment confronting the university has imposed serious constraints on possible action in this regard, as in its pre-service teacher education and training.

It is widely recognized that research and innovation, including the development of new educational methods and teaching and learning materials, are often conceptualized, developed and tested by those working in higher education institutions, before being applied in the system as a whole (UNESCO, 1995). This is, indeed, what the universities in Africa have been and are doing, with various degrees of success. In other words, the university in Africa has been and, indeed, is a chief locus of educational research and a leading conductor of educational experimentation. It is a participant,

often a leading participant - with other units in the educational system - in joint efforts to appraise and improve the operation of the system as a whole.

Although the Institute of Education is the normal organization through which the university's educational research and experimentation is conducted, the Faculty/School of Education is often involved; while some universities have established special Educational Research and Development Units or Educational Research Bureaux for the purpose.

The greatest challenge in African education is the question of the curriculum. Accordingly, the reconstruction of curricula, at all stages, is imperative for all African countries, in view of the widespread education of doubtful quality in the continent. Curriculum development is considered a principal element of educational reform and a primary method of resolving educational problems. This must go hand in hand with a corresponding programme in the production and/or provision of new teaching and learning materials, in methods of teaching and evaluation, and in the types of educational technology to be adopted. Indeed, the volume of work accomplished and going on in the field of curriculum development and adaptation is tremendous. However, curriculum development has far too long been confused with revision of syllabi and updating the outline of topics. Moreover, in many African countries, as elsewhere in the developing world, changes in curricula are simply applications of experiences in curriculum development in Europe and North America, paraded in the client countries as innovations. Because curricular innovations are frequently misunderstood by "consumers" of the education system, they are either resisted, ignored, or misrepresented (World Bank, 1980). A good curriculum reflects the total environment in which education takes place: it is dynamic and, therefore, subject to modification from time to time as the situations demands (Fafunwa, 1971a, 1971b). Many countries in Africa are still uncertain as to which direction primary and secondary education should go;

and while the debate continues, it is difficult to settle the question of the much needed improvements in the processes of teaching and learning.

As was illustrated at the 1990 Jomtien World Conference on Education for All, most school systems in the world desperately need an injection of fresh ideas, qualitative improvements and a departure from borrowed concepts. It would be expected that the university is eminently suited to the generation of new ideas in any field. It is, thus, the place where fresh ideas about education and the improvement of its quality must come. Indeed, there can be no doubt that the university has made some very significant and worthwhile contributions to the improvement and renewal of the school curriculum in Africa. Much more needs to be done as the problem is monumental.

There is one critical area which deserves special mention. We live in a world where science and technology have become the dominant culture; but Africa remains mired in a state of pervasive scientific and technological underdevelopment and consequent marginality. The need for a science-led development in Africa is overwhelming. Science education is an integral part of the search for the solution to the problem. In this connection, recognition must be made of the vital importance of the Unesco Science Education Programme for Africa (SEPA), which has been in existence in English-speaking Africa for the past three decades or so. It can also be said that the university has made tremendous efforts to strengthen the teaching of science and mathematics in schools, through both the training of teachers and the improvement of the curriculum in these subjects. The creation and the activities of national associations for science and mathematics education in many countries have had a positive impact. In some cases, the university has provided special remedial courses to students who have otherwise gained entry to it, but with weak school science and mathematics examination results for university studies in science and science-based fields. Also the institution of

university-school partnership ventures/programmes, like the Junior Engineers Scientists Technicians (JETS) Organisation in Zambia, has proved very successful in improving the state of science education in schools.

Principal aim of JETS of Zambia is to popularize science and technology among students in schools. It provides youths with the opportunity to learn and apply scientific principles in the design and construction of technical projects; and it helps them in discovering and appraising their own abilities, aptitudes and interests. It organizes science clubs in schools and science fairs (where the best projects are exhibited by the students themselves) on regional and national scales. It disseminates scientific and technical information to clubs through the magazine JETS OF ZAMBIA, as well as popular science; and it promotes public lectures by prominent experts. The University of Zambia promoted the creation of JETS and is actively involved in its organization at national level.

The acquisition, by the universities in Africa, of the capacities and resources which would facilitate their contribution to the improvement and enhancement of the quality of education is being frustrated by the posture of key international institutions, like the World Bank, and many donor agencies/countries. There is a hardening of attitudes against higher education, with the apparent acquiescence of African governments, or about which they seem quite impotent to do anything. The 1990 Jomtien World Conference on Education for All is being distorted in some quarters in such a way as to undermine higher education. But the Jomtien World Conference on Education for All does not devalue higher education. It states quite clearly that many kinds of expertise and skills will be needed to carry out various initiatives targeted on basic education. "Managerial and supervisory personnel, as well as planners, school [teachers and] teacher educators, curriculum developers, researchers, analysts, etc, are important for any strategy to improve basic education". (Inter-Agency Commission, 1990). But, as it has been clearly indicated earlier, these

resources must be developed, produced, and supplied by the universities and other institutions of higher education. It is, therefore, grossly misleading to suggest that the development and provision of higher education in Africa works against the continent's development and provision of primary/basic education (Ajayi, Goma and Johnson, 1996).

4. PROSPECTS FOR NEW ROLE FOR THE UNIVERSITY

The possibility for the university to play a significant or meaningful new role in the improvement of the quality of education at the lower levels will be affected by a variety of factors. However, in order to create an enabling environment for this important task, the highest priority should be accorded to the building and strengthening of capacities - at the university itself - that are badly needed for the formulation, the development and the implementation of effective policies and programmes. But where the demands far exceed its capacities, the university would have to be highly selective and consider very carefully what it could expect to achieve which would be critical, with the means at its disposal (Ajayi, Goma and Johnson, 1996).

A mediocre university will not be in a position to inspire the country's government and educational institutions at lower levels in the search for quality. It is, therefore, imperative that the quality of education at the university should be distinctly superior for the institution to act with confidence and for it to command the respect of the country and of those it seeks to assist. The Regional Advisory Committee on Higher Education in Africa has argued that, in order to improve the standard of higher education in the continent, specific, coordinated schemes should be undertaken, aimed at students and teachers alike (UNESCO, 1988). Such schemes should be conducted both at the secondary education level and that of higher education itself. The improvement of the standard of higher education depends, in fact, upon

improving that of secondary education. A policy of comprehensive reform should, therefore, begin by improving the quality of school education.

The university should seek to play a leading part in making the case for good education at all levels. This task must be more focussed than hitherto and must expose the dangers of mediocre education to Africa's development and progress. Deficient education can only debase the quality of the products of the system. The goals of schooling encompass more than just academic achievement. Quality pertains also to how well the school or school system prepares students to become responsible citizens and instills attitudes and values relevant to modern society (World Bank, 1988). The needs of Africa demand quality education. This must not be derailed by the politics of poverty that is often exploited by those who beat the drums of the *egalitarian versus elitist* education ideological battle.

Cardinal to the entire endeavour is the question whether the leadership of the country, in its generality, has the courage, genuine desire and perseverance to change the poor state of education. This will be demonstrated by the event of a broad educational vision, clearly defined priorities, realistic strategies for carrying out plans, sufficient independence for educational establishments to attain high overall quality, adequate financial and material resources, sensible use of new technologies and a positive and responsible attitude to creativity and innovation (Diez-Hochleitner, 1996). Indeed, there can be no disagreement with the view that "educational problems can only be solved if those responsible for education are prepared to innovate; an educational policy of more of the same will not be enough" (Dieter Berstecher as cited by Ungerth Jolis, 1995).

In the quest to create an environment that would permit a pragmatic approach to the task of improving the quality of education, it will be necessary to promote and sustain political, social and economic awareness - among opinion leaders and the public at large - of the decisive contribution good education can make, not

only to the resolution of specific critical problems, but also to the badly needed overall development and progress of the country. This would require an intelligent, realistic, ongoing public debate to which all the stakeholders concerned (parents, students, educators, administration, industry, religious and political leaders, trade unionists, NGOs, etc.) would contribute (Diez-Hochleitner, 1996). Serious debate of this kind should avoid point-scoring and offer practical solutions geared to changing circumstances, providing regular and objective quantitative and qualitative assessments that would enable improvements and changes to be fed back into the education system. The university should pioneer and sustain such debate and endeavour.

In addition, the university should consider providing, in its calendar for the year, a period of one week, to be designated as *The Education Week*, devoted to consultations, discussions and reflection on "*The Role of the University in the Education Sector*". The Week could include an exhibition of relevant activities/actions undertaken or accomplished by the university. The essential objective of the endeavour would be to involve the entire university community in a continuing exercise on and assessment of how the institution can best contribute to the improvement of the quality of education, apart from the training of teachers, curriculum development, educational research and professional development and growth of teachers. What the country would, therefore, expect after the events of the Week is not rhetoric, but a clear statement on innovative and imaginative ways that the country should consider, in the task of raising the quality of education generally, but especially at the primary and secondary levels, on a sustainable basis.

Conservatism has been the bane of many and unique innovative ideas in the university. So, for example, educational issues affecting primary and secondary education (curriculum, teacher education, educational research) must always be the responsibility of the School/Faculty and Institute of Education. And

yet those gaining access to the university spread out to several other Schools/Faculties for their studies. Is it, therefore, unreasonable to suggest that these other bodies should, in some innovative ways, become more directly actively involved and, together with the Schools/Faculties and Institutes of Education, engage in the university's task of enhancing and controlling the quality of education at the lower levels?

This will not be easy. But the university is being called upon to be sufficiently flexible to utilize imagination in its structure and in its operations. All universities, however, should be challenged by imaginative ideas (Murray G. Ross in York University, 1964). Indeed, all social institutions, if they are to be useful, must look imaginatively at their purposes and functions, and develop new means by which these purposes and functions will be fulfilled. This is as true for the university as it is for the church, the courts, the school, or the home. One does not need to overemphasize the point, because universities know the importance of imagination very well. We need imagination in the university because imagination is at the root of all fruitful research and scholarly study (Murray G. Ross, *ibid.*). It is the process which produces the hunch, the shrewd guess, the fertile hypothesis, the ability to take the courageous leap to entirely new concepts. A university in which there is not a considerable ferment of ideas is already decadent.

The importance of innovation cannot be overemphasized. For many/some people in Africa, the term "*innovation*" may sound fanciful and idealistic. It is, therefore, important to stress that innovations must be capable of solving practical problems, and accordingly, the university should, as far as possible, concentrate on those programmes that can manage to find fresh solutions to the chronic problems of quality and low learning achievement found in most formal schools in the continent.

The International Council of Scientific Unions (ICSU, 1996) has recently underscored one fundamental reality: science and science-based knowledge and

technology are the driving engines for change in modern society. There must, therefore, be a major increase in the capability of all persons to cope with the scientific and technological culture that is shaping their lives and the lives of their children. To build capacity in science is to enable nations and regions to make use of science and technology for the well being and culture of their citizens. It is now abundantly clear that the Twenty-First Century will be dominated by science and technology to a much greater extent than at present. For Africa to survive and prosper in such a future, it is absolutely essential to increase awareness of the need for a science-led development in the continent. Accordingly, Africa must create a pivotal role for science and technology. "More than at any time in its recent history, Africa now needs to master science and technology and not merely identify with it" (RANDFORUM, 1993). Among other things, this demands the provision of good science education in the schools and at the university. The university is called upon to play a full part in this endeavour through the development of needed/appropriate science curriculum and the training and supply of good science teachers for the schools. This should be accorded top priority.

Nevertheless, improvements in science education must begin early, that is in the primary schools, and then moving, at a later stage, to the secondary and university levels (ICSU, 1996). The challenge to the university is that it should bring the authority of its scientific community to influence and improve science education in schools, especially in primary schools. It is up to the university to consider and determine the best and most effective mechanisms for doing this. In this regard it is important to address the present predicament: the poor preparation of the generalist primary school teachers to teach science and mathematics.

Increasing costs, in a state of general and continuing indigence, are eroding the ability of institutions to secure and/or maintain that critical support that makes the difference between quality and

just getting by. So the university is likely to be constantly in the uncomfortable position of trying to meet its own basic needs and at the same time finding it more difficult to support new initiatives which could keep it current and relevant to the task of improving education, especially at the primary and secondary levels. The situation is compounded by the negative postures toward higher education as indicated earlier. The major financial investments which the university requires, if it is to play a distinct and significant role in the improvement of education, cannot be expected from those international institutions and/or bilateral organizations holding negative attitudes against it. Their familiar group of ideologically-based responses: user fees; links with the private sector; efficiency through various attempts at sharing and regionalization (H.R. Kells in Buchert and King, 1995), will not enable the university to make the needed desired impact. Undoubtedly, "To ignore higher education almost totally in the [World] Bank's overall plans in favour of total focus on needed investments in the lower schools is unwise. This ignores the time needed to build the faculties and facilities of quality which will be needed to respond to the increased and enhanced flow of students coming out of the then improved base of the system." But, for the World Bank, quality seems to be a second-order consideration. Financial adjustment is a precondition for quality improvement, both in higher education and in lower levels (*ibid.*).

The university should always aspire, through its performance, to serve as a model, for the education sector, of a place where acceptable standards of education prevail and are actively pursued. This will be demonstrated by unambiguous evidence of high quality teaching and graduates thereof, scientific productivity, vigorous research traditions, lively postgraduate teaching and a healthy scholarly publications record. In this connection, the greatest challenge for African countries is to take urgent measures to curb the "decline of professionalism" and the phenomenon of

"institutionalized mediocrity" in the university, so that it can contribute to "the creation and maintenance of enduring opportunities for outstanding scholars and scientists to read, reflect and do research that results in the production and application of relevant knowledge" (David Court in Buchert and King, 1995). Whatever efforts are made, the threat of the brain drain in a global incentive system is likely to become ever more serious. In a situation of institutional deterioration, such as Africa is experiencing, the best hope probably lies in strengthening networks of individuals and a collective sense of academic commitment, pending the revival of universities themselves (ibid.).

The importance of consensus on 'purpose', before embarking on new ventures, cannot be overemphasized. The setting up of institutional structures before anyone discusses what they are for is one explanation for the resilience of academic drift (Burgess, 1977). Universities, like governments, may have all kinds of aspirations, and may seek all manner of innovation, but they typically try to achieve their ends through inappropriate means. They establish a new institution (an institute, a faculty/'school' or department) with most of the features of a traditional model to do a new job, without asking whether these features are apt for the new purpose. So innovation falters, and original intentions are neglected or even reversed (ibid.). "Often administrators make a virtue of purposelessness by claiming to be somehow 'neutral': 'What's best administered,' they seem to be saying, 'is best.' On this view good administration depends not so much on purpose as on objectivity. Unfortunately the claim to objectivity is spurious: even in the most high-minded civil services it is a cover and excuse for an unacknowledged point of view". It is, therefore, important for the university to secure the greatest possible consensus of its own community to support any worthwhile ventures targeted on improving the quality of school education.

In the search for a new role for the university in the task of improving and enhancing the quality of education in schools, we should be mindful of the fact that we are now on the threshold of the Twenty-First Century. In terms of education, those who are born today will be in the primary schools in the first decade of the next millennium and in the secondary schools and the universities in the second decade. Those who are already in the schools will be in the universities in the first decade. Thus, the children who might benefit from any desired new role that the university might play in the education sector will be adults in the society of tomorrow. That society and its environment will no doubt be different from our present one. Accordingly, whatever the university might do should take into consideration not only the immediate but also the distant future, when the school children of today will be living and participating in the different aspects of their lives and countries as adults who will have received education of the quality available to them. The challenge for the university is what and how it can do best in contributing to quality education and, at the same time, to see that the schools and other educational institutions will not be educating, training and producing people to meet the needs of yesterday.

5. CONCLUDING REMARKS

According to the Delors Commission, *learning to know, learning to do, learning to live together and learning to be*: these four pillars should be the foundations for any educational vision in the 21st century (UNESCO, 1996). But these pillars will not stand on the shaky foundation of education of mediocre quality.

Improving the quality of education which is in serious decline, to any significant degree, will demand vast amounts of money, which many countries in Africa do not have. But equally important will be the need for improvement of non-monetary inputs, like creative planning, efficient implementation and

administration, creation of a climate of sustained hard work, improvement in the motivation of teachers and students, superior performance in the education and preparation of teachers and so on. It can be argued that the much decried economic crisis has often been used as a pretext for the widespread impotence to react imaginatively and innovatively to the realities confronting education at all levels.

It is easy when discussing suggestions for improving the quality of education to lose sight of the practical problems of realizing some of these goals. It is, therefore, important for educationists at the university to be able to move with elegance from high theory to mundane practice: that is an equally essential task for them. Educational ideas, however intellectually sound, must survive contact with reality (Burgess, 1977). Indeed it is in the mutual stimulus of theory and practice that educational advancement is to be sought.

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CHAPTER 6

Relevance of Higher Education Policies and Practices

Florida A. KARANI*

1. PRINCIPLES AND PHILOSOPHY BEHIND THE FORMULATION OF HIGHER EDUCATION POLICIES IN AFRICA

1.1. The historical Factors and its Influence on Policy

Early origins of higher education in Sub-Saharan Africa may be traced to Tombouctou in present day Mali where studies in astronomy, geography and Islamic studies flourished between 943 and 1526 ; and Fourah Bay College in Sierra Leone which produced its first graduate in 1879. Makerere College in Uganda, Achimota in Ghana and Yaba in Nigeria were offering post secondary education by 1935. However, it was not until after the second world war and the Asquith Doctrine of University development in Africa (which recommended that Universities be developed as detached and self sufficient communities, since effective education could only happen if students were isolated from their cultural roots) that higher education in sub-Saharan African began to assume a definite thrust.

Higher education institutions were founded in 1948 at Ibadan in Nigeria and Legon in Ghana and Makerere in Uganda in accordance with the Asquith model. They

* Deputy Vice-Chancellor (Academic Affairs), University of Nairobi and Professor of Education.

also had special relationship with the University of London. They were constitute Colleges of the University of London after which they were patterned and which they imitated. Similarly, in Francophone Africa, the University of Dakar in Senegal founded in 1957 and the Centre d'Etudes Supérieures in Côte d'Ivoire which achieved University status in 1964 were paired with the Universities of Paris and Bordeaux respectively for accreditation purposes. The first Universities were few, by 1960, the eve of independence for many Sub-Saharan countries there were only six (6) Universities. In addition to the physical and cultural detachment the colonial model entailed the imitation of European Universities. Their purpose was:

"to nurture and sustain an intellectual elite through similar organization, similar procedures, similar curriculum"

Initially the emphasis was on humanities, later extended to include social sciences. For example throughout the 1950s, the University College of Ibadan had courses in Latin, Ancient Greek and ancient history ; but no courses in medicine, engineering, economics geology or public administration; the development of academic programmes at Makerere University College was similar. The syllabi were heavily dependent on imported texts and expatriate staff. Research was seen mostly as a useful adjunct to teaching, rather than being instrumental to the productions of relevant knowledge and technology to be applied in the fields of education, agriculture, the environment, health, shelter and clothing, food, transport, water and energy to help create a scientific community. Research was also conducted mainly by expatriate staff.

Implicit in the historical development are trends that influences early and subsequent evolution of higher education in Africa becoming with view to relevance and the place of higher education in Africa:

- the restricted nature of higher education;
- physical and cultural detachment;
- elitism;
- narrow curriculum with emphasis on humanities and social sciences.

Colonial authorities did not believe that the African was capable of benefiting from formal education. In 1926 for example, colonial authorities in East Africa ordered a study to establish that the African was incapable of benefiting from formal education. The study which was conducted by a non neurologist on the brain of Africans who died in hospital concluded that the brain of an adult African was immature and equivalent to that of a seven to eight year old European boy. The colonial administration established a few educational institutions out of necessity to train a limited number of Africans to serve the colonial Government in low level personnel positions. Such denial and prejudice underpins the thirst and demand for education that has been characteristic of educational evolution both during the nationalist movements and in the post independent era.

Missionaries were instrumental to the establishment of a limited number of educational institutions initially at elementary level, and later at the secondary level, aimed at promoting and facilitating missionary work and building a conducive social environment.

Even with such sparing beginnings at elementary and secondary levels, the quest for the third level of education was inevitable.

Following the attainment of independence, the skeleton higher education institutions were valued as symbols of prestige and national attainment for their provision of high level, skilled manpower to replace

departing expatriate staff, and for their contribution of knowledge and ideas, but adherence to the colonial model was inhibiting the ability to respond to the needs of the societies of the emerging new nations. The new systems of higher education were unable to deliver scientific and technical training to Africans in fields of critical socio-economic importance. For example by the early 1960s Universities in British Africa had produced only 150 graduates in Agriculture, while in Francophone Africa, there were less than six.

1.2 Factors in the search for a relevant Model

In the decades subsequent to independence evolution of higher education policies has entailed a search for a relevant model to meet development needs. This has involved adaptation and modification of the inherited model. A process which has necessitated the formulation of policies that address these factors are discussed below. But one should not assume a single model for all the Sub Saharan countries. The unique environment in each country, and the character of each Institution, have influenced the emerging types of Institutions.

(i) Expansion as a response to increase demand for higher education

The rapid expansion of primary and secondary education as a response to years of colonial neglect, and the growing demand for advanced training have created pressure for increased enrollment in higher education and hence the demand for *expansion in enrollment and physical facilities*. The need for policy guidelines on higher education enrollments that take into account the extent of demand, available resources and capacity, appropriateness of training and job opportunities, is evident.

Increased demand for higher education has also encouraged the establishment of more Institutions of higher learning, both through Government and private initiatives - a development which also *necessitates the establishment of a system of coordination, monitoring, and supervision*, in order to control and guide growth, to maintain standards, and to protect the interests of the students and the society.

In Francophone Africa for example, the average rate of growth in higher education enrollment between 1970 and 1980 were the highest the world i.e. 20.7% compared to 11.3% for Anglophone, and 3% for USA.

The University of Dakar originally designed for 3,500 students, enrolled nearly 20,000 students in 1991.

In Kenya, another example, the number of Universities has grown from one public University College in 1964 (the period immediately after independence), to 5 public universities and 12 private universities today (1997) while enrollment in public universities has grown from approximately 700 in 1964 to 45,000 undergraduate students today. As early as 1984, the Government found it necessary to direct that:

"undergraduate enrollment will be limited... to be accompanied by diversification of courses..., while postgraduate training will be accelerated... the Government will also encourage the private sector to establish additional private Colleges and Universities but will ensure that they conform to the educational objectives stipulated by the proposed Council for Higher Education."

The Commission for Higher Education today fully fledged, coordinating, controlling and supervising Higher Education, was established by Act of Parliament in 1985, to control the establishment and growth of higher education institutions in Kenya. Nigeria was the

first country in Africa to establish such a body - the Nigerian Universities Commission, other countries are - Ghana, Zimbabwe, Tanzania, Uganda and Botswana are following the example, but it is evident that there is need to strengthen the capacities of such bodies to enable them to carry out the job of planning, controlling and regulating higher education effectively.

In the policy cited above, the need for regulating enrollments and funding alternative ways of coping with demand, diversification of curriculum to include science based courses and the control of the development of higher education is evident.

(ii) Gender differences

The enrollment factor is also characterized by low enrollment figures for women. In Francophone Africa, gross enrollments for females range from 0.2% in Niger to 1.8% in Côte d'Ivoire. In Kenya, the proportion of women enrolled in public universities is 25%. Preferential admission policies to increase the proportion of females students and that of the needy (discussed under cost below) will help achieve equity. There is therefore need to introduce policies explicitly designed to give priority to equity objectives.

(iii) Cost: Strengthening the Financial Base of Higher Education

A development challenge posed for Higher Education in Africa is that the growth of public resources for higher education is the unlikely to keep pace with the ever-increasing budgetary demands of the expanding higher education system; and the large capital required for continued capital development. It is estimated that in the 1980s public expenditure per student in Sub-Saharan Africa declined from \$6,300 to \$1,500.

Inadequate resources has affected the quality of higher education teaching and research. It is also reflected in inadequate staff, and the deteriorating infrastructure ; lack of books; equipment and computer facilities ; lack subscription to Journals, lower volume of research and reduced number of seminars.

Hence the need for policy guidelines to facilitate the *identification and diversification of new sources of finances* that are so crucial in bringing about improvement.

It has been demonstrated that the financial base of higher education can be strengthened by:

- (a) Mobilizing a greater share of the necessary financing from the students themselves, hence the move to the direction of cost sharing which require students to meet a portion of the tuition fees, while at the same time, subsidies for non instructional costs are eliminated. Parents contribution to the cost of their children's higher education will increase inspite of concern that such increase will affect equity.

Support for needy student

Many families in Sub-Saharan Africa live below the poverty line. Poor households with members of their family enrolled in higher education, may not be able to afford University fees; hence the necessity for a policy on financial support for needy students. Several countries such as Kenya and Nigeria have put in place a bursary and Loan's system which help such students to secure financial support to access higher education. In Kenya, this practice started in 1984 in fulfillment of Government policy which stated that "the Government will consider assisting needy students with bursaries and/or scholarships".

- (b) *Mobilization of donations and endowment from Alumni and Private Industries*, can contribute towards broadening the financial base of higher education.
- (c) Generating additional funds from *income Generation Activities*. Governments can encourage this base by removing the practice of reducing allocation against income generated, as this kills incentive to generate income.
- (d) Providing for *self supporting students* who meet admission requirements, and can meet the full cost of their higher education. Many students who meet the minimum requirement for admission to Institutions of higher learning are left out because of limited resources and capacity. Guidelines are needed on the admission of such students who would meet the full cost of their higher education; as this can contribute to the cost of running and developing higher education. Makerere University in Uganda has implemented this policy with great success, whereby students who meet minimum University admission requirement, but lower than required for subsidized students, and wish to be admitted and pay the full cost, are admitted.
- (e) Availability of additional places created through the establishment of *Private Universities* where the student meets the full cost of his/her education, makes it possible to offer higher education to more people at no extra cost to Treasury.

Given the crisis in higher education caused by adequate funding, it is evident that there is urgent need to strengthen policies on cost and financing of higher education with back up strategies on the identification and diversification of new sources of funds.

2. RELEVANCE OF HIGHER EDUCATION TO ITS MISSION AND THE CULTURAL AND SOCIO-ECONOMIC REALITIES OF THE ENVIRONMENT

Adherence to the colonial model characterized by detachment and elitism ethos as observed above has been seen to inhibit ability to respond to the needs of African societies to which the institutions belong.

The search for relevance has been led by national Governments and the institutions of higher learning themselves while at the same time proposals and formulation of long term policy goals and mission statements has been conducted at high level inter African Regional Conferences.

As early as 1966, Julius Nyerere, first President of the Republic of Tanzania, observed that:

"the University in a developing society must put emphasis of its work on subjects of immediate moment to the nation in which it exists and it must be committed to the people of that nation and their humanist goal".

On the same issue, Aklilu Habte a former Vice Chancellor of the University of Addis Ababa stated that :

"the truly African University must be one that draws its inspiration from its environment, not a transplanted tree, but one growing from a seed that is planted and nurtured in the African soil".

In 1962, the UNESCO Conference on Higher Education held in Tananarive stressed the need for African Universities to integrate in equal measure the classical mission of production, transmission, and utilization of knowledge, and those of promoting knowledge about the African cultural heritage contributing to the reinforcement of independence and African unity.

At the Organization of African Unity Economic Summit of member states held in 1980 and at the follow up Plan of Action held in Lagos, the discussions and resolutions underscored the critical importance of education and stressed the need for internally directed development, self reliance and autonomy.

At the UNESCO policymakers Conference held in Harare in 1982 to assess the evolution of education on the continent over twenty years, and at subsequent meetings held in Dakar in 1984 and 1987 respectively, five key shortcomings were identified, and three goals were set to help bring about improvements.

Shortcoming

- Inadequate human resources especially in research areas critical to development.
- Irrelevance of overseas studies to local needs.
- The superfluous nature of University research, which is mainly motivated by the need to publish, rather than the need to deal with concrete problems of development.
- The artificially cloistered quality of diverse disciplines.
- The imbalance between scientific and literacy (humanities and social science) studies.

Goals

- Improve the quality of African higher education.
- Promote greater common utilization of competencies capacities across the continent.
- Harmonize higher education policies among African countries.

On this issues Ashby states that:

"the social propose of a University in Africa differs from its traditional social purpose in Europe. In Europe, universities stand for continuity and conservation in Africa Universities are powerful instruments of change".

These policies have yet to be fulfilled and hence the need for making them a reality by putting in place implementation strategies, programmes, and time-frames.

It is evident that Higher Education in Africa must do more than just to propagate knowledge for its own sake, it must be instrumental to development - changing the conditions of the common man and woman. Universities can play a developmental role as inventors, experts, promoters, and interpreters of scientific and technology to help create scientific communities.

Curriculum reforms taking place in various Institutions of Higher learning are in pursuit of this objective. New degree programmes have been developed to replace irrelevant programmes, and there is increasingly more use of locally authored texts, however, it should be noted that not every aspect of the curricula can be Africanized given the universal nature of certain truths in the various disciplines. What is required is a new working definition which translates knowledge into development. Constraints pertaining to inadequate facilities, equipment and lack of instructional material, and crowding which hinder effective implementation of curricula thus affecting quality, need to be addressed.

Research

Apart from publication for the sake of it and being a useful adjunct to teaching, research should produce

scientific knowledge and technology that can help bring about social, cultural and economic change that will help improve the lives of the people.

In the Science Citation Index (SCI) developed to capture the Worlds most influential research, of the estimated 50,000 to 70,000 Scientific Journals published world wide, almost all of them are published in Western countries. In most Sub-Saharan production of Scientific papers in mainstream research is insignificant. Kenya and Nigeria which have large University systems which have expanded rapidly in the recent years and have shown themselves less vulnerable to changes in their research environment are reported to have increased their output of mainstream research during the decade 1977-1987, but they did not grow as fast as world science. In Ghana and Uganda output declined by 67% and 53% respectively during the same decade. This is attributed to the economic and political difficulties experienced in the two countries; Ethiopia, Sudan, Madagascar, Angola, Mozambique and Zimbabwe, also registered major declines.

Mainstream research that involves publishing in Western Journals achieves international visibility for the African researchers, but there is evidence that national ability to produce mainstream research is functionally linked to national ability to produce research that is less visible internationally but one that is important for local industrial, agricultural and rural utilization.

There is need for countries to draw up research agendas, and to prioritize them in relation to socio-economic needs. Funding, and provision of research facilities and training are crucial perquisites.

Foreign donors are a major source of research funding in most African countries. There is a need to examine the donor factor with a view to ensuring that it subscribes to national research priorities.

The development of graduate programmes both at the Masters and Ph.D levels in which research is a major component and the shifting of research from being a foreign activity to become a valued recognized and key pursuit in University academic programmes, are evidence of the indigenization of research in Universities in Africa, which is breaking some ground in assisting the understanding of pressing problems of rural life, and other indigenous issues.

There is need to develop infrastructure sufficiently to support research efforts. Some of the constraints encountered include limited financial resources, few senior researchers, inadequate research facilities, inadequate integration of research findings into planning and lack of diffusion of applied research results by the communities because of ignorance, lack of education, and high level of illiteracy.

The need to develop and sustain a critical mass of academia and to build capacities capable of servicing the curriculum effectively and doing research calls for effective staff *development* plans and programmes which also require adequate financing. The question pertaining to overseas training and ascertaining of academic equivalence of persons trained in different countries has not affected teaching and research.

According to Eisemon and Davis:

"the development of competitive national economics based on technological capability requires a close coordination between national economic, scientific and educational policies as well as large, diverse, systems of higher education that can supply highly skilled human resources that are sources of innovation as well, such countries invest substantially in higher education and University research. Their referents are scientifically developed".

The deemphasis of investing in the consolidation of a well developed higher education system, can only be done at the expense of delaying the creation of scientific enlightened communities in Sub-Saharan Africa.

3. HIGHER EDUCATION WITHOUT FRONTIERS

Dependence of higher education on face to face contact with teacher is responsible for the restriction to the elite - a limited number who can access it determined by limited capacity.

New means of education are required for wider access. Distance education is already helping to widen the opportunity for higher education for example the Open University in Tanzania, similarly in Botswana, Swaziland, Zimbabwe and Uganda.

Through distance education including print, electronic media, higher education can be availed to a wider population than that currently catered for. This can help to address the problem of demand which it is not possible to satisfy in the conventional type of higher education institutions. This strategy can also provide room to meet the tertiary level educational needs of a diverse audience, including adults whose social commitments make it impossible to access the conventional higher institution.

4. PARTNERSHIP WITH PRODUCTION AND SERVICE SECTOR

The relationship between higher education and the world of work in Sub-Saharan Africa has for a long period of time been characterized by : largely theoretical programmes which do not prepare the students adequately for the world of work ; overconcentration in the humanities and social sciences surpassing the absorption capacity of the national labour market, while there has been a serious shortfall and undersupply in the science based sector. This problem

has been aggravated by the economic recession and discontinuation by many Governments of the policy of automatic employment in the civil service of all persons who complete their studies.

Polytechnics, instead of developing areas of excellence in technology have tended to be upgraded to Universities. This has perpetuated the already severe shortage of middle level manpower. This means that the ratio between graduates and technicians continues to be imbalanced and therefore not effective in facilitating production for national development. This is largely fuelled by wages structures which reward according to levels of certification. There is thus very high pressure for degree courses even where the investment even is evidently needed in to technician training.

Sensitivity to this problem has produced a number of initiatives over the years intended to facilitate and enhance the contribution of Universities to National development. These need to be improved and expanded for greater impact.

Some programmes now have an unbuilt *utilitarian function* which involve practical work study arrangements. For example, teacher education programmes in all public universities in Kenya and at the Universities of Abidjan, Bamako, Dakar and Niamey have a teaching practice component which require student teachers to teach in schools in part fulfillment of the degree programme requirements.

There are also examples of practical oriented programmes introduced eg the Entrepreneurship degree course at Jommo Kenyatta University of Agriculture and technology in Kenya. Some of the programmes in Medicine, Engineering, Agriculture, Law et cetera involve field attachments, community service, or internship as an integral part of the training.

There is also a move in the direction of cutting back intake in the humanities and social science programmes, while encouraging, promoting and stepping up of intake in the science based programmes.

Universities are moving in the direction of enabling students subjects to meeting admission and faculty requirements, to enrol in programmes of their choice based on criteria of job opportunity and relevance in the job market, rather than the practice of drafting them into programmes that are not of their choice especially the arts based. This may help to cultivate a more motivated, serious and committed student.

University research activities should facilitate development through inputs into agriculture, industry and modernization. The manipulation of scientific activity by Government should help create modern societies.

5. THE CONTRIBUTION OF HIGHER EDUCATION TO THE RENOVATION OF THE GLOBAL EDUCATIONAL SYSTEM FOR NATIONAL DEVELOPMENT

It was stated above that a major constraint preventing the diffusion of research results is ignorance, lack of education and illiteracy, but also the concept that education is only for the elite has led to the educated persons developing a distance to the general population.

Universities can be laboratories for innovation and the renovation of the educational system and subsequently the society. Universities can be important centres of experiment and discovery through extension services home study, correspondence courses radio television, programmes and in this way, spread knowledge beyond the narrow limits of the campus in such areas as those discussed below. In *education for citizenship*, the individual can be helped to come to terms with their environment and their people, and to

gain an understanding of their own culture, history, legends, art, music, dances, social structures starting with the family, community, nation and the world.

Through *adult and continuing education* parents can become enlightened. This has advantages both for the family, the children and the community by virtue of being facilitated by enlightened adults.

In *rural basic education* programmes including adult education, agricultural education community improvement projects domestic arts and literacy in which the curriculum may be characterized by functional education, which would emphasize fundamental education in basic facts and skills needed in each persons daily lives, can help create enlightened communities.

Health education in disease prevention and cure, stressing social aspects of diseases as well as community action programmes for public health, programmes in homemaking, nutrition, food preservation, disposal of waste et cetera would help create health aware communities.

In other words, higher education need not stop at the theoretical academic level, it can as suggested above propagate functional education. Modern educational technology-both print and electronic can be utilized to liberalize education and to share expert and functional knowledge globally.

6. CONCLUSION

It is evident that the need for reform in higher education has accumulated a lot of policy formulation initiatives in Africa, but there are gaps. The policies in place need to be reactivated, and policies has been ineffective. The reform policies very quickly become part of the old traditional pattern. Much less change has taken place than the policies have intended. One of the reasons for this has been lack of accurate programming

and lack of subsequent monitoring. Thus as we approach the 21st Century - a reactivation of policies in higher education, filling gaps and an intensive programme of implementation of those policies monitoring and evaluation of achievements will bring a new functional face to higher education.

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CHAPTER 7

Relevance of Higher Education with a Special Reference to East Africa

Joseph M. MUNGAI*

1. INTRODUCTION

Relevance of higher education depends on the suitability of the impacts that its graduates make in relation to the requirements of the world of work, no work, industrialisation and socio-economic development in general. The impacts which the graduates make in all these aspects of society are themselves dependent on the knowledge, skills and consciences that higher education has inculcated in them. Apart from the knowledge and skills which the graduate needs to tackle given tasks, conscience is of vital importance as it determines the development of work ethics in the graduate. This in turn determines the manner in which the graduate applies his/her knowledge and skills.

In Africa, there are problems of underdevelopment such as poverty and high levels of dropping out of youth from educational institutions. The majority of children do not complete primary education, with girls predominating. This in turn means that the enrolments of girls in higher education institutions remain relatively low. Growing numbers of these girls are going into youth prostitution. The entry of AIDS into the scenario has made this development a real threat to survival. Since twice as many girls as boys are infected

*Secretary, Commission for Higher Education, Nairobi, Kenya.

by AIDS, future motherhood will literally mean a perpetuation of the catastrophic epidemic.

2. IMPACTS OF HIGHER EDUCATION

2.1 The world of no work

Although relevance is primarily concerned with the world of work, the world of no work in Africa is also of vital importance in national development because of the negative effects it has. This is a world which annually absorbs the large numbers of youth who drop out of the educational institutions. Poverty is forcing these young persons into prostitution for girls and drug abuse for boys and girls. These developments soon become a major drain on the national economy. Higher education has two very important contributions to make to this world of no work, namely continuing education and co-operative education.

- (i) Continuing education is the only way of providing education to the rising numbers of early school leavers. In Kenya, for example, school enrollments have been dropping with more than half of primary school goers not completing that level of education. The majority of those dropping out are girls. Considering the vital roles played by women in family, population and economic matters, it is vital that most of them acquire education of at least secondary school level. Apart from early school leavers, society in general does need lifelong learning and training, provided in the form of continuing education, to working personnel to meet continually changing developmental needs.
- (ii) Co-operative education can be given both in and out of school. It is vital in enabling those who are unemployed to get together and undertake socially and economically gainful activities.

2.2. Higher Education and Industrialisation.

The processes of industrialisation will need graduates who have had industrial and field

attachments to produce graduates who are able to learn new entrepreneurial skills and to create jobs.

2.3. Higher Education and Sustainable Human Development.

Human resources development provides the vital and resourceful driving force for all other aspects of development. Human resources are the only resources that are resourceful, a characteristic that is necessary in determining the most appropriate manner of utilising other resources.

3. PROCESSES OF HIGHER EDUCATION.

3.1. Renewal of Teaching and Learning.

Renewal of teaching and learning will involve issues of content and delivery. It will also affect the functions of higher education with regard to teaching, research and resulting services. In this connection, work study programmes are of vital importance in exposing students to practical aspects of their studies.

3.2. Strengthening the Research Function

Research is a function of higher education. It is a pre-condition for social relevance and academic quality. Research is also a very sensitive performance indicator for a university institution. This is well illustrated by the pattern of research done in the College of Health Sciences at Kenyatta National Hospital (CHS/KNH).

Most of the clinical research done in Kenya has been based at CHS/KNH. Since 1967, this output of research has been due to the effect of the medical school. With the establishment of the medical school in 1967, a group of expatriate scholars were recruited from the Universities of Glasgow, Padua and McGill. These expatriate scholars, plus a few of the Kenyan scholars who were there then, had an obvious effect on the research output from the country as a whole and CHS/KNH in particular. The result was that, with effect from 1971, Kenya established itself as the leading contributor of research publications in the East African

Medical Journal (EAMJ) (Figure 2). Furthermore, CHS/KNH where most of the medical school scholars were located, was contributing 60% of the Kenyan publications in the journal.

The importance of the medical school as a vehicle for enhanced research output is illustrated in Figure 3. Before the establishment of the medical school in 1967, KNH was producing fewer research publications for the EAMJ than other health institutions in the country. In 1969 however the contributions from KNH and the other health institutions were equal and then, with effect from 1970, CHS/KNH became the leading contributor of the publications in the EAMJ.

With the departure of the scholars from Glasgow, McGill and Padua between 1973 and 1976, Kenya witnessed a decline in health research output. However, CHS/KNH was still contributing 60% of the publications in the EAMJ. This was because, by then, the medical school had recruited a core of indigenous scholars, most of whom were based at CHS/KNH. Furthermore, the postgraduate programme had got under way, with the first Master of Medicine postgraduates completing in 1976. The pattern of enrollments of postgraduates in the medical school is shown in Figure 4. The graph shows a close relationship between the pattern of postgraduate enrollments and that of research. The two patterns represent the solid foundations for making CHS/KNH a stable and productive centre of research through investment in the indigenisation of scholarship.

In 1981 Kenya reached an all time high as the leading contributor of research in the EAMJ. CHS/KNH had completely overshadowed other health institutions in the country and contributed over 80% of the publications from Kenya that year. However, although Kenya continued to be the leading contributor to the journal, the highly publicised managerial problems of KNH resulted in so much uncertainty that, by 1985, the country's and hospital's contribution of research publications had dropped considerably. In 1986 the CHS/KNH contribution

dropped to 50%. This declining trend was completely halted and reversed by the gazettelement of the KNH Board as a parastatal by the President in 1987. This action resulted in the immediate restoration of confidence and improvement of the leading position of Kenya in health research between 1988 and 1991. Furthermore, CHS/KNH has recovered and maintained its position of contributing over 60% of the country's research publications in the EAMJ and some 30% of the publications of an entire issue of the journal.

3.3. Postgraduate Studies

Postgraduate studies in universities are largely an integral part of research work. Development of postgraduate policy is, therefore, closely related to development of research policy.

The National Council for Science and Technology of Kenya was set up by the Science and Technology Act of Parliament (1977) to provide mechanisms for research. In this connection, the Council co-ordinates the research done in the Kenya Medical Research Institute, the Kenya Trypanosomiasis Research Institute, the Kenya Agricultural Research Institute, the Kenya Forestry Research Institute and the Kenya Marine and Fisheries Research Institute. The Council has also financed research carried out in universities and individuals. However, this financing recently stopped for a period of five years. This problem has served to highlight the need to popularise science to ensure public support for investment in research (Mungai, 1990).

In 1980 the Government adopted a science policy in which it undertook to spend up to 1% of GPD on research. Although the current level of expenditure is only about 0.4%, it is still a major indicator of the policy commitment of the Government in research and the related post-graduate studies.

In 1988, the Government issued the Sessional Paper No. 6 which contained the following policy statements on research, postgraduate studies and staff development:

- Universities should establish ways and means of raising funds from the public and private sectors to strengthen university research;
- universities be provided with adequate funds to expand postgraduate programmes to meet the demands for national manpower training and promotion of research;
- universities should ensure that postgraduate students, tutorial and research fellows devote adequate time on their studies and research in order to complete their programmes on time;
- universities endeavour to train their academic staff in the basic concepts of universities teaching methodology and in guidance and counseling;
- university academic staff who are involved in the training of teachers should combine both academic or vocational qualifications and professional training in education;
- adequate capacity and capability be developed in Kenyan universities to enable them train national manpower in all specialised areas.

In general, therefore, a national policy does exist to promote and finance research and postgraduate studies. What is lacking are mechanisms for determining the requirements in the various specializations. A lot of the postgraduate research which is done is dependent largely on the interest of the individual specialists concerned. However, wherever the Government has indicated the need for any particular type of research to be done, the institutions have always responded positively. In this respect, for example, Kenya is one of the main producers of pigeon peas in the world. This result was achieved in the University of Nairobi after cross-breeding a drought resistant variety (Kenyan) with a high yielding variety from India.

During negotiations with the World Bank for the Universities Investment Project Credit it was agreed that post-graduate studies in the public universities would be rationalized in the same way undergraduate

programmes have been. It was also agreed that the student loan scheme would be extended to post-graduate studies.

Traditionally, the ratio of postgraduates to undergraduates has been targeted at 10%. However as shown in Table 1, only the University of Nairobi has been able to maintain that ratio. There is thus a major shortage of postgraduates. Considering that staff development for universities and research institutions is heavily dependent on postgraduate studies, this shortage is bound to have serious effects in the long term. It will make it difficult to expand universities and other aspects of post-secondary education and training due to shortage of specialised teachers. This will in turn make it difficult to achieve the desired levels of total quality education and training by the year 2010. Yet these levels of total quality education and training will be necessary in enabling Kenya to become a newly industrialized country by the year 2020. The shortage of postgraduates will also make it difficult to produce the specialized personnel who will be required by the economy as a whole, especially that of industrialisation of the country.

Table 1: Numerical and percentage relationships between undergraduates and postgraduates in public universities

	UNIVERSITY	UNDER-GRADUATE	POST-GRADUATES	TOTAL	% RATIO
1	EGERTON	7. 702	74	7. 776	1. 0
2	JKUAT*	2. 935	10	2. 945	0. 3
3	KENYATTA	8. 093	74	8. 167	0. 9
4	MASENO	1. 429	7	1. 436	0. 5
5	MOI	5. 245	176	5. 421	3. 0
6	NAIROBI	12. 546	1. 393	13. 939	10. 0
	TOTAL	37. 950	1. 734	39.684	4. 4

* Jomo Kenyatta University of Agriculture and Technology.

Source: Returns from Public Universities for 1995 /1996.

3.4 Policies and Strategies for Reinforcing Training and

Research

One of the most glaring deficiencies in African countries is the lack or ineffectiveness of the mechanisms which the countries require in order to utilise research results for development (Mungai, 1994a). In a country like Kenya a considerable amount of research has already been done. However, at the national and institutional levels, the utilisation of the research results is either lacking or ineffective.

National policies are therefore necessary to enable the countries to utilise research results for national development. An example of this is provided by the African Forum for Health Sciences, based in KEMRI, Nairobi, which has set up a book-producing Symposium Committee as part of its annual congress. The Forum aims at producing, annually, an advanced, university level research-based learning material. In preparing for each book the Forum will bring together 15 - 20 scholars who are involved in research of a particular topic. A lot of the contributors to the book-producing exercise come from the public universities. Strategies which are needed to achieve this kind of activity include capacity building in institutions of higher education and processing of research results for production of advanced learning materials and other goods and services which are needed for national development.

In order for this kind of work to develop into a culture of scholarly activities, there is need to establish an index of topics of research which has been done or is being done. In Kenya this is the responsibility of the National Council for Science and Technology which therefore needs to be strengthened. In the meantime, the Commission for Higher Education has been preparing an index of research which has been done in public universities. The Commission has also been collecting the titles of postgraduate thesis and dissertations from public universities.

3.5. Internationalisation of Higher Education

University education is universal by nature. The scholars in universities are international. This status has been sustained by communication among scholars in conferences and publications. University scholars must continue to make global contributions. However, it is necessary to ensure that the current globalisation of information technology does not destroy the simpler communities who depend heavily on their traditional values for identity and survival. Higher education can play a vital role in codifying and universalising the values of such communities so that they are protected at the national level.

3.6. Relations with society as a whole

The role and place of higher education in society is well demonstrated in the contribution of research to quality of health care (Mungai, 1993). Quality research, namely research which is internationally refereed and published, is essential for quality health care. One of the reasons for this is that, if appropriately applied, research results are very effective in helping to make health care policies to become increasingly precise and relevant. This in turn ensures that the society benefits in terms of improved health and therefore productivity.

Another way in which higher education relates with society is through direct service. This is illustrated by the Chiromo Mortuary Service of the University of Nairobi. This service was started in January 1992 in the Department of Human Anatomy and its development is illustrated in Figure 5, 6 and 7. The Service has served the following functions:

- it has provided a 24-hour service that is solidly rooted in medico-anatomical professionalism;
- the service is an income generating activity from the fees charged;
- the service provides a very effective work study programme for medical students;
- the service is providing an opportunity for reforming medical education;

- the service is making an impact on the cultural life of Kenyans.

4. INPUTS TO HIGHER EDUCATION

4.1. Financing of Higher Education

In Kenya the public universities have been dependent on the Government for their funding. This is because public funding is essential in ensuring access and equity as well as investment in the most cost-effective programmes. However, with the rapid growth of enrolments of students and declining funding from the government, it has become a matter of urgency to develop alternative approaches to funding. In the case of Kenya, admission into the public universities was doubled with effect from 1987/1988, with 1990/1991 experiencing a quadruple level of admission. This increase in admission levels had the following effects:

- the budget of the public universities went up by about 47% while that of the parent Ministry of Education was controlled at 7% annual growth;
- it became necessary for the Government to seek alternative ways of financing the universities. In this connection, the Government obtained a World Bank credit, in 1991, for financing applied research, consultancy studies, staff training and purchase of equipment, vehicles and library books;
- some of the conditions for the credit were that the universities were to undertake long term financial and development planning. In the case of financial planning, the universities had to show how they would balance their operating budgets;
- it became necessary to introduce cost-sharing measures (Republic of Kenya, 1995a). Fees were increased and subsidisation of catering and accommodation from tuition funding was stopped. The Higher Education loans Board was established to give students loans (Republic of Kenya, 1995b).

4.2. Search for Alternative Funding Sources

In order for higher education to get alternative sources of funding, it is vital for the institutions to undertake marketing activities aimed at achieving maximum customer satisfaction. This is necessary because there is competition for the same funds. Within the institutions there is need for development of income generating services as shown by the Chiromo Mortuary Service of the University of Nairobi.

4.3. Higher Education and other Education Levels

As Figure 1 illustrates, higher education depends on other levels of education for its inputs of undergraduates. The educational processes which the students undergo in the universities are closely dependent on the quality and relevance of education offered in secondary schools.

In Kenya the quality of university education is heavily dependent on the fact that the institutions admit the top 9000 or so students from about 140,000 candidates.

Another major responsibility of universities over other levels of education is the upgrading of knowledge as a result of new developments in research. This is one of the ways in which universities play a leading role in the renovation of the entire education system. It is also in this connection that universities play a leading role in continuing education.

5. MISSION AND OBJECTIVES OF HIGHER EDUCATION

5.1 Rethinking the Mission and Redefining the Function of Higher Education

In order to redefine the mission and function of higher education, it is necessary to look at it as an integral part of total quality education and training within which it will continue to fulfil its mission of being an effective vehicle of sustainable national development. For example, Kenya has declared its plan of aiming at becoming a newly industrialised country by the year 2020 (Republic of Kenya, 1997-2001). In

this connection, the Commission for Higher Education is coordinating higher education as part of total quality education and training that needs to be achieved by the year 2010 in preparation for the national vision.

5.2. Identifying new Approaches

One of the new approaches includes research utilisation for development. This needs to be accompanied by the application of those aspects of total quality management which apply to higher education institutions and the promotion of co-ordinated collaborative research.

With regard to total quality management, the main area of application to higher education is the participatory involvement of every member of the collegiate system (Harvey, 1995). In this connection total quality management is also useful in developing linkages between the institutions and industries. This will become increasingly necessary as field and industrial attachment and industry-led programmes become essential in enhancing the relevance of higher education to the world of work.

With regard to collaborative research, it is necessary to maximise on the complementarity of research and its publications from different scholars. In this way, institutions and countries in the region will be able to provide and use a broadly based African resource from which to utilise research knowledge. The individual researcher normally searches for such information when processing some work for publication. Other researchers tend to use publications from Europe and America before exhausting the African sources. Since Sub-Saharan Africa produces only 0.4% of the world's total publications (Zymelman, 1990), it is vital to put it together to form the core resource on which to absorb research knowledge from the rest of the world. Furthermore, this will form a solid base on which to develop collaborative research among researchers, institutions and countries.

The coming of the AIDS epidemic has served to highlight this need. This is because AIDS is a multi-

perspective problem. As a sexually transmitted disease, AIDS has socio-cultural, religious, health, educational and economic perspectives which have all to be addressed in an integrated manner to realise any measure of success. Towards this end, the African Forum for Health Sciences has put together research material entitled *Demystifying AIDS in Africa* (Mugai and Koech, 1996). In view of the close association between AIDS and misuse of alcohol and other social drugs, the Forum is also putting together research material on the subject under the title *Rescue Africa from Drowning in Social Drugs* (Mungai, Kofi-Tsekpo and Koech, 1997). The Forum, in collaboration with the National Health Research and Development Centre, is also putting together research material to form a basis for the sharpening of health policy and research prioritisation (Mungai, 1997).

5.3. Formulating a basic rationale on which the process of change and development of higher education could be based

The use of a logical framework for developmental and financial planning has been found to be effective in public universities in Kenya (CHE, 1994).

The planning design has the application of performance indicators built into it for the purpose of clarifying the objectives and the design itself as well as for the purpose of monitoring and evaluation (World Bank 1996).

The planning design starts with an *introduction* in which various perspectives are described to show how the institution has reached its present status of growth. These include historical, economic, organisational, status, socio-cultural perspectives and others. The introduction ends with a description of the basic data of the country and institution.

- The introduction section is followed by:
- *the mission and the objectives* of the institution. These are stated in the Acts of Parliament which govern the institutions.
 - *the teaching/learning processes* under which the various programmes, including research, that are offered by the institution, are described.
 - *the service to the community*. This is the section under which the institution offers some of its professional services to the community either freely or at a fee. In the latter case the service generates some income for the institution.
 - *the resources* which are required to carry out the tasks involved in the institutions programmes. One of the resources to be considered under this topic is existing research material. The other resources are human, physical/technical and financial resources.
 - *The organisation and management* of the institution which includes personnel, space/time and financial management.
 - *monitoring and evaluation* in which there is provision for use of performance indicators.

Finally, all the foregoing topics are summarised in a *strategic plan of action* which indicates the steps to be taken, the time scale to be followed and those responsible for taking action.

References and appendices provide information for further reading and cross-checking on suitability of sources.

This logical framework is also being used in development planning of post-secondary training institutions. This is because these training institutions are part of higher education in Kenya where they are coordinated by the Commission for Higher Education. Higher education (universities and post-secondary training institutions) are expected to produce a balanced national manpower between graduates and technicians. Craftsmen are also an essential component of the balanced manpower but their training is not coordinated by the Commission for Higher

Education. The most serious shortages are in the technician levels. In order for the post-secondary institutions to undertake long-term development effectively, they are in process of acquiring legal autonomy through their own Acts of Parliament, the newest in this process being the Co-operative College of Kenya (Republic of Kenya, 1995c).

5.4. Integrated Action

An integrated approach to higher education in Africa is essential in order to utilise the available resources in the most cost-effective and cost-beneficial manner.

In this connection integrated teaching/learning processes are also going to be necessary for efficiency and cost-effectiveness. These processes are dependent on continually improving on the interdisciplinary and multidisciplinary approaches to the research, teaching and service roles of higher education. This is the only way in which higher education will be able to contribute effectively to the solution of pressing problems. For example, AIDS in Africa has become a major threat to sustainable development and possibly survival itself. This is because of its social-cultural, economic, religious, health, educational and other perspectives, all of which have to be taken into consideration. Any action that is aimed at dealing with AIDS effectively must look at these perspectives in an integrated manner.

In all these approaches, higher education has a major role in enhancing the ethical and moral values that guide society as a whole and its youth in particular.

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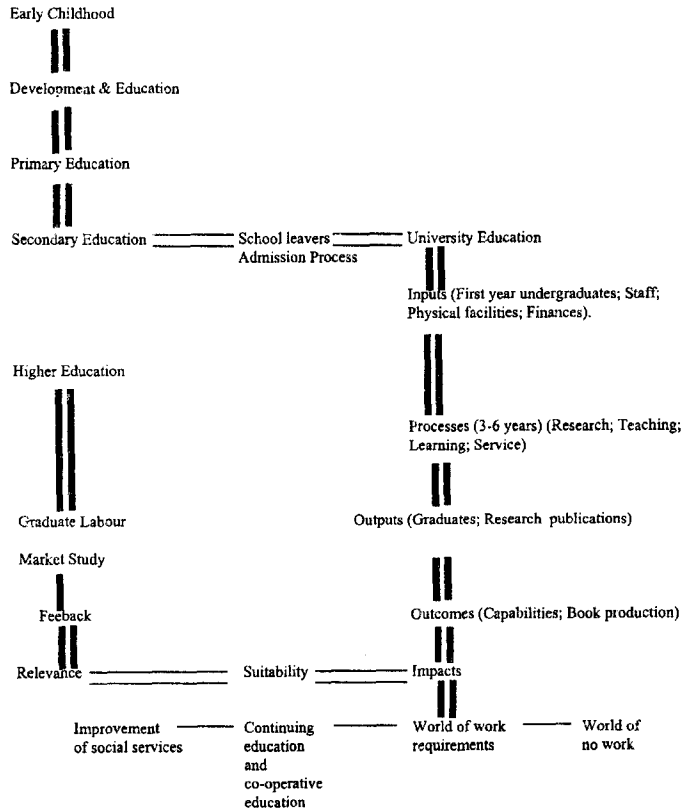
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FIGURES

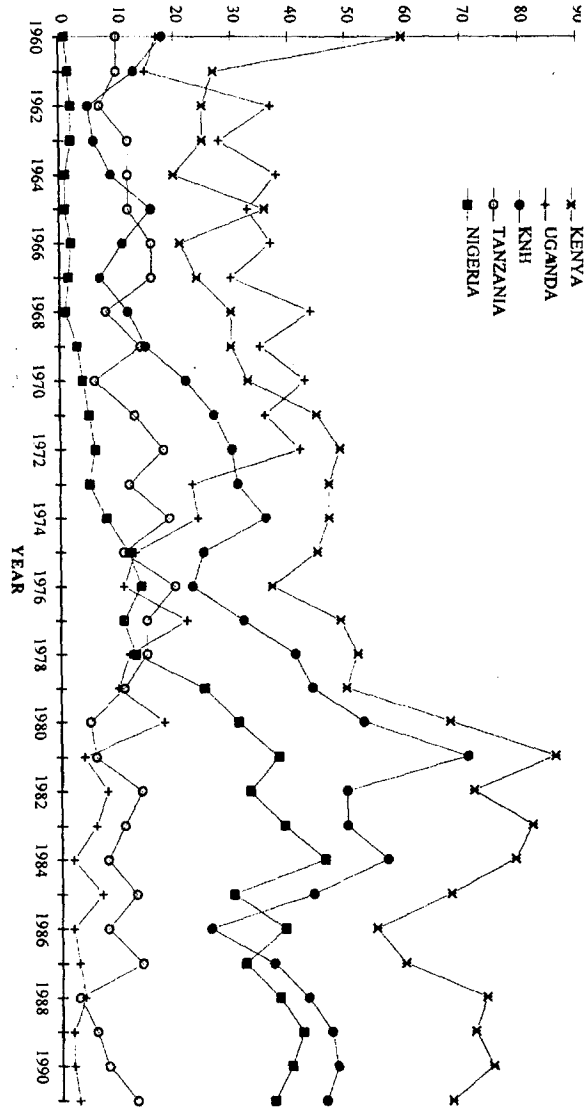
1. The relationships between levels and processes of education, including to the world of work.

FIGURES

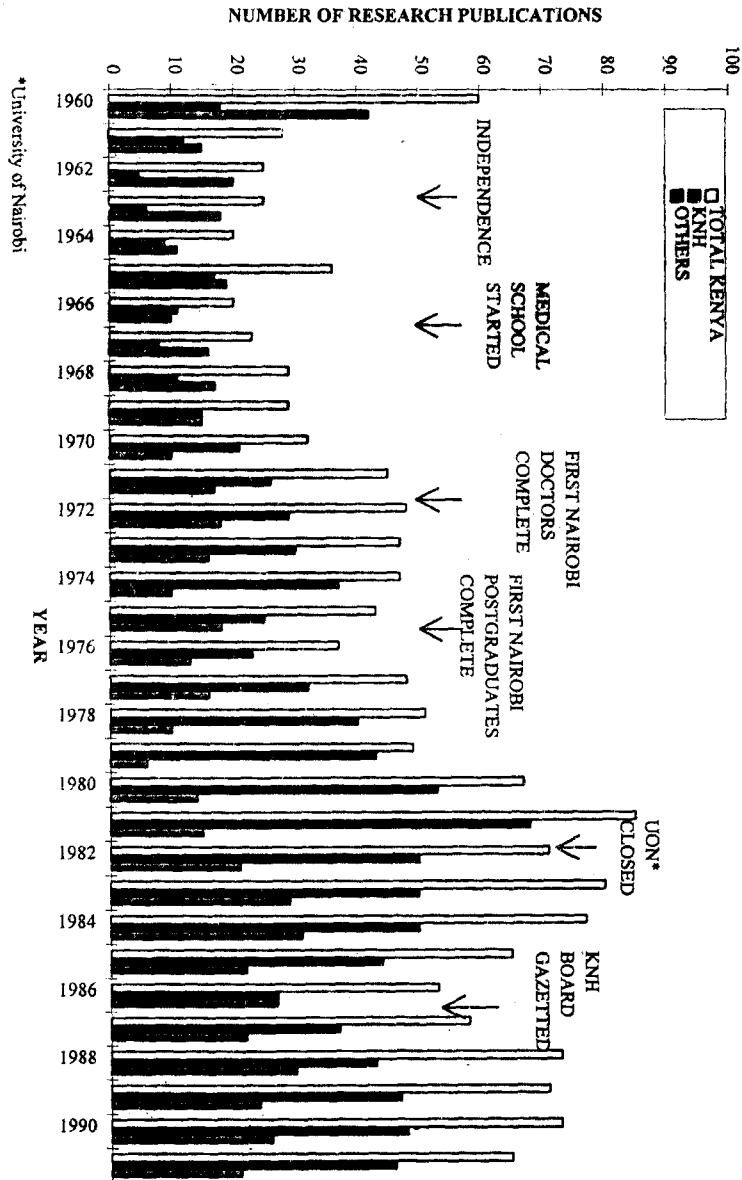
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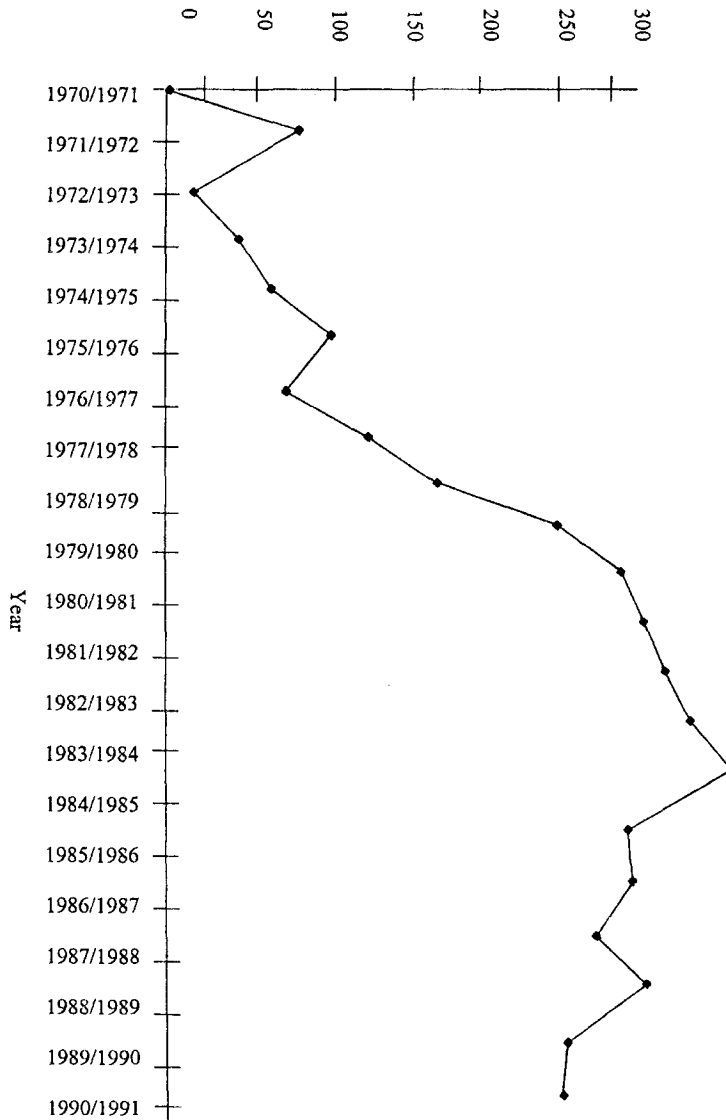
2: Graph to illustrate the annual contribution of research publications in the East African Medical Journal by Kenya, Uganda, Tanzania, Kenyatta National Hospital (KNH) and Nigeria



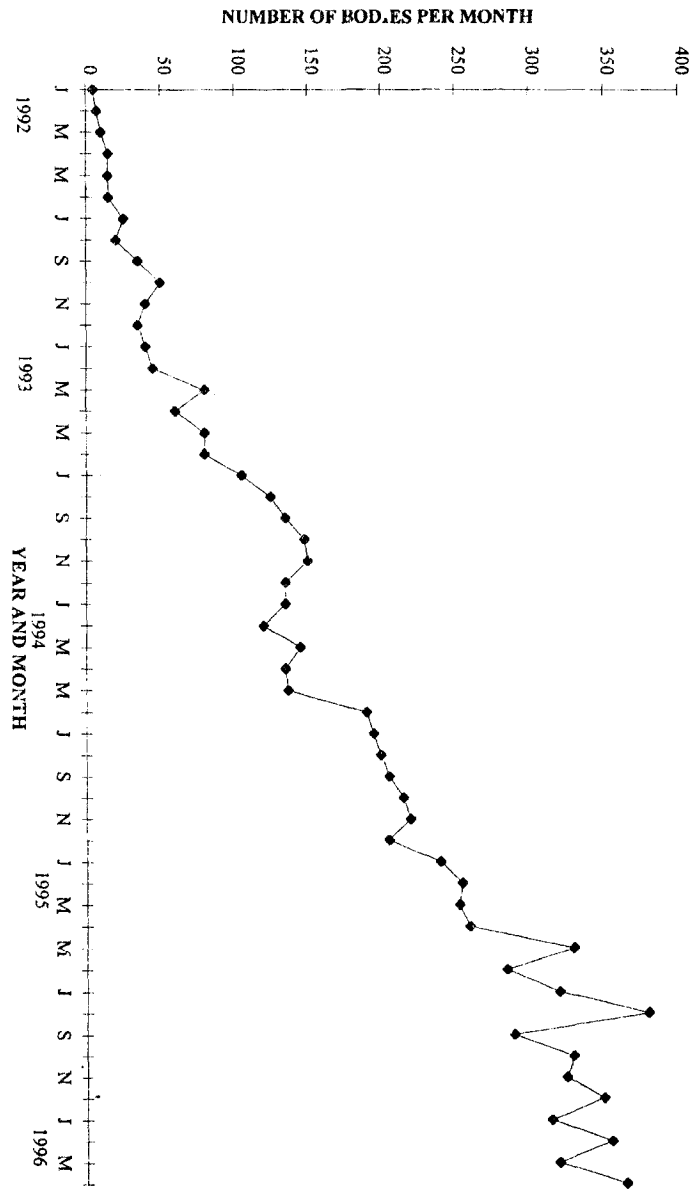
3. Graph to illustrate the Yearly Number of Research Publications from Kenya, Kenyatta National Hospital (KNH) and Other Institutions (Others), in the East African Medical Journal



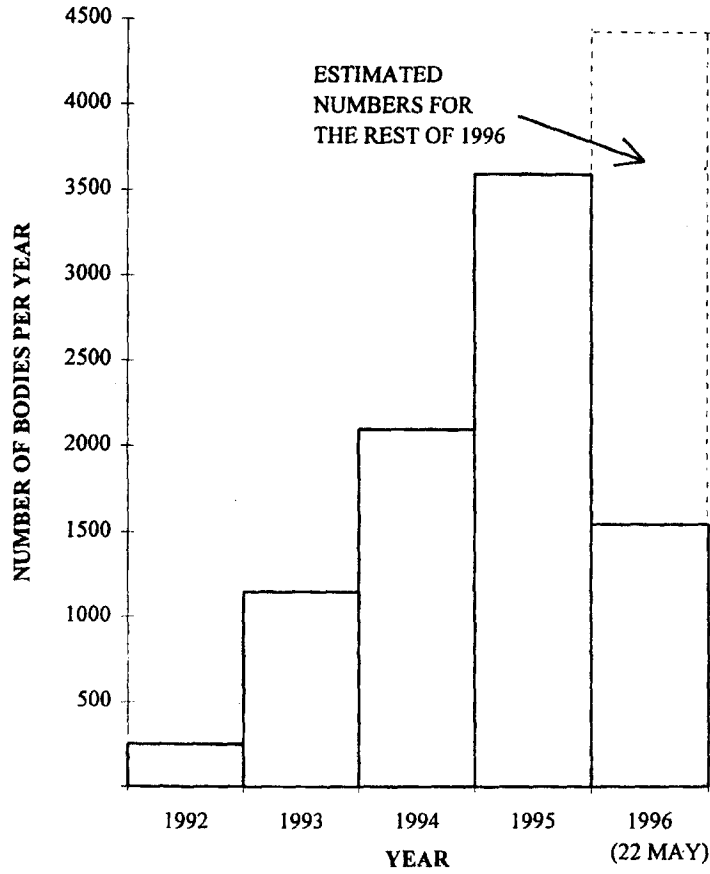
4: Graph to illustrate the annual pattern of postgraduate enrolments for master medicine in University of Nairobi



5: Graph to illustrate the monthly and yearly pattern of utilisation of the chromo mortuary service



6: Graph to illustrate the annual patterns of utilisation of the chromo mortuary service



CHAPTER 8

Relevance of Higher Education: The Point of View of the World of Work

P. Nalla FALL*

1. INTRODUCTION

The interest taken by the National Council of Employers of Senegal in the development of higher education is naturally due to the fact that:

- in the first place the Enterprise has been, is and will always be a natural partner of the institutions of higher learning, even though this partnership has not been fully exploited, especially in our developing African countries which are facing challenges of economic growth and international competitiveness;
- furthermore, the Enterprise and its various actors (employers and workers) share with the Institutions of higher education the ideals of "peace, development and freedom";
- finally , the Enterprise is a privileged place for the application of knowledge and exercise of skills, of values and open-mindedness; in a word the Enterprise is a place for socialization, for materialization of civil order and the continuous training of citizens endowed with a civic sense and capable of contributing to the sustained growth of their country.

*Chairman of the Economic and Financial Committee, National Council of Employers of Senegal (Conseil National du Patronat du Sénégal).

This is why, on behalf of the employers' organization, a member of the Pan-African Employers' Organization, a member of the Council of the International Labour Organization, amalgamating 17 basic trade unions embracing more than 650 enterprises, employing nearly 75% of salary earners in the modern private sector of Senegal., I have the honour to make my modest contribution to the deliberation on higher education in a changing world.

This world is characterized by the rapid development of science and technology, especially of information and communication technologies which are accelerating the process of globalization and modifying the relations between the different actors in the economic, social and cultural life. The rapid changes require a capacity for adaptation.

The contribution will be hinged on three major axes :

- what the Enterprise expects from the Institutions of higher learning, namely the creation and implementation of an active partnership ;
- what are the characteristics of such a partnership between Enterprise and Institutions of higher learning ;
- what the Enterprise can contribute to higher education institutions through the proposed partnership..

2. WHAT THE ENTERPRISE EXPECTS FROM THE INSTITUTIONS OF HIGHER LEARNING

In order to have a better grasp of the expectations of the world of work from the institutions of higher learning, it is important to understand the new functions of the private sector in the world in general and in the developing African countries in particular. Since the 80s in Africa, the private sector is considered as the spear head of economic development through growth in the creation of wealth, the distribution of revenue and the creation of employment, as well as the promotion of the international competitiveness of our countries. In that regard, the function of the African private sector is similar to that of the other countries,

a sign of globalization and of a certain form of unique thinking, at least in this area.

The structural adjustment programmes implemented by the African governments in collaboration with the development partners have resulted, in some cases, in the restoration of macro-economic equilibrium (deficit budgets/balance of payments/balance of trade/reduction of the debt burden, etc.).

At the same time, the State is disengaging itself to leave to the private sector a more effective exploitation of the avenues for productivity thus released and the accomplishment of the tasks of economic, social, and cultural development, which requires a necessary opening up of our economy and a readiness to face the challenges of productivity and competitiveness, simultaneously the cause and the consequence of globalization.

In this context, the Enterprise expects the institutions of higher learning to help it to adapt itself to the new situation created by the rapid development of science and technology. In that respect, higher education should perform three basic functions :

Firstly, the training institutions should make a significant contribution to the raising of the scientific, technical and technological level or standard of our countries through research and qualitative education in line with the needs of the moment. This mission has the main objective of preparing the environment to absorb any change and to make up, to some extent, for the backwardness in this area.

Secondly, the institutions of higher learning should participate in increasing the international competitiveness of our economies through:

- on the one hand, dissemination of research results which could be used by various economic stakeholders in the process of production;
- and on the other, the training of human resources capable of joining easily the most advanced existing systems of production, of adapting themselves to others to come or inventing their own competitive systems.

Institutions of higher education should make available to the enterprises “usable” products and human resources with a vision, a sense of anticipation, a sense of authority and integrating dialogue and fully aware of their responsibilities as leaders, in a word “employable” human resources.

This will help the Enterprise not to lag behind with respect to technological evolution and to face the challenges of international competition engendered by the globalization of the economy .

Thirdly, the institutions of higher education should be able to train a new type of African citizen, capable of contributing to the promotion of a society of peace, justice and equity. They have to train the builders of good governance, democracy and peace without which raising of scientific, technical and technological level or standard could not be used by the Enterprise for the implementation of its mission of creation and distribution of employment and wealth.

On the whole, the Enterprise expects the institutions of higher learning to carry out their functions of research, training, information and qualitative advisory support.

The successful implementation of these functions requires, on the part of administrators and lecturers in the institutions of higher learning, a good knowledge of the world of work, of its mode of operation, as well as positive attitude towards it.

At this end of the century, the African Enterprise is becoming more and more a place for dialogue and for communication between the apparently divergent but strategically converging interests. The Enterprise constitutes the place for the exercise and application of the freedom of conception, of creation and of the translation of ideas into products and into processes. It is the place where workers belonging to different political parties, to different trade unions, to different beliefs meet and interact around the same ideal, aiming at a common positive result. Is that not a good example of the exercise of freedom in democracy, tolerance and peace?

The good knowledge of the features of the business environment cannot be acquired from a distance without the participation of those very people who know the realities of the Enterprise, namely workers and employers. The higher educational institutions should, for a better grasp of the realities of the world of work prepare themselves to attain with the latter (employers and workers) a true partnership whose objectives, conditions and modalities must be clearly defined and understood by both parties.

3. CHARACTERISTICS OF A PARTNERSHIP WITH THE ENTERPRISE

In a modern world characterized by global competition, as well as perpetual search for increased performance, it is paradoxical to note that most of the African countries of the Sub-region, including Senegal pour out, every year thousands of graduates, well-trained but "unusable" in the world of work due to a lack of appropriate professional skills. It is all the more paradoxical as the economies of these countries have an increasing demand for well-performing enterprises and capable business men.

The paradox exists, despite the attempts made by these countries to set up programmes for the promotion and integration of higher education graduates as business creators; furthermore, the multiplicity of the programmes for industrial attachment for young graduates seems to indicate that the educational programmes scarcely prepare these young people for the exercise of an independent activity and still less for the ethics and adequate experience of work coupled with a spirit of initiation and creativity.

The basic reason for the persistence of the paradox lies on the one hand in the inability of the education system to make the training one of the avenues to active and professional life, and on the other hand in the lack of a vision and will to anticipate the needs of an effective insertion of the young graduates into the labour market, which would have necessitated a close

collaboration between the training institutions and the world of work.

The higher education system has behaved as an independent system with no link with the professional world. The academic's spirit of independence, excellent in itself as an affirmative value, has prevailed over the integrating spirit of the developer that the academic should be. The professional and academic worlds have lived side by side without talking to one another, a luxury that our developing countries can ill-afford.

It is therefore necessary to initiate and implement a partnership with a clear objective, i.e. to remove the paradox and increase the external efficiency of higher education. As the Director-General of UNESCO, emphasized in his opening address at the African Regional Consultation preparatory to the World Conference on higher education held in April 1997 in Dakar, "higher education institutions should learn to do things themselves and help their students to learn how to do things."

This paradox could be removed and external efficiency increased if the institutions of higher learning adopt a business approach, a marketing approach, a quality approach in their production process. For this partnership to function efficiently, the training institutions will have to pay attention to the market, design and implement a differentiated, selective and flexible strategy: training programmes and methods should be subjected to permanent assessment and continuous adaptations; administrators and academic staff should be permanently retrained and *the links with the business sector should be further reinforced.*

4. WHAT THE ENTERPRISE CAN CONTRIBUTE TO HIGHER EDUCATION INSTITUTIONS THROUGH THE PROPOSED PARTNERSHIP

The enterprise maintains "customer" relationships with the institutions of higher learning and it constitutes for the latter the consuming market for the products of research and training and that of information and consultancy services.

As a customer of higher education institutions, the enterprise expresses its needs and influences the production, determines the quality of products and services and conditions of the manufacturing process. The knowledge of the demand features enables Higher Education to set up a qualitative and efficient system with high norms and standards. As a result the Enterprise constitutes a validity test for quality in higher education.

The enterprise, as the place for the use and application of knowledge and skills provided by higher education institutions is a laboratory for the quality control of the products of higher education.

From its daily practice and its practical orientation, the Enterprise can provide to the institutions of higher learning the professionalization which they are looking for; business executives can undertake some teaching activities under certain conditions, thus bringing to the theoretical knowledge the test of practice.

Besides, as a client of the institutions of higher learning, the Enterprise can contribute to the funding of research activities, training and consultancy support

Finally, the Enterprise can contribute to the improvement of sub-regional cooperation thanks to its networks made up with different enterprises belonging to multinational groups ; and thanks equally to the regional and continental organizations of employers. The partnership in question could likewise be organized at these levels.

5. CONCLUSION

In this period of economic and social crisis affecting our countries at the present end of the 20th Century, the system of general, technical and vocational training should evolve in order to contribute with maximum efficiency to the improvement of the performance of the enterprises. Such a system should harbour an external efficiency with positive impacts on developmental activities. Therefore, it is necessary to ensure that

higher education systems in Africa are adequate in the following areas:

- adaptation of the initial training programmes to the local conditions and the needs of the world of work;
- in-service training for the workers, technicians, civil servants and administration personnel, in order to respond to the needs of the enterprises and the administration;
- training programmes for craftsmen and their apprentices, who play a major role in the economic development. They often rely on family structures and risk to lag behind with respect to modern technology.

Some proposals are necessary to give the training system and its constituent structures the following priority objectives, viz:

- to lead the youth to employment by providing them with professional skills;
- to offer employed adults the means of retaining their jobs or developing them;
- to enable craftsmen and their apprentices to integrate themselves better into the system of production thanks to a greater mastery of technology.

Actually, this orientation is possible only through a good knowledge of African trades and the conditions of their practice in the enterprises.

A great effort is needed to free technical and professional training programmes from their vassalization through education without any objective and without any relationship with the real conditions of the country in order to focus on new people, with new means, new methods and new teachers.

For example, without waiting for global reforms but all the same preparing for them, one can even now design initial and complementary vocational training programmes for secondary schools and other training centers. These programmes may include modules on

entrepreneurship for working adults and apprentice craftsmen.

It goes without saying that such new orientations entails a reconversion of the trainers who must learn to know better the business environment as well as the professions practiced therein. This situation calls for a new type of training structure, programmes and pedagogical methods and materials. It also requires a more active participation of the world of work in the definition and grading of training courses. Finally it should lead to a new mode of funding training structures, with greater responsibility for their internal management and for the achievement of their external efficiency.

It is under these conditions that higher education will generate knowledge, skills, values and broad-mindedness. It is on these terms that the paradox mentioned above will be removed and that the system will attain its internal and external efficiency and meet the expectations of the enterprise.

CHAPTER 9

Strategies for Improving the Relevance of Higher Education: The Experience of Côte d'Ivoire

Saliou TOURE*

1. INTRODUCTION

The deep and multidimensional crisis of higher education which Africa is witnessing since a few years compels us to look at the role and place of this level of education in our societies.

In a world that has been subjected to merciless economic competition, in which scientific and technological learning has become a major challenge, in a context of extreme economic difficulties and profound social change, the need for relevance has become more pressing than ever before.

Questions on the development of Higher Education have become rampant in recent years, as shown by the numerous conferences, seminars or workshops held on this issue, quite often initiated by UNESCO. But if proposed solutions and ideas for reform abound, the difficulties encountered lie in how to implement them and how to overcome the resistance to change.

Indeed, how can one lead the university community, which is certainly in favour of reforms but allergic to change, into a process of renewal? That is one of the most arduous tasks confronting us. With respect to Higher Education, is a good reform not one which is likely to be accepted ?

*Minister of Higher Education, Scientific Research and Technological innovation of the Republic of Côte d'Ivoire.

In the light of the modest experience of Côte d'Ivoire in the past four years, I would suggest a few points for discussion and action.

The first part of this paper contains some observations on the relevance of Higher Education with respect to its missions and the realities of our environment.

In the second part, I shall define some principles which, in the light of the experience of our countries since thirty years now, should underlay our policies on Higher Education.

Finally, in the third part, I shall use the reforms being implemented in Côte d'Ivoire to illustrate these principles.

2. RELEVANCE OF HIGHER EDUCATION

In 1962, in the early days of independence, during the conference jointly organized in Antananarivo by UNESCO and the Economic Commission for Africa (ECA), ambitious objectives were entrusted to African universities, especially that of becoming a key tool for national development.

It is generally acknowledged that a significant system of higher education has indeed been set up on the continent, embracing at the same time universities, schools of engineering and regional higher education institutions and these structures have contributed immensely to the training of qualified personnel needed by our newly independent countries. However, we must acknowledge that since the 1980s, the system put in place has become more and more unsuited to the national socio-economic and cultural conditions and, as such, it is the place where all the crises of the society occur : crisis of confidence, social crisis, pedagogical crisis, financial crisis, and political crisis.

A multidimensional crisis of this magnitude, revealing profound economic and social changes has contributed to weaken the institutions of Higher Education, to undermine the confidence, which socio-economic partners had in them and to discredit the

system whose quality, efficiency and impact on development was becoming more and more doubtful.

A certain number of exogenous factors are at the root of the discredit, which has befallen Higher Education in general, and the university institution in particular.

The first of these factors is the adaptation of tertiary education and training. In a context of general economic crisis, with the civil service no longer providing jobs for graduates of Higher Education and the private sector offering very little prospect of employment for those completing classical university courses, a serious problem arose concerning the *relevance of higher education and training*, in relation to the needs.

The second factor has to do with demographic growth and the sharp increase in the social demand for higher education. Subjected simultaneously to serious financial constraints and to strong social pressures, the rapid increase in students' enrolments has led to a fall in the quality of education.

In this context, another issue arose, that of knowing *whether to liberalize the access to Higher Education in the name of the right to education or to limit the access in the name of quality of education*. This issue deserves to be discussed.

On the other hand, the structural adjustment programmes, implemented during this period, led to budgetary restrictions, especially for Higher Education which contributed to worsen the financial difficulties and thereby to aggravate the crisis in this sector.

But if exogenous factors account, to a large extent, for this multidimensional crisis, it is worth to stress that endogenous factors are likewise involved.

In 1979, in his work entitled : "The University in Côte d'Ivoire and the Development of the Nation", Vally Charles Diarrassouba, then Vice-Chancellor of the National University of Côte d'Ivoire, posed the question of the effectiveness of the university in these terms:

It seems to me that there are traditional concepts on therole and the nature of universities that some,

among our colleagues, tend to accept on trust, but which the public and the authorities could dispute one day in the name of effectiveness.

It is therefore necessary for the academics themselves, at least those who are sensitive to the risks of a university as a parking devoted to rhetoric in mediocrity, to reflect on the activities of our university.

In his 1995 study on the future of African universities, Gérémié Sawadogo of Burkina Faso drew attention to the fact that African universities had not fully participated in the development efforts of their countries because they had entrenched themselves in their initial roles.

If that is the case, it must be recognized that the legacy is burdensome. Modelled on the European, not to say French universities, the African Francophone university inherited from the start all the characteristics of the former, especially those which make the university a : *city within the city*. In his work titled : *!Age des Savoirs , Pour une Renaissance de l'Université* , Claude Allègre introduced the subject with the harshest words on the French University institution:

"For centuries, the French University remained a dark ivory tower. Isolated from what is useful, a jealous guard of a limited and often obsolete knowledge, it sought within itself its own justification".

By withdrawing into themselves and falling back on well worn traditions, are the universities not depriving our developing countries of the illumination of the mind and of the creative imagination, which they are very much in need of ?

Apart from providing training in various skills, African universities were also mandated to generate, through their research activities, practical and theoretical knowledge likely to promote national development.

There again, the *relevance of the research activities* carried out in the institutions of higher learning has equally become a subject of debate.

Beyond the many reasons which can be mentioned, there is no doubt that the results of the research activities have not measured up to expectations, both qualitatively and quantitatively. The number of publications has remained relatively low. In an article published in 1991 on Scientific Research in Africa, Gaillard and Waast noted that in the field of the natural sciences and of biology, researchers in African universities produce, on the average, one scientific publication every seven years !

Due to the major increase in enrolments, the low internal efficiency, the lack of relevance of some training programmes with regard to real needs, the low involvement of research in national development and the deterioration of the working conditions of lecturers and students, African Higher Education, originally considered to be an indispensable tool for development, witnessed the gradual dimming of its image.

The perspective consequently changed. While funds for Higher Education slumped, interest in Basic Education became increasingly more pronounced, since it was then considered, especially by Donors, as a key factor of economic and social development.

While universities in the developed countries have accomplished radical changes, African universities have remained stuck to a model, which has become totally obsolete, and in any case out of touch with their socio-economic environment.

Thirty years after their establishment, African universities are experiencing major crises ; the mandates, which they received at independence, should be reviewed in the light of the changes, which have taken place in our countries and in other systems of Higher Education across the world. It is imperative to adopt other policies of Higher Education, with new underlying principles.

3. PRINCIPLES UNDERLYING HIGHER EDUCATION POLICIES

Recent developments show that Higher Education is subjected to the combined pressure of very serious external constraints, including increase in the demand for higher education, stagnant budgets and decrease of employment opportunities for qualified personnel as well as having internal constraints constituted by poor internal efficiency, lack of flexibility and adaptation to demand, imbalance in budgetary allocations to the detriment of pedagogical activities and weak institutional capacity.

Besides, Higher Education is particularly compelled to respond to the challenges of the end of the twentieth century, which, for our countries, are essentially : the realization of an original and fruitful synthesis between our traditions and an emerging post-industrial society, based on information, knowledge and creativity, the expansion and development of our democratic life and national unity, the reduction of inequalities between people and between regions, the promotion of human dignity, and economic development.

To respond to these challenges in a situation of highly obstructive internal and external constraints require the implementation of reforms which must be based on a certain number of fundamental principles.

First of all, with regard to the increase in student enrolment, it is undeniable, in the present world economic context, that the prosperity of a country depends essentially on the level of education of its population and, in the first place, on its standard of higher education.

While over 50 percent of the 18 to 23 age-group in developed countries have access to Higher Education, only 5 percent of this age group in the developing countries have access to it.

Due to the need for the improvement of the level of education of the population, individual interests, social demands and economic needs, it seems that the

increase in students enrolment is an inescapable fact on which Higher Education policies should be based.

In a context of inadequate resources to cope simultaneously with the quantitative increase and the qualitative improvement, of the system, alternative solutions towards the expansion of the facilities at the lowest cost, must inevitably be devised.

The promotion of private higher education and distance education may help to respond to the demand for access to higher education at a low cost.

Apart from lowering the unit costs, the diversification of higher education institutions helps to enhance opportunities. In the absence of alternatives, students tend to extend the duration of their studentship.

The decentralization of Higher Education training programmes also has the advantage of bringing the training structures closer to the people, helping to limit the social cost which quite often encumber the budgets. Decentralization likewise promotes participation in regional development thus reducing the inequalities often observed between the regions.

Another principle on which higher education policies should be based is to ensure an optimal coherence between initial training and continuing education, research and technology policies and the policies for the development of small and medium-size enterprises, which are the main creators of employment opportunities.

It is only this coherence which can generate the synergy and dynamism required for economic and social development.

To this end, Higher Education, especially the university, has to revise a certain number of dogmas: the dogma of a university separated from *the "useful"*, which does not train but educate, the dogma about the university not teaching a profession but developing the mind, the dogma of a university built and organized by and for the academic staff, the dogma of a university which runs its own affairs without external interference.

There lies the main obstacle to change. Trapped in their internal contradictions, taking refuge in their traditions and resisting evolution, the universities, heirs to a well-worn model, have not been able to reform themselves in order to adapt themselves to the requirements of their time.

There is therefore a need to redefine the functioning of universities and especially to redefine the relations between them and the civil society on the one hand, and the State on the other.

This redefinition should be based on the fact that Higher Education ought to be organized, above all, for society for the purpose of training its children. To this end, representatives of civil society, especially the socio-economic partners ought to be involved as closely as possible with its management and with its functioning.

For the same purpose, the State, while preserving academic freedom, has the duty to impel the reforms, with a view to a better internal and external efficiency, and to evaluate the results in terms of the objectives and the means placed at the disposal of the institutions. That compels the State to establish a coherent framework for medium-term planning, to set up strategies for sharing the development objectives with the institutions, especially through contract projects, and finally to secure the resources required for the evaluation of the results.

Finally, another principle on which Higher Education policies should be based is that the state should make a special effort for the development of infrastructure, especially in the area of equipment and access to the information highways. Indeed, one of the opportunities available at the end of this century is, the generalization of access to the information highways which is eliminating barriers and the isolation of lecturers and researchers in our countries.

This special effort to improve university equipment and infrastructures can be better achieved from the possible savings from non-academic services and a selective privatization in this area will have the

advantage of raising the quality while lowering the costs.

There is no Higher Education of high quality and there will be none without teachers of high quality. The remuneration offered being quite often low, there is ground to offer attractive working conditions in order to retain or to attract competent staff.

4. ORIENTATIONS ADOPTED IN COTE D'IVOIRE

Like in other African countries, a reform of the higher education system became indispensable in Côte d'Ivoire during the last few years.

This reform process which begun in 1992, has four essential phases: a preliminary phase of budgetary adjustment, a phase aimed at redefining the legal framework, a phase of rehabilitation and expansion of the facilities and finally a phase of improvement of the quality of the system.

The reform was concretized by the promulgation, in September 1995, of a new law on Education, as well as the adoption, in 1996, of decrees for its enforcement.

Without going into the details of the actions, which have been taken, of the difficulties encountered and the results obtained, I shall present the main areas on which our efforts have been focused.

One of the main areas of the reform is to improve the relevance of Higher Education by adapting its mission to the new expectations of economic, social and cultural development.

Apart from the affirmation of these missions in the official documents, a reform has been undertaken in order to adapt institutions of higher learning to the new requirements. For this purpose. Training and Research Units have been set up in the universities on the basis of educational projects and research programmes related to the strategic orientations of development instead of Faculties centered on disciplines.

These training and research units should organize the training and research programmes taking into

account the needs of the economy. Although these programmes should not neglect general culture and knowledge, they should give priority to vocational training.

The areas to be given preference and which ought to be important in the coming years are those of business administration, with a view to promoting the emergence of competitive enterprises, of technological development and of agriculture for the purpose of promoting the development and transformation of the natural resources, of Education in order to improve the quality and performance of an education system regarded as the pillar of a coherent economic, social and cultural development, and finally of health.

This reorganization of the training system cannot be effected unless a strong partnership is established with the world of work. This partnership will be implemented at various levels. It will, first of all, be implemented through the participation of the world of work in the management organs of the institutions : University Council, schools councils, etc. which should help to adapt the training and research programmes to the needs of the economy. It will also be implemented through contracts between the training structures and the socio-economic partners : contracts for staff training, contracts in the area of research and consultancy. The experience of the schools of engineering in funds generation has yielded positive results. It will, finally, be implemented through an increasingly important use of the socio-economic partners in training activities, either in the form of complementary training or by direct participation in the educational activities as part-time lecturers.

Another important area of this reform is the expansion and the diversification of training opportunities.

The promotion of life long education for all is one of the major priorities of the reform. To this end, all the institutions of higher learning have been provided with the facilities for continuing education.

The promotion of a private higher education sector, offering short duration vocational training programmes makes it possible to admit more than twenty thousand students, which represents about 30 percent of the student enrolment.

Deliberations on the establishment of distance education are also in progress. This should especially help all those who have the means, to have, at any time in their lives, access to high-level training.

The diversification of higher education is accompanied by an unprecedented effort in investments for the benefit of the universities, an effort made possible particularly by the withdrawal of the State from transportation, feeding and students accommodation..

This diversification is also implemented through a policy of decentralization of university training in favour of the regions, which has resulted in the opening of the university of Bouake and of Regional Units of Higher Education in Daloa and Korhogo.

Another important area of this reform concerns the evolution of the relations between the institution of higher learning and the State on the one hand and the civil society on the other.

With regard to the relations between the State and the institutions, experience has shown that there was ground for a better definition of the development objectives and for a better sensitization of all the actors on their responsibility towards the attainment of these objectives. For this purpose, a mode of contractual operation between the State and Higher Education institutions has been established, each partner having to commit itself simultaneously to the results to be obtained and on the mobilization of the resources.

This procedure will facilitate the mastery of the objectives of quantitative expansion and qualitative improvement as well as of the human, material and financial resources needed to achieve these objectives.

This new practice requires from the State, the design of a strategic framework for the development of

the system, which has been done through the formulation of a White Paper on the development of Higher Education, and from the institutions of higher education the provision of an institutional framework to help achieve the objectives. The pluri-annual contract should be concluded through negotiations between the parties.

The evaluation of Higher Education constitutes a consequence of the contract policy. To this end, a National Evaluation Committee on Higher Education and Research, charged with evaluating the results expected within the framework of the pluri-annual contracts to be signed is envisaged.

As for the relations between the institutions and the civil society, experience has shown that the problems of Higher Education concern all the citizens, and for this reason, the civil society should be most closely associated with the deliberations so that a permanent dialogue can be established, thus avoiding having to manage cyclical crises, which paralyze the system.

That is expressed in the new Law on Education and in its enforcement decrees by opening Higher Education to the partners of the education system, by the participation of the community and of socio-economic partners in the consultation and management organs, which are created in the institutions and at the national level.

5. CONCLUSION

Higher Education in Africa is going through a decisive phase in its evolution. The increasingly competitive world economic system compels us to set up an education system, synergic with research and production, and able to respond adequately to the development of the society.

This change cannot take place without a radical review of established models and without overcoming the strong resistance to change, characteristic of the university community.

Redefining Higher Education, by assigning it missions which are more directly related to the development needs should help to create an environment in which the academic staff and students will feel committed to a hopeful social project.

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**QUALITY OF HIGHER
EDUCATION**

CHAPTER 10

Quality of Higher Education in Francophone Africa

Ousseynou DIA*

The responses of higher education to a changing world should be guided by three watch words which determine its local, national and international standing and functioning, relevance, quality and internationalization. "UNESCO Policy Paper for Change and Development in Higher Education" Executive Summary, Section V.

1. INTRODUCTION

In the context of these new orientations, every higher education policy should fit into the particularly complex social dynamics of the training and/or research institutions (Universities, Teacher Training Colleges, Institutions...) that have interfaces with secondary or "pre-university" education on the one hand and with the world of work and the development concerns of the States on the other. Set at the extremities of the educational system, these two entities exert pressure and lay down conditions that cannot be ignored. Hence, such a policy will emanate from a dynamic compromise between the external demands and the tasks which the States assign to these institutions.

In this regard, the relevance of higher education should be perceived in terms of its role and place in society, its mission as regards training and research and the resultant services. It should also be seen in terms of its linkages with the world of work (in the

*Director of Higher Education, Dakar, Senegal.

widest sense), its relationship with the State and sources of funding as well as its interactions with other levels and forms of education.

Holders of the "Baccalaureat" (Advanced Level School Certificate) continue to knock at the doors of universities thereby creating qualitative and quantitative problems at that level. Three questions have become topical issues in many countries: What is the real standard of the baccalaureate holders? Does this profile correspond with the standards envisaged through the secondary school syllabus? At present, the Baccalaureat serves as school leaving certificate and passport to higher education. Should these two functions be separated? How is the transition to higher education operated? Is there a direct access or a kind of selective admission or controlled admission?

Downstream, i.e. at the end of the higher education studies, the number of graduates knocking at the doors of the labour market in a legitimate search for employment raises other issues in both qualitative and quantitative terms as well: how many graduates does the labour market require? What should be their profiles and in which fields? Do graduates of higher education have the requisite qualification for employment?

Set between the two extremities is the higher education process characterised by its own internal problems of which a few aspects determining its relevance, efficiency and the quality of its training will be mentioned through the educational policy objectives of the States which have achieved independence since 1960 (i.e. to become credible institutions, train competent professionals for development, organize development-oriented research, render services to the community and diversify graduate profiles and training programmes).

The correct perception of the problems inherent in such educational policies has therefore enabled the States to set up institutions to train the professionals they need. The universities have particularly developed relevant curricula and adapted them to African

priorities; they have legitimized research and created specialized institutions in this area; *they have, to a large extent, replaced the technical cooperation assistants by indigenous lecturers and encouraged the development of intellectual communities. Their main success consisted in training qualified professionals needed to manage public and private organizations.* However, under the impact of significant external trends (economic globalization, high population growth rates, technological innovations and serious financial constraints), the higher educational institutions are now in crisis in a crucial phase of their development. Beyond the negative trend (decline in the internal and external training efficiency) the basic issue is to know what type of institution the States need. Generally speaking, there is an urgent need for higher educational reform for the purpose of maintaining and strengthening quality standards among other concerns. It is more than necessary to develop a new perception of education and training in order to adapt and enhance the system's relevance, efficiency and quality.

We shall examine the following issues concerning:

- quality in higher education;
- practicability and efficiency of this educational sector;
- promotion of science and technology; and
- reinforcement of the research function of higher education.

2. QUALITY IN HIGHER EDUCATION

2.1. General Considerations

Given the importance of the stakes, it is advisable to reflect initially on the meaning of *excellence* and *quality* as performance indicators specific to the educational system or as recognized in the industrial sector. Certainly, "*excellence*" or "*quality*" does not have a single definition for the simple reason that there are several ways of pursuing and assessing excellence. Figuratively, it can be asserted that "*excellence*" consists of doing the best of all things and doing them

in the best possible manner. "Excellence" is a measure of the quality with which people carry out their functions. It is not linked per se to the number or the scope of the institution; at most, one could say that there is an optimal level beyond which management tends to become inefficient and impedes excellence. In the light of the higher educational reform policies, the multi-sectoral, multi-international and multi-dimensional nature of quality embraces all the components such as: teaching, training, research, teaching and non-teaching staff, curricula, learning, learners, infrastructures, scientific and technical equipment, institutional environment, etc..

The quality of training is the most pertinent aspect of the entire underlying system of higher education. However, the recorded decline calls for a review and improvement of the performance indicators, namely:

- Academic standards (the above-mentioned skills) serve as pedagogic reference points for quality control, but they are often considered as codes of conduct laying emphasis on ethical problems and professional ethics. The local norms are based on international standards, and therefore reflect a consensus reached after consultations on the values, achievements, accomplishments and professional attitudes.
- Material and financial incentives (accommodation, equipment, grants, allowances and other forms of reward) foster the development of a culture of quality as they help to maintain teaching and research staff by improving their standing through salary adjustments together with administrative, technical and pedagogical support .
- Educational facilities (manuals, textbooks, journals, periodicals and information and communication technology aids: CD-ROM, video-cassette, satellite dish..., teaching aids, scientific, technical and instructional equipment) help improve and enhance examination results as well as the efficiency and quality of education and research.
- The institutionalization of the maintenance of

university infrastructure and equipments has a direct impact on the quality of education.

The quality of education provided remains the most important aspect but it is also the most difficult ideal to determine. In fact, it sets standards defining the intellectual environment of the institution, determines course requirements and the means of acquiring certificates, as well as the management capacity, in the final analysis.

The perception of the philosophy of quality is based on the areas of competence. For lecturers, it concerns, above all, the quality of training given to students, which embraces all the functions that they should perform in the areas of teaching, research and services to the community. In the case of the non-teaching staff, it concerns the quality of work to be carried out or the services to be rendered as part of their daily functions. To ensure quality training, it appears important to establish among all the stakeholders a common understanding of targeted objectives and a framework for information exchange and harmonization of student training and development programmes.

Commitment to meeting students' expectations should be expressed through mobilization around a key value and the motivation of staff for enhanced productivity. This calls for a mastery of skills required for the performance of prescribed functions. It is therefore important for each member of the community to receive training and be kept abreast of the notions and principles associated with the philosophy of quality.

The operational objectives connected with this main goal include the following aspects:

- Plan and implement activities that could enhance the understanding of the concepts and principles underlying the philosophy of quality. This implies organizing conferences, retreat for studies and symposia;
- Promote lifelong vocational training for enhanced

- motivation and productivity;
- Establish measures aimed at promoting initiative and team work;
 - Establish clubs to promote the ideals of quality;
 - Ensure that all staff members participate in the quality management process.

2.2. Indicators of Institutional Performance

All the aspects concerning quality therefore influence the *image* of the institution and the intrinsic quality of its functions.

There are at least *five performance indicators* for classifying universities and affiliated institutions:

- institution's reputation: the classification is done;
- quality of institutional resources (lecturers, students, facilities; etc), in which case the classification lays emphasis on resources instead of productivity;
- value of external achievements: here, the classification is based, among other things, on the lecturers' personal involvement in the professional career of graduates; etc;
- nature and scope of curricula;
- performance in terms of skill development.

Under the circumstances, our universities would certainly not be classified among the best universities of the world even though certain universities of the North envy some of our substantive institutions; the system of higher education bears some positive characteristics such as highly qualified academic staff and a university tradition of excellence.

The quality of a higher educational system may also be assessed on the basis of three *parameters*, namely:

- relevance of certificates awarded; i.e. the appropriateness of certified skills in relation to the requirements of the profession endorsed by the given certificate;
- value of the knowledge produced: this can be assessed in terms of its originality or novelty on the basis of its contribution to the development of

knowledge and science, or its utility or scope of applications.

- Its impact on the socio-cultural environment through university extension activities: lifelong education, community development and expertise.

At this level, our universities could no longer meet the expectations as they are beset with immense difficulties of all kinds (quantitative increase in enrolments, low output in science, an increasing number of unemployed graduates, financial constraints; etc).

2.3. Strategy for Overall Quality Management

The quest for excellence and quality has become the main concern of the institutions obsessed with achieving success. Obviously, there exist, in business terms, some common attributes such as the specific nature of actions taken, the attention paid to clients, autonomy and entrepreneurship, increasing productivity through staff motivation, mobilization around a key value, the use of a simple and light structure, concentration on what can be done, showing flexibility in a context of rigorous discipline, etc. These attributes are not generally perceptible in the same degree in each of the best enterprises; however, in each case, at least one of them stands out clearly. At any rate, the best enterprises are obsessed with quality and its management. This philosophy of quality encompasses the following concepts: conformity of products to clients' expectations and standards, mobilization of all the agents involved, team work, maximum added value and service to customers.

It is therefore reasonable that the appropriate strategies for enhancing the quality of training are being researched in the higher education sector particularly in the field of technology. A research conducted in 1986 by the American Society for Training in Engineering revealed that the quality of training in engineering disciplines is linked to the expertise of the lecturers (the need to use industrial experts),

continuous development of teaching skills, the use of appropriate teaching methods and techniques and laboratory equipment. The basic conclusion of this study is that the application of the concept of *overall quality management* inspired by what goes on in industry is now recommended almost everywhere in the higher education sector.

Several university institutions in the developed world have just established action programmes for global quality management which emphasize an essentially client-oriented approach to educational management. The desired service or product quality calls for a proper identification of the corresponding characteristics envisaged and the use of a production process which guarantees that such characteristics will be achieved through efforts aimed at eliminating drop-outs, repetition and superfluous complexity. The student is obviously identified as the main user, i.e. the first client. According to this hypothesis, the goods or services delivered would be the training given. On the contrary, especially with respect to technological and vocational training, others are rather tempted to assimilate the industrial environment and "*client*" on the one hand and the student and "*product*" on the other. It is therefore noticed that a pedagogic approach oriented towards overall quality management consists in *presenting students as the main focus of Higher Education* with a view to providing quality training.

2.4. Implementation of Overall Quality Management

Students' expectations are not limited to the education intended to prepare them for professional careers. The educational system should contribute to their basic training to ensure their integral development. The mission of higher education should entail to establish an appropriate relationship between training and job requirements. Higher educational institutions should therefore seek to satisfy both students and the industrial environment that would engage them at the end of their studies while giving

priority to the students' needs.

i) Conditions for implementation

The harmonious implementation of overall quality management is contingent upon six conditions, namely:

- total commitment on the part of higher educational authorities;
- training and commitment of academic, technical and administrative staff, as well as support staff for pedagogic activities;
- students' commitment and involvement;
- establishing an atmosphere of collaboration and pride in work (encouraging efforts to improve quality, etc);
- promoting a new institutional culture embracing collaboration (for realistic team work) and participation in the quality management process;
- mastery of the socio-economic environment.

The strategies for enforcing quality in training comprise five stages involving the following functions:

- accurate description of needs aimed at defining long-term objectives and seeking the means of achieving them;
- examining constraints (prevailing situation and attitudes) with a view to establishing a project that takes account of both objectives and constraints;
- application of quality management techniques to training;
- assessing results of quality-oriented training so as to better determine needs and improve training objectives;
- adopting quality management at the institutional level.

The fourth and fifth stages show the "boomerang" effect of the quality-oriented training: the consequences on all the training process and structures are of crucial importance.

Whereas we should avoid making the imperfect and

dangerous analogy of likening a training institution to a production enterprise, it should be acknowledged that a training institution is similar to a service company established to meet both present and potential needs of users and the legitimate aspirations of the people operating in this structure. The ability to satisfy users' needs is termed as "quality". That being the case, why should the tools for quality management not be used to improve the satisfaction of requirements of the two clients of training: students, the primary users of the training received, and the society, which is looking for skills to improve its functioning and that of enterprises?

ii) Institutional Management

Given the new orientations defined for higher education, quality management requires the personal commitment of all agents participating in the new educational project and a collective commitment of all national university institutions. Can such institutions promote quality management if the academic and administrative staff do not enforce it? Is setting examples not the best means of motivating students? In fact, students will adapt much more easily to quality management if they have already experienced it.

The new debate on quality lays emphasis on the role of communication, and on the replacement of rigid hierarchical structures - where the person in charge addresses myriad problems - with flexible, open and participatory systems allowing for consultations, cooperation and development: a small number of staff thus engaged in a quality-oriented structure together resolve their problems whenever they arise. The efforts of quality-based training might be fruitless if a quality plan is not applied to training and if the example is not set by the top hierarchy.

iii) Practice of Overall Quality Management

The sole method of quality-oriented training consists in making students operate in an entity that pursues the objective of overall quality management. It

is impossible to advocate the quality approach in all enterprises and discourage its use in training institutions.

Can teachers inculcate in students a state of mind they themselves do not possess? We really need a cultural change that will guide us against the forces resistant to change as well as a new style of quality-based participatory management. Moreover, it is actually towards the training institutions that efforts should first be directed as a matter of priority, with particular regard to innovations.

The fundamental principles mainly concern the following precepts:

- setting clear and quantified objectives whenever possible, communicating them and getting others to share them;
- officializing the planning process and encouraging consultation and participation.

With the accurate and clear definition of the educational objectives, it will be possible to:

- determine the orientations of study programmes, course contents and priorities for research;
- choose the most appropriate teaching methods and inputs;
- set standards and assessment procedures;
- facilitate communication and cooperation between the stakeholders; and
- establish operational structures.

2.5. Evaluation and Quality Control

The term evaluate means to assess a value. In the educational institutions, the object assessed on the basis of academic standards may be the knowledge acquired by students through training courses, the education provided by a teacher, training programmes, academic structures, etc. In other words, it is an educational activity that consists in comparing individual performances and objectives.

Evaluation therefore consists in measuring the level of conformity between goals envisaged and the actual

outputs so as to develop an improved instructional strategy for achieving the set objectives.

j) Evaluating Objectives

The question of objectives is situated at two levels: the ultimate purposes of Higher Education, and operational objectives. Such education will be characterized by a threefold aim of imparting scientific and technical knowledge, participating in their elaboration and advancement through research, and finally, the preparing towards a future trade or career (learning a professional activity, acquiring manners and the know-how required in the life of a citizen operating in a specific environment). Yet, it appears obvious that the first two goals are in the service of the third: as a matter of fact, the transmission of knowledge and their development have no meaning unless they are geared towards preparing students towards their future work and responsibilities.

This reflection on training helps to also shed light on the debate about the introduction of technology into basic education. The main issue can systematically be defined as a relationship between goals or needs and resources or skills based on the products or processes. The result of such a presentation of technology is a new pedagogic, or rather macro-pedagogic perspective, which establishes linkages between technology, economics and classical studies. Training graduates to make them aware of their technological and societal responsibilities, training men capable of understanding the profound meaning of technology and conditions governing its transfer for development purposes could be some of the priorities of the training policies adapted to our context.

This requirement becomes all the more imperative as we reflect on the roles and functions of the institutions being restructured in our countries which are confronted with complex problems of development. This give the impression that the ultimate objective of various educational systems consists in finding

solutions to the problem of development.

Redefining the mission of higher educational institutions in terms of their ultimate objective as agents of development is certainly a necessary step, but it is far insufficient. It will still be necessary to establish the operational phases through which the teachings should be channeled in order to achieve the ultimate goal. Besides, it would be necessary - still at the operational level - to define the precise and observable behavioral objectives, to be evaluated, compared and assessed among students through the examination process.

Teaching by objectives, which is widely used for several years at other levels of education, particularly in the primary and secondary sectors, could greatly contribute to Higher Education; in this case, each teacher has to set beforehand a number of operational (i.e. observable and measurable) objectives and work out the contents from the programmes and methods likely to help him/her to attain them.

ii) Evaluating teaching

As regards the evaluation of teaching, it can at least be done at two levels: that of content (development and evaluation of curricula and syllabi), and methods. Given the specific goals which the institutions should henceforth pursue, we have to ask ourselves certain questions before preparing curricula. What links should they (institutions) maintain with those of developed countries? In other words, is any development work done if one is contented with teaching in the former the same course contents as in the latter? The question of standards seems to us to be all the more relevant as the neutrality and universality of scientific and technical knowledge appear to be more and more pseudo-evident. Scientific and technical knowledge has, as a matter of fact, a cultural impact in the sense that they more or less explicitly internalize a global vision, a mode of analysis and perception of reality. This interrogation therefore leads to a reflection on the universal and specific aspects and on their

complex relationships. If learning can more or less be considered universal, its linkages are enhanced by culture.

It is advisable to examine our students' basic scientific knowledge and consider the appropriate course content they need to make up for the inadequacies. If this preliminary survey is not carried out, the education we are providing could end up as a duplication of the knowledge already acquired by our students (formal knowledge, empirical personal and social knowledge); besides, one might wonder if the scientific and technical knowledge that we impart to them still address the issues that actually arise from their relationship with their environment.

iii) Assessing the academic staff

The problem connected with evaluating teaching methods is less attributed to the lack or inadequacy of appropriate pedagogic techniques than to the negative attitudes of certain teachers in this respect. Such evaluation can inevitably be done by observing the performance of teachers because an objective assessment can be made only on the basis of their conduct. With regard to the objectives of training, qualification and assessment of lessons taught and their feed-back, the evaluation can induce the academic staff to improve their performance and thus enhance the quality of teaching; it also helps to ascertain whether the objectives of a course or a study programme have been attained or to discover the discrepancies between the students' expectations, the teacher's intentions and the demands of the discipline.

All the same, with what tools can one make an *objective* assessment of a teacher's performance? There is in the first place the video technique which not only allows for the observation of the teacher's performance by a third person, but also encourages self-observation. There is also the practice of course inspection by a high-ranking professor or expert, analysis of syllabi by an administrative body and course evaluation by students.

The assessment of teachers' performance has often been resisted by some teachers and this deserves attention. The refusal can be explained as a resistance to pedagogic innovation, a mean of averting the risks of upsetting the "*master*" image which the teacher enjoys and the established monopoly of learning power which the master arrogates to himself in the classroom. However, this lack of conformity to the pedagogic practice of evaluation seems to be linked to the cultural context, educational system, the manner in which institutions and their teachers have been made to consider the notions of *learning*, *knowledge* and *teaching* in terms of *aptitude*, *competence* and *training*, the last element being a measurable product of planning. It is also linked to the level of students' participation in managing their studies and in running their school, the quality of instructional information given to teachers which underscores the significance of evaluating their services and skills.

The inherited educational system actually allows for the assessment of teachers in tertiary institutions only on the basis of their research works. Such evaluation has the merit of trying to define certain objective criteria for assessment such as publications and theses, and forcing young graduate assistants or assistant lecturers to distinguish themselves in a discipline before occupying positions of responsibility. On the other hand, it accounts for the preference given to scientific research to the detriment of teaching. Most of the teachers who took part in the debate on scientific research and teaching reached a consensus on the need for training through and for research even though some of them wondered about the place of educational research in the training institutions.

This explains the fact that, in the countries where teachers' performance is assessed, the practice is attributed to the search for the institutions' internal efficiency on account of the economic crisis and/or the phenomenon of student unrest. The revival of educational practices as well as the evaluation of teachers and teaching derives from this situation. That

is why students now indulge in making a quasi-systematic evaluation of their teachers. If it more or less provides information on the quality of the pedagogic relationship (criteria for teaching and research: characteristics of a course), it scarcely helps to evaluate the contents and their level of assimilation - at least because the assessments are based on human relations, the sole guarantee, in the eyes of the learners, for efficient teaching. This experience now reveals that students' assessments can measure the level of conviviality and human warmth!

However, the assessment that students make of the instruction received is a source of vital information for every lecturer who cares about improving his course. This practice is fruitful because it is rare to find instances where no deductions are made from the remarks given or from the analysis of their comments for improvement. A policy on this type of evaluation can only be incorporated into a comprehensive effort by an institution determined to provide quality education. This practice indeed goes beyond the questionnaires filled by students to take into account all the other pedagogic parameters. With all precautions taken (agreement on the validity of questionnaires, objectiveness in data gathering), it is possible to ask the teachers deserving promotion to submit an evaluation report on their performance in order to reinforce the pedagogic judgement or opinion of his peers, which cannot be ignored.

iv) Assessing Students' Knowledge

To ascertain that lessons are learnt, the assessment of knowledge constitutes an indispensable step, and marks, an appropriate appreciation. There are various modes of assessment: short written or oral tests in the form of Multiple Choice Questions (MCQ), the desirable oral tests and written home work within a limited period of time (or binomial exercises), press reviews within limited time and brief talks on specific subjects, debates prepared by two teams, investigations or practical surveys, round-tables with marks for the

groups, etc.

2.6. Teaching Practice for Quality Education

The diverse social aspects of teaching practice are often influenced by the countries' economic situation while the mission of higher education is underscored by the principle of democratization of education and training. The generalized access of Advanced Level G.C.E. (Baccalauréat) holders to the university has resulted in the expansion and heterogeneity of enrolments, thereby promoting cultural pluralism. Such data urge us to lay emphasis, henceforth, on diversified teaching methods and new education technologies, in other words, on a differentiated education.

i) Teaching methods

Defined as a strategy for the participation of teachers and/or learners in the teaching/learning, the teaching method constitutes an important variable of the teaching process. The objective of this formula is to determine what the teacher will do to make learning more effective and what the learner will do to acquire knowledge and know-how. A teaching strategy necessarily falls within the teacher's package of strategies and derives its value from the expediency of using it to promote the results of learning. Between the formal lecture, in which the lecturer addresses a large number of students, and the interactive discussion in small groups, there is a wide range of pedagogic approaches inspired by one method or the other: dialogue/discussion, panel discussion, debate, course - forum, *brainstorming* (evaluation and instant use of ideas gathered on a subject by the teacher in the presence of a facilitator), *buzz groups* (presentation of a subject by the teacher before a group, evaluation at the sub-group level followed by a meeting for synthesis in a plenary session), case study method, simulation methods, etc.

There are also the mixed methods. In practice, it is therefore essential for the teacher to master a variety of

teaching formulae.

ii) *New Information and Communication Technologies Applied to Teaching*

Often considered as a superfluous accessory for those who have scientific and technical competence, pedagogy rather seems to be one of the indispensable conditions for enhancing quality in education. The teacher's vocation and skills should be evaluated by classifying and rationalizing the process and circumstances under which students learn. This calls for pedagogic knowledge which is derived from educational practice and theoretic models of systematic research as applied to the analysis and resolution of training problems. In planning the conception, implementation and evaluation of training facilities, we move from the age of craftsmanship to that of educational technologies and methodologies.

The situation is changing with specific requirements of quality education as well as professional and social advancement through an increasingly frequent use of audio-visual methods and programmed teaching, thanks to the new technologies. In fact, the new communication technologies: audio-visual, computer science, on-line data processing, etc., are making constant progress and this progress is particularly geared towards ensuring a greater facility in their use as these technologies concern the public at large. In place of the cinema and big calculators, we witness the appearance of the video, microcomputers (personal computers), interactive video, remote access computing and its multiple possibilities, etc. The trainer should take these new data into account in his reflections because he perceives therein a rich package of tools at his disposal for the establishment of his teaching project.

Already, the computer has profoundly influenced all the economic and social sectors. It would be expedient to first situate activities within the spectrum of computer applications in education such as computer-assisted teaching (and computer-assisted intelligence),

which helps the learner to acquire new knowledge and develop specific skills, computerized educational management which evaluates the learners' performance and guides them through their course. Moreover, the computer offers a wide range of resources/instruments and specific teaching aids.

It therefore appears necessary, at a time when electronic machines are increasingly being used in today's world, to speed up their introduction into education, especially in the technological field in order to familiarize learners with the handling of more and more complex data, and help them to efficiently deal with the problems they will encounter in their professional career.

The generalization of numerical techniques is leading to the necessary rapprochement between telecommunication, data processing and television. These basic stakes will inevitably influence the development of higher education in the 21st Century.

iii) Logic of Educational Success and Quality

The debate on quality has resurfaced and demands in turn, that pedagogy focus on basic learning and that an appropriate evaluation or assessment be made thereafter. This strategy imposes a variety of roles on the teacher: he acts simultaneously as a resource person, a learning aid, a guide, a tutor, counselor or even a master, capable of imparting organized knowledge.

In this sense, differentiated pedagogy is not dissociated from the teachers' efforts to vary their operational strategies as it forms part of the search for solutions to a far-reaching contemporary challenge - that of modern education systems in the face of social determinants. In other words, even before constituting a major pedagogic option for maintaining quality, the management of mass enrolment and heterogeneity seems to be a necessity for the education system and the educational structures themselves.

If this pedagogy attempts to better accommodate and manage diversity, it is because it aims, in the final

analysis, at the success of the largest possible number of students. In fact, it is a form of success-oriented pedagogy that is topical today since people have become aware that it is now necessary to promote equal opportunities for success. As a pedagogy based on the logic of greater success, differentiated pedagogy is contingent on the ability to learn and develop oneself; it is concerned with adapting to the diversity of individuals and personal learning capacity.

At the course level, it should be manifested in the constitution of more homogeneous and manageable groups, in the formative and criteria-based evaluation process through tutorials or any other method which seeks to take the phenomenon of "massification" and heterogeneity into consideration.

Within an institution, this strategy should be supported with a flexible and inventive pedagogic organization which makes it feasible as well as a favourable arrangement in time and space conducive to exchanges among teachers and to meetings between teachers and students.

The concern for quality also calls for the adoption of a special teaching practice. However, the debate on quality inevitably comprises several levels of discussion. It is philosophic because it induces discussants to assess values, criteria, goals, the vision of education or even that of the human beings and society. It is also political because it calls into question a public service, national experts and material and financial resources provided the State. It is also pedagogic, insofar as it again calls into question the educational activity itself as well as the objectives, content, methods and the evaluation process.

High quality pedagogy entails the acquisition of basic learning skills. Such knowledge refers to the initiation and synthetic activities that occur at the beginning and end of a course and which promote the integration of knowledge with regard to generic abilities and attitudes. At this level, a quality-oriented pedagogy based on this knowledge associates pedagogy with basic training. An evaluation that enhances quality should

have at least three essential characteristics: it should first aim at intellectual development, give attention to integrated development and finally come within the perspective of educational success.

This concern for students' individual progress obviously evokes all forms of formative and criteria-based evaluation, which cannot be said to be currently in use in higher education. It should be recalled that formative evaluation tends to provide appropriate information to guide teachers in their work and students in their learning. For its part, criteria-based evaluation relies on a comparison of the students' results with the expected level of mastery of the objectives of a course or syllabus. These two aspects of the same approach, which a teacher can blend, have the merit of being specifically centered on students' personal progress.

The quality of pedagogic activity therefore necessitates the fulfillment of components such as freedom of instruction and institutional evaluation. The requirement of integral development should be addressed by both the teacher and the student-actor deeply engaged in the educational relationship. Indeed, it is the student who perceives and learns rules, establishes linkages and organizes the learning process; it is the student who integrates knowledge. In short, students learn to develop themselves.

Teachers, students, support and administrative staff intervene directly or indirectly in the teaching process. All the educational partners are responsible for the institutional ethics, which inspire and sustain the teaching practice. Everyone finds it advantageous to work in an environment where knowledge is valued and the multiple facets of such ethics (freedom of expression, quest for truth, concern for professionalism, respect for educational contract, etc) inspire all the gestures and interventions. Finally, the provision of appropriate conditions is necessary for a teaching practice associated with the training mission in a favourable environment. These conditions make an essential contribution to the establishment of the

spirit of educational success in the context of quality in university education. This is the ultimate goal of pedagogy.

iv.) Renovating Academic Programmes

For a given output profile, the academic programme should not be solely regarded as a coherent juxtaposition of course contents in an interdisciplinary or multidisciplinary system. It should make the general and specific objectives pursued evident in the contents, envisaged teaching strategies, evaluation conditions and procedures.

With the expansion of modern knowledge and new qualification standards for workers throughout the world, the adaptation and renovation of academic programmes depend on a political choice between two conceptions of *national* and *international* scope.

- The nationalistic preoccupation emphasizes endogenous development.
- The competitive international conception uses the same terms of reference as those of the developed countries to train high-level managerial staff and promote development research.

In fact, the ultimate goal of development pursued is the same and therefore reconciles the two points of view. Indeed, the endogenization of teaching and research should not presuppose a decline in quality. Similarly, the presence of high-level researchers does not necessarily offer solutions to all the problems of development.

The result expected from a new effective approach lies in the organization of course contents, their planning, pedagogic approaches and the management of new academic programmes by education and training professionals. More flexible academic programmes could be organized on the basis of modules and credits in certain disciplines, according to training needs. This practice would justify the integration of lifelong professional training and short, intensive training cycles. The renewal of the Master's and Doctorate

Programmes deserves special attention. These programmes are of crucial importance in the development of national capabilities. However, they are increasingly affected by the problem of maintaining the efficiency and quality required to guarantee professional competence in the context of competition between the regional and international economies. This situation has generated renewed interest in regional cooperation in this education sector.

3. OPERATIONAL CAPACITY AND EFFICIENCY IN HIGHER EDUCATION

3.1. Administrative and Organizational Efficiency

The lapses observed in the management of our higher educational institutions have resulted in disappointing performances attributed, among other things, to high unit costs, poor supervision, misuse of personnel and installations, inappropriate funding procedures and the absence of an information system and organized management.

Promoting greater efficiency in the management of our institutions has therefore become an important objective of several Governments. By evaluating and reorganizing the administrative structures and developing staff qualifications universities, in particular, can generate funds to enable them to do more with the available resources. However, the most significant results of the improved management depend on more daring reforms in the university funding and administrative system. The improvement of their capacity for strategic planning depends on the existence of organized and easily accessible information on the key aspects of their performance. In fact, in these circumstances it appears necessary to obtain easily user usable data in order to follow the trend of academic results, unit costs and institutional efficiency.

Any strategy aimed at stabilizing and revitalizing higher education should include a reorganization of our institutions' system of management or governance.

Indeed, the internal and external tensions between the Central Management, Staff and Users (students) disrupted the functioning of institutions as a result of the weakness of the mechanisms for internal communication. Every improvement in this area restores confidence and reinforces institutional stability and efficiency. The existing structures of governance (administrative councils, deliberative assemblies and technical committees) should therefore be reinforced or changed, if need be, to make them more responsive to the concerns and needs of the parties concerned. A better flow of information at the university level will enhance the understanding of problems facing the educational institutions.

3.2. Pedagogic Efficiency

The pedagogic management of our higher educational institutions should facilitate the training of staff fit for integration into the development process, researchers equipped with appropriate tools and capable of resolving problems and lecturers who can impart knowledge efficiently. To this end, there is an urgent need to establish a rational, endogenous but open institutional system organized from judiciously associated interactive and interdependent elements whose activities contribute towards the achievement of educational objectives. Such a system should be provided with a mechanism for regulation and evaluation. The main objective consists in establishing an internal process regulated by provisional structures.

Managing an institution efficiently implies organizing optimal conditions for its functioning on the basis of specifications of the educational project (aims, qualitative and quantitative objectives), existing conditions for the feasibility of the actions or missions (planning, overall pedagogic structure; main orientations of the human, material and financial resources; grassroots pedagogic teams; admission profiles; graduation profiles, etc). The efficiency of our institutions will mainly depend on the managerial qualities of their executives and on the scientific and pedagogic

experts sustaining the system.

The administrator should have at his disposal reliable data for economic and pedagogic analyses to guide him in his activities. Certain elements of the on-going project that can serve as educational performance indicators are as examined below:

- the admission profile which brings up the question of academic prerequisites for the various fields of education, the issue of working conditions and schedules, and finally, the linkage between curricula of the secondary and tertiary education sectors. The admission profile is still associated with psychological, cognitive, psychomotor and cultural data;
- the graduation (or product) profile which corresponds with a standard describing skills and attitudes acquired and justifying the award of a certificate giving official recognition to the training after due assessment;
- the enrolment package that determines the accommodation capacity of the premises, the student-teacher ratio and the organization of practical activities;
- the failure and drop-out rates that constitute important criteria for evaluating the efficiency of the education provided;
- the phenomenon of graduate unemployment which raises the issue of relevance of the product profile in relation to the economic environment, the world of learning, etc.;
- the system's efficiency which can be enhanced through the appropriate renewal of the training methods and techniques and educational information and communication technologies;
- the knowledge acquired through research (results of studies, programmes and projects, scientific publications, use of research results, number of trained researchers, etc.) are some of the indicators of an effective development research;
- the rate of returns at the private and social levels reflects the efficiency of the training provided and the relevance of the certificates awarded. It is

obtained by comparing the educational costs borne by individuals and the flow of income to be generated by such education on the labour market throughout the users' lifetime.

4. PROMOTING SCIENCE AND TECHNOLOGY

4.1. Teaching Science and Technology

Like other States of the world, African States are destined to participate in the great worldwide competition foreshadowed by the 3rd Millennium whose vital stake lies in the mastery of Science and Technology. In the early years of their independence, the foundations of all development strategies of the African States should have been established through a rigorous evaluation of the level of Science and Technology Education, the definition of a coherent and permanent scientific policy, the mobilization of human resources and the establishment of evaluation and regulatory mechanisms.

The perception of the stakes justifies all the attention given by African States to the teaching of science and technology. The 1962 Antananarivo Conference on the Role of Higher Education in Africa recommended the development of national capabilities in science and technology. The States were urged to achieve 60/40 ratios in these disciplines which were generally recognized as embracing agriculture, engineering, health science and natural sciences. Even though this objective has not been attained laudable efforts have been noted all over the continent. The teaching of science and technology has been identified in most of its fundamental dimensions: aims and objectives, means and strategies, importance of science and technology education, the policy governing access to such education, the pedagogic strategy for the selection of students in secondary schools and in the scientific options, the efficiency of the system and its prospects.

Africa has therefore sought to acquire substantial resources in order to find solutions to problems such

as underdevelopment, population explosion, energy shortage, declining education, urbanization, eradication of persistent diseases and to manage technologies better to that effect.

The institutions had to face a twofold challenge: undertaking technological and industrial research aimed at resolving problems and developing basic research, the only mechanism that could help them attain an international standard.

4.2. Vocational Training and Internationalization

j) Renovating Technological Education Programmes

A combination of arguments such as those developed above, economic preoccupations and the aggravation of unemployment for graduates in the social and human sciences in the public sector, the main employer, prompted the States to better organize technological education and vocational training in the tertiary sector through new policies.

However, the new environment of globalization of the liberal economy has since the 1990s brought about profound changes in the organization of enterprises. Is it due to the growing impact of international trade, to the greater diversity of industrial products? Two trends have often been highlighted among the commercial constraints: one seems to increasingly influence the life of enterprises, while the other emphasizes the need for effective business management at each level of production.

In our opinion, and, without seeking in any way to denigrate its importance, it seems that these phenomena constitute the premise of others that will have a qualitatively greater structuring effect.

- The current technological changes greatly affect working conditions in the tertiary sector (information dissemination) as an additional part of the task is computerized. Behind this trend lies a new element - the fact that the technical component of the work of an engineer or a technician will make

less use of an action on the physical nature than one modifying the organization of human relations within and outside the enterprise.

- The changes result in penetration of commercial rationality into the working process at the tertiary level. This penetration is facilitated by international trade, and its tertiary component (especially services) is developing gradually every day. The present trend towards the internationalization of productive mechanisms is sustained by this process.

These profound trends associated with demographic realities are already transforming our educational system and calling again into question the principles on which the system was established. In fact, the system established was expected to guarantee a flexible adjustment of educational supply and demand. Necessary arrangements had to be made towards attaining this objective of adjustment, especially the distribution of educational levels through hierarchical stratification of careers. However this balance is being called into question under the pressure of new phenomena: first of all, a greater demand for vocational training is noticed; besides, new production techniques are upsetting this hierarchical arrangement of trades; finally, the tailor-made training seems to be taking precedence over the qualified training transferable in certain industries and people seem to be more preoccupied with developing "operational and practical" programmes than basing their options on training and the labour market. The development of adult education opens new prospects for francophone universities to intervene in the non-structured informal sector by offering modular training programmes that are not necessarily crowned with certificates.

ii) Correspondence between Training and Job Requirements

If there are prospects for technological and professional training in our tertiary institutions such prospects are necessarily contingent on alliances

established with enterprises, professional associations and employers' organizations. However, this new fact is transforming the ways in which we plan and run our training programmes. The institutions will henceforth be solicited simultaneously for initial training, refresher courses and further training. Should these different objectives be pursued in different institutions? If the answer is no, should the objectives be separated, or should the existing structuring scheme be retained? Taking these new constraints into account means transforming educational practices as well as the values on which the system of education was built. In the final analysis, the new economic situation created by the trade liberalization and technological changes will not simply transform higher technological and professional education; it is the entire francophone African educational system that will be transformed accordingly. Thus, the new times will demand that the school henceforth encourage a vocation-oriented pedagogy more than the type based on formal understanding. At present, the school still attaches importance to formal understanding and seems to neglect the practical aspects of education. Knowledge is not only understanding; it entails knowing how to apply what one has understood. The new world into which we are entering is therefore also going to force us to rediscover these forgotten truths.

Under these circumstances, is it possible for training to integrate all these elements. In our opinion, the phenomenon entails a formidable challenge. Indeed, one should take into account four important elements:

- Drawing up programmes according to the so-called skills method will henceforth require the intervention of enterprises which cherish a culture that promotes technological innovation in all of its branches (know-how, procedures, management system, etc);
- The really scientific aspect will be modified insofar as the technical problems to be resolved will increasingly appear in the form of modification of

relations between individuals or human groups with less emphasis on the traditional aspect of the modification process;

- The working environment of enterprises will itself be modified insofar as every action will bring multidisciplinary mechanisms into play.
- The hierarchical organization of the work of enterprises will be disrupted as the interruption of market forces speed up the process.

In other words, is training adapted to these processes? It would be wrong to answer this question from the perspective of access to supplementary disciplines. That is certainly necessary, but the main assets of tomorrow's engineer or technician will be his ability to perceive an exceptionally diverse reality in a unified and synthetic manner. One might paradoxically tend to conclude that past education prepared students better. Indeed, modern education enables trainees to acquire numerous techniques, without grasping synthetically and conceptually all the phenomena inherent in a given problem. The actual focus here is the weak point of the logical empiricism which leads certain teachers to revert to the more "traditional" teaching methods. At any rate, this impressionable reaction is an illusion; the methodological unity which the tertiary institutions fostered among students was based on a certain vision of natural sciences for the purpose of acting primarily on the transformation of nature. Obviously, society and enterprises will be less concerned about this type of problem.

In these circumstances, the education provided in the "*Ecoles Normales Supérieures*" (Teacher Training Colleges) is bound to change thoroughly its training and the one provided upstream. The cultural change that we are all witnessing around us will have repercussions on our entire education system. Understanding the economic determinants and preparing future engineers and technicians to that effect constitute a long-term process.

In view of this change, a gigantic effort is necessary. It is the duty of the lecturer/researcher, a privileged

agent of this change, to assist in transferring the knowledge that he helped to create. Developing teaching methods to speed up and democratize access to knowledge is not an income-generating career for decadent researchers. It is, in reality, the only antidote against the "dual" society prophesied by some sociologists, in which the chief priests of science and technology are totally marginalized from the rest of the community. It is by accepting genuine pedagogic research that the term teacher/researcher can assume its full dimension. However, in setting up new structures, we should draw on past experience and take account of future requirements in order to strengthen the new objectives and introduce a new teaching system.

4.3. Promoting Quality Technological Education in the Tertiary Sector

The implementation of such a training policy calls for new types of industrial and commercial development agents, operational and production engineers as well as technicians. In fact, their jobs are the central focus of the analyses which highlight the two profiles of engineers that bear some universal traits, whatever the enterprise's area of activity or competence. It concerns engineers capable of carrying out design and application functions and operational engineers. They should be functional at different levels of the enterprise's operation, have adequate capacity for adapting and integrating the diverse services and prove that they have acquired a vast culture. To train such flexible and versatile engineers, it is necessary to develop a specific system of education, which prepares them for their future functions throughout their academic course. The studies will simultaneously comprise thorough, specialized general and professional training that would constantly integrate the new scientific and technological innovations and address the needs and aspirations of the ever-changing society. They will especially be organized as part of the preparation for a career or a set of careers and for

initiation into scientific and industrial research.

Two important considerations emerge to clarify the issue of quality in technological and vocational training at the tertiary level.

- The first consideration is clear: today, technological and industrial capabilities cannot be developed without an ambitious policy that emphasizes the restructuring of Teacher Training Colleges and uses all available resources and possible mechanisms to plan and implement indispensable pedagogic reforms and innovations as well as the necessary linkages with other levels of education.
- The second basic consideration lies in the fact that our perception of technology which associates needs, products and resources, calls for an in-depth reflection on the diverse procedures governing the system's renovation by university authorities, business executives and those responsible for training as well as graduates and students. Projects aimed at creating new branches of learning or transforming educational structures should be designed and traditional training and teaching programmes should be refocused by asserting more clearly the will to set the highest standards for human resources.

It is also by stressing the need to promote this meaning of technology that the essential pedagogic innovations in the development of our enterprises' technological capabilities will be planned with a view to meeting the major challenges which constitute important industrial and commercial stakes in the technological and vocational training sectors.

Finally, this new professionalization function should be envisaged in the context of a *right to higher education* and an increasing demand for educational services as our societies evolve towards a model of a *lifelong quality education for all*. This model is gradually replacing the ever-dominant one that consists in selective and intensive courses organized over a limited period. Only an adequately diversified and flexible

system, in terms of access and higher educational procedures, can meet the challenges of a rapidly changing labour market. This new situation prevailing in the world of labour therefore has a direct impact on the new objectives of technological education in the tertiary sector. The increase in course content and the induced work load cannot alone constitute a viable solution.

These programmes should give priority to subjects which develop the intellectual ability of students to enable them to judiciously face up the complex situations characterized by the technological, economic and cultural transformations and diversities that cannot be ignored. Fortunately, these new trends inculcate in them qualities such as initiative, enterprise and adaptability; they also enable them to carry out their duty with greater confidence in a modern world of labour. Definitely, and, as already mentioned, this modernity will eventually eliminate the artificially created opposition between general education and vocational education.

4.4. Centers of Excellence

The difficult economic situation of the States and the global upheavals attributed to the emergence of aggressive economic entities have actually help in updating the concept of African integration. Similarly, it would be expedient to rationalize technological cooperation with the North by refocusing real needs which should be expressed in a reliable manner.

Cooperation and integration in the field of science and technology should not necessarily mean uniformizing or centralizing such activities. The process rather consists in drawing on a thorough knowledge of the national systems and reflecting together in order to identify the basic obstacles to the promotion of science and technology education as a factor of development, the mobilization and optimal use of financial and human resources that are available or yet to be generated.

A cooperation and integration policy established through networks or centers of excellence could be developed in the following areas:

- training for teachers and researchers (scientific and technical training, initial vocational training, regional centers for lifelong training, development of suitable training methodologies);
- mobility of teachers and researchers;
- creation of monitoring and assessment committees;
- creation of expert committees to monitor performance and quality indicators;
- production of teaching material;
- development of an information and communication system, drawing on technological achievements (satellites, television, telematic or *information super highway* programmes; etc).

Each of these areas entails the development of operational programmes reflecting objectives to be attained, the resources to be employed and strategies to be implemented, specifications and evaluation criteria for the results obtained.

The creation of regional centres of excellence is hereby proposed to support national efforts and resolve problems attributed to the deficiencies in the professional training systems. These centers will meet the needs of high-level training for enhanced qualification. They will offer appropriate programmes to make up for the lack of critical aptitudes and serve as points of convergence for new approaches to education and professional training.

The regional centers of excellence will be involved wherever an institution and a programme exist. They will be organized around core programmes of university departments which blend with the deficient crucial needs identified in the national science and technology capacity assessments.

The objectives of these regional centers of excellence will be to:

- provide practical training;
- address in a flexible and easily adaptable manner the

- changing needs of the labour market and thus guarantee a sustainable capacity building process;
- develop innovative approaches in order to contribute to the advancement of knowledge;
 - carry out industrial research in sectors where the need for it is expressed and promoted necessary exchanges;
 - promote new products and ideas (technopoles, or science parks, etc.).

It is important to point out that the regional centers of excellence are not destined to replace universities. Their primary objective is to meet, through an interdisciplinary approach, the skilled labour requirements and those of the labour market. The centers will be original and specific in their approach: they will feature programmes and courses geared towards short-term concrete needs and promote flexibility in programme design and course content.

5. REINFORCING THE RESEARCH FUNCTION

5.1. Review/Analysis of the State of Research

The tertiary institutions, especially the Universities, are at present concerned about all aspects pertaining to development of our societies to which they are more and more open and whose preoccupations are well known to them. They help in resolving national problems; their primary duty is to act as the prime-mover of development through research and training. Thanks to their national scope, they address the needs and problems of the country and determine its action and the corresponding priorities. As universal structures, they promote cultural exchanges. They therefore act as agents of a cooperation they ought to foster with generosity and in a critical and prospective way.

Our institutions, which have long been entangled in contradictions and ancient traditions, are increasingly moving towards development-oriented research while maintaining their autonomy in the area

of research, ever since the establishment, almost everywhere, of structures for the management of national scientific and technological policies. They have been encountering three types of difficulties in their development:

- *Institutional and organizational difficulties*: until recently, the absence of a competent body in charge of management and coordination of research accounted for the lack of follow-up to research activities (lack of reports on scientific activities, lack of monitoring and evaluation of scientific production, no research policy geared towards promoting priority topics or projects; lack of financial incentives for research-development through the award of scholarships and thematic research grants, non-approval of research proposals, absence of a directory of current research themes and profiles of lecturers and/or researchers as well as research programmes, etc.).
- *Material and financial difficulties*: the obvious inadequacy of research materials and the low level of funds reserved for research compromise its development.
- Problems connected with growth and qualification of lecturers and/or researchers: the reduction of funds allocated to laboratories as a result of the present economic situation and the administrative structure of the traditional research budget are not likely to encourage research. Moreover, it takes too long for researchers to be promoted senior research fellows.

5.2. Guiding Principles

In spite of the complexity of the problems posed and the ambitious missions assigned to them our universities have resolved, for the first time, to undertake activities in keeping with long-term research policies. This policy formulation process allowed for a better definition of the operational strategy which enabled them to improve the structure of programmes through the use of an ex-ante grading evaluation system based on several criteria (scientific and

technical criteria, chronological criteria and opportunity for orientation and balanced research). A university research policy should necessarily be situated in a global context of the scientific policy of the country and geared towards finding new solutions to development problems. For this reason, the research fields are not only scientific and technological in scope; they also focus on social, economic, organizational, institutional, legislative and even political issues.

The major options for the long term can be summed up as follows:

- university research is action-based. Every applied research obviously starts from basic research which makes it possible to define and plan the various activities; on the other hand, every basic research should lead to applied research or the modification of the objectives of applied research;
- university research should situate its programming in a forward-looking and long-term planning context since the sectorial or economic objectives of the short-and medium-term research policies have to be compared with the long-term objectives with a view to establishing some coherence between them.
- university research should essentially be a multidisciplinary research-development activity addressing the concerns of the population.

5.3. Research Areas

In this regard, the diverse facets or terminology ascribed to university research are taken into account, e.g.:

- basic research which leads to the definition of methodological concepts that foster progress for the development of knowledge;
- research and development, which highlights the importance of adaptations in the field;
- targeted research, finalized and underscored by socio-economic objectives;
- applied research aimed at finding solutions to contingent problems of limited scope;
- research adopted to special circumstances;

- strategic research, which consists in organizing research for the achievement of far-reaching objectives, and is accorded special importance on account of the economic upheavals.

University research seeks to organize under *development objectives* while upholding the fact that, in future, it will be both reductionist (hyper specializations) and global (collective response) in scope. The scientific project will be carried out through adopted structure that would take account of long-term objectives in relation to their short-term constraints, control the use of funds and improve the management, follow-up and evaluation processes.

i) Structures for Research Project Design, Execution and Backstopping

These structures should be developed in the following pattern: reorganizing the set of research structures, revitalizing research and training units and strengthening support services for research programmes.

ii) Structure for Animation, Orientation and Evaluation

The following actions shall be taken: revitalizing committees on teaching and research institutions, setting up horizontal scientific committees entrusted with the formulation of the general policy, creating within each structure a think-tank to deliberate on scientific orientations and assess the work of researchers and other activities.

iii) Management and Control Structure

The institutional review will help reinforce the action of the decision-making organs:

- In this regard, the research committee should perform better its orientation and control functions.
- the University congregation should not only express its views on the major scientific orientations, its programmes and the accompanying resources, but

also deliberate and formulate proposals on the basic themes connected, in particular, with scientific dynamism, the development of institutional tools and external evaluation of activities and resources, etc.

5.4. Planning and Developing Human Resources for Research

i) Staff Policy

The objective is to implement a personnel policy, based on a rigorous and centralized planning of human resources in order to set up a corps of competent and motivated lecturers and/or researchers and technicians supported by equally competent and motivated administrative staff. This objective implies:

- attractive remuneration and career prospects (review of the conditions for establishment, harmonization of career profiles and simplification of the career development stages);
- an incentive system regulated through evaluation mechanisms (allowances, selective promotion, sabbatical leave, participation in seminars/congresses, etc);
- reorganization of the internal promotion system.

ii) Developing the Research Personnel Structure

The structure of the research personnel should be adjusted according to the staff salary equalization system and constraints affecting research and development in the various departments.

The following orientations are recommended:

- establishment of a card-index of the internal and specific scientific potential with data obtained from surveys;
- establishment of a chart of training programmes for teachers and/or researchers;
- identification of priority areas of training for senior researchers in key sectors (water science, rural and urban water supply, production, sanitation, management, etc., agricultural science, food science,

communication, forestry, environmental science and advanced technology: computing, remote sensing, bio-technologies, nuclear technology and new materials technologies);

- increasing the number of technical research staff (30%) and that of lecturers and/or researchers.

5.5. Structure and Management of Financial Resources

To date, certain universities have not been allocated substantive budgets for research since the budget nomenclatures used do not make it possible to identify all the resources allocated to research. As a result of this situation, it is difficult to obtain the necessary statistical data for the accurate assessment of the financial effort with view to laying foundations for a rational programming of financial resources.

Financial resources should be assessed according to the following principles:

- provision for research in the budget nomenclatures;
- gradual increase in public resources allocated to university research;
- full control of national extra-budgetary resources (proceeds of services and funds from the private sector);
- full control of external aid (bilateral, regional, multilateral aid funds from NGOs and private foundations);
- increased financial participation of enterprises in industrial and technological research.

5.6. Communication and Cooperation Policies

i) Development of the Communication Function

A dynamic and effective communication and cooperation policy assumes that university research should go beyond its focal setting.

In opening out the research framework, priority should be given to actions aimed at developing its scientific potential, the knowledge imparted and its results to ensure that research plays an effective role in

the development process. The following orientations are recommended to that effect:

- improve the internal communication procedures;
- establish interactive communication mechanisms with partners upstream or downstream;
- adopt adequate mechanisms for processing and disseminating knowledge and research results;
- develop and revitalize linkages between Research/-Development, Research/Teaching and Research/-Planning.

ii) Cooperation Policy

a) National Cooperation policy

Relations with the national environment are organized according to the following principles:

- promoting, long-term and rational consultancy and working relations with research institutions, participating in educational planning and supervisory activities in particular and identifying research requirements in collaboration with the university community (lecturers-students-research fellows) and social partners;
- expanding the scope of research through the promotion of research - development.

b) International Cooperation policy

In order to gain access to all sources of innovation and knowledge, our universities intend to improve their level of integration into the international scientific community and also intensify their participation in cooperation-oriented actions (especially, the mobilization of financial, material and human resources):

- vertical cooperation is aimed at establishing working relations with international research institutions through multilateral or bilateral cooperation. Such relations will develop towards a greater diversification of partners. In this regard, regional cooperation and African integration should be accorded special attention;

- horizontal cooperation will be developed by intensifying the participation of universities in programmes jointly implemented with other institutions (creation of networks).

c) Funding research through International Cooperation

A large number of organizations finance research in Francophone Africa. An analysis of the areas of activity reveals that:

- most of the grants are allocated to fields such as agriculture, food, health, demography, higher education, environment, natural resource development, etc.; they are therefore mainly earmarked for activities aimed at finding solutions to development problems;
- part of the bilateral aid goes back to the donor countries (according to some estimates, one-third of bilateral funds remains with donors); joint research is therefore preferred as it partly promotes endogenous scientific capacity building and rarely makes provision for *institutional support*;
- multilateral aid is more diversified.

It seems possible that our universities can mobilize operational resources for all disciplines through multidisciplinary research programmes. It is therefore important to train high-level experts.

d) Collaboration between Universities and Industries

Relations established with industries for the purpose of laying foundations for collaboration reveal that such cooperation is motivated by two basic concerns, namely:

- finding solutions to specific technical problems in the short term; and
- improving the partners' strategic capacity in the long term in order to guarantee a basic research capacity provided by the university community and likely to backstop their own research.

The strategies this sector intends to implement are based on:

- a clear definition of the terms of reference of the collaboration between universities and industries in research-development (selecting university partners; integrating industrial environment researchers; codifying relations: exchanging views, consultancy, contracts, investment grants, training and recruiting graduates; close collaboration in monitoring research and development activities at each stage);
- a policy aimed at developing long-term linkages (endogenous research capacity, access to a global network of researchers and training engineers through research).

In spite of the low potential for industrial research, our universities intend to extend their activities in this sector. The higher vocational institutions are situated in this context.

5.7. Training for Research and Development

It has become necessary to promote, through research, training programmes leading to careers in fields such as engineering and medicine. In fact, to surmount the existing crisis and pave the way for development requires the attainment of a reasonable technological standard comparable to that of the developed countries. Obviously, this objective calls for increased research activities primarily geared towards technological fields propitious for research and development.

5.8. Service Policy

i) Service Function

All the work done by higher educational institutions, particularly the universities, through their missions, can be understood as services to the community: training students to obtain certificates, and research, constitute some of their traditional functions. The service function can be defined as the

set of short and medium-term services that researchers render to their environment as part of or in relation to their scientific activities, in which case their services may be remunerated through normal funding by the institution or through a specific mechanism; of course, this includes private activities.

The major ideas currently developed by Francophone African Universities still concern problems of relevance of research and effectiveness of activities undertaken by universities for their environments. The interest generated certainly reflects the increasing scope of the institutions and their role in the African society. The new context of economic globalization plays an essential role in strengthening research and promoting the institutions' exposure at the national and international levels.

However, since every training at the tertiary level necessarily and always includes knowledge and know-how, it would be advisable to examine ways in which the human vocation and the academic function can be harmonized with the utilitarian function and professionalism.

This will actually consist in promoting high quality training oriented towards a pedagogy of development that facilitates not only an active acquisition of knowledge and methods especially for the purpose of improving educational efficiency and the capacity to resolve concrete problems, but also the establishment of professional ethics to enable teachers to better assume their new responsibilities towards students and assist in meeting the development needs of the entire society. In the field of research, advisory support and consultancy, the modes of collaboration observed between the institutions and public and private organizations, consulting firms and enterprises are linked to these circumstances.

ii) Services Offered

A variety of services are offered. Actually, the emphasis recently laid on such services, in terms of quality, and in order to increase the institutions'

private resources and finance research reflects a new process aimed at developing the services provided.

Higher educational institutions offer the following services to the public: hire of infrastructures, organizing courses, cultural programmes, informal collaboration with popular universities, non-university vocational training, university press, sociological and economic surveys, etc.

Despite their differences, most of the disciplines taught show some common characteristics, e.g.: their obvious presence in media and cultural activities, expert committees, decision-making centers and consulting firms; participation in co-operative research programmes at the interdisciplinary, national and international levels; relatively oriented towards research and development, lifelong education and adult education. All the disciplines contribute to the production of services and dissemination of scientific and technical information.

iii) Relations between Universities and the Public

This collaboration assumes diverse forms. Certain universities have established an interface (liaison service or personnel) to ensure improved co-ordination of activities with utmost efficiency. However, some difficulties of understanding and adaptation still exist with respect to communication and working conditions in particular.

The service constitutes an enriching input not only to the society but also to the institutions themselves; it is even considered as an essential element for research and especially for training.

Financially speaking, it is difficult to estimate resources generated through services since they are not recorded in the budget. On the one hand, the available information is inadequate and on the other, it is impossible to assess the non-quantifiable (non-monetary) elements. In theory, the issues at stake include comparison between theory and practical (teaching and research at the university level are not only enriched by the problems posed by the practical

sector and the resultant data; they also drawn on the comparison between methods employed by universities and practical methods), the promotion of technology transfer through practical means and the understanding of the interdisciplinary dimension of practical problems. In the relational sphere, the service can actually help in establishing a network of linkages with the external environment.

iv) Interdisciplinarity

Interdisciplinarity poses problems of collaboration in the provision of services within the same institution and between the latter and its external partners. Problems identified by the communities cannot always be addressed or even resolved through specialized approaches alone. Some complex problem of prime concern (environment, drought, food self-sufficiency, energy, health, etc) can only be partially highlighted if attention is focused on the contributions of only one discipline. Certain satisfactory approaches to community problems therefore call for the dismantling of a number of intra or extramural obstacles even between universities and other public or private research organizations.

It is likely that in the present context, the service function will develop considerably in the coming years. However, the precaution to be taken consists in promoting a careful and qualitative development of the existing input while enhancing the quality of teaching and research which constitute the primary objectives. Promoting contacts with the public and small and medium-scale enterprises is now recommended and facilitated by development institutions.

v) Consultation Policy

In the light of the above considerations, the following points are worth taking into account during the formulation of a consultation policy:

- preliminary stages: exchange, at all possible levels, information and experiences regarding services, their motivations and results; make an inventory of

services provided, if necessary, within a centralized framework; try to encourage internal discussions after the dissemination process and define the problems raised;

- actual consultation: set the general objectives of services envisaged, the goals to be achieved at both institutional and community levels and try to improve the institutional image when necessary;
- consultation among partners: try to use real or potential partners and consultative mechanisms in defining expectations of the communities in relation to the service function;
- consultation between the institution and its partners: with regard to information, assist the institution's internal and external partners to compare the expected outputs, constraints affecting activities and the respective criteria.

iv) Financing Services

The complex problems connected with the funding of services centralized cannot be resolved at a general level. Some basic principles should be applied in establishing rules governing this field:

- it is essential to raise the question of transparency with regard to charges and remunerations for services within an institution;
- it is necessary to make a distinction between the lucrative and non-lucrative activities;
- an internal standardization should be established to allow for the application of charges modulated according to the lucrative or social character; moreover, the proprietorship of the data should be taken into account so as to enforce the various criteria set by the universities and the business community and guarantee the non-material benefits of the service (amortization, profit margin, etc.);
- efforts should be made to establish mechanisms for the distribution of proceeds of services provided.

In fact, the key element of services useful to the communities and to science or technology consists in

the researchers' personal attitudes or state of mind. Hence service policy would mainly reflect such attitudes and the associated mechanisms for consultation primarily between the real or potential partners, and eventually, between the institution and its partners.

6. CONCLUSION

Our intervention is situated in a context whereby the universal problems inherent in promoting educational relevance, efficiency and quality at the tertiary level are analyzed against the backdrop of the diversity of the national education systems.

All the agreements, conventions and charters established in recent years define objectives that remain valid provided that they update and adequately formulate the relevant analyses. We should discard with the detrimental and retrograde strategies that generate only crises and inequalities since we believe that the expansion of higher education in the 21st Century amply addresses the scientific and technological aspirations and human needs. There are good prospects for effective and quality mass education oriented towards society and adapted to the world of work, the determining link with lifelong education for workers and citizens whose professional and socio-cultural activities and training will closely interact throughout their life.

The functions and missions of the tertiary education sector are bound to be broadened, through the development and dissemination of knowledge, professional qualifications and the reinforcement and enrichment of cultural values. The tertiary sector will offer diversified and high-level education and promote reflection on the basic problems facing Africa. If supported with contemporary research, it will contribute to the development of human resources and the resolution of practical problems facing each country in addition to fostering exchanges and promoting communication and cultural dialogue in a

dynamic framework for cooperation and integration.

Its methods, programmes and course contents must develop towards an interdisciplinary perspective so as to ensure a better integration of the new educational technologies as well as a more flexible and effective training capacity.

Its additional functions will necessitate new profiles for the personnel involved in the sector. The scientific activity and higher education will assume increasingly collective dimensions. As in the production sector, the laboratories and educational services sector are developing a collective and multifunctional workforce comprising specialists with distinct and complementary skills: lecturers engaged in research activities, full-time researchers, specialized teachers produced in other sectors, technicians and administrative staff. This group of staff will increasingly integrate for a variable period of time assistants, research fellows and specialists from external sources, especially from enterprises and its members and students will be offered the opportunity to participate in creative work in production centers and social activities.

A high-level professional mobility is therefore envisaged in our sub-region on the threshold of the 21st Century. The relations and linkages with the rest of the educational system, research and the world of work will play a crucial role in this regard. It is therefore essential that all the categories of staff receive initial training of high quality that could regularly be complemented with continuing education in the course of their professional career. They should also be accorded a status that could guarantee their security, stability and the material conditions indispensable to their work that would also enhance the quality of their education. All the members of the group should eventually be capable of participating directly in deliberations, in decision-making processes and in the management of higher educational institutions together with representatives of the world of work and culture, the public and students.

These aspects constitute universal requirements. However, they can naturally be realized in various forms from one country to another. Let us therefore try to establish a model of higher education that would practically be applicable everywhere.

CHAPTER 11

Quality of Higher Education: Conceptions, Contestations and Comments

Nico CLOETE*

This contribution is not a comprehensive and systematic overview of the quality debate in higher education. It focuses on some of the different conceptions of quality and political, economic and academic demands for quality. It also includes a brief overview and observations about the proposals on quality made by South Africa's National Commission on Higher Education and the subsequent Green Paper. The concluding comments pull some of the threads together. The aim of this paper is to stimulate rather than settle debate.

1. CONCEPTIONS OF QUALITY

Linguistically quality has at least three different meanings. Firstly, quality can mean a degree of excellence (a top quality product). Secondly, it could be a characteristic or attribute (for example, university education is more academic than vocational). Thirdly, it could mean better than something else (degree x is better than degree y). In higher education the concept has remained elusive and ill-defined. In the worlds of Barnett the concept is "*multidimensional and subjective*" and there are as many "*qualities of higher education*" as there are sets of objectives and criteria that can be related to higher education . (Maassen, 1995; p. 64)

* Director, Centre for Higher Education Transformation, Pretoria, South Africa.

Philosophically, quality can be approached from an essentialist, nominalist or an objectivist perspective (Maassen, 1995). The essentialist perspective attempts to identify the essential or fundamental aspects of quality. The nominalist point of view, in turn, regards the search for definitive descriptions as rather unfruitful and accepts that there are as "*many definitions as there are stakeholders and purposes*". This perspective settles for conceptions on which "*sufficient*" agreement can be reached. The objectivist approach tries to apply a common methodology across a system to obtain an "*objective operational measure*" of quality. (Maassen, 1995; p. 64)

In a survey of the literature on quality in higher education, Dill (1992) identifies three approaches:

- Reputational approach - this is mostly determined by peer review which is the basic instrument of judgment. While this approach has many weaknesses, it is somewhat like parliamentary democracy: everybody criticizes it but no generally agreed-upon alternative has emerged.
- Outcomes (students) approach - this relies on outcome indicators such as the proportion of students who pass, persistence rates, the number of publications, earnings of alumni, etc. Not only are many of the outcomes difficult to interpret because of interrelations with reputational measures and input differences, but it is not clear how to link these outcomes to measures that improve quality. Astin concludes that "although a great deal of assessment activity goes on in American institutions, much of it is of very little benefit to either students, faculty, administrators or institutions. (Maassen, 1995; p. 65).
- Total quality approach - this stresses broad participation. Constant improvement, organisational learning and a focus on the needs of the customer. This approach is used mainly in industry, and is increasingly promoted as a model for higher

education which, unsurprisingly, solicits the usual protests about the unique character of higher education.

In summary, classifying the different conceptions into the following categories is one way of pulling some of the strands together:

1.1. Quality as exceptional

This "*traditional*" conception regards quality as exclusive, distinctive and intuitively recognizable. Quality as excellence often refers to high standards that can be attained only in limited circumstances with exceptional students and staff. This is the dominant conception in elitist higher education systems and institutions.

1.2. Quality as efficient production

This approach, based on practices in industry, disconnects quality from an absolute standard and makes it relative to "*specifications*". A quality product is thus one with "*zero defects*". A slightly different conception is quality as "*fitness for purpose*", meaning the extent to which the product or service meets the "*designer and customer specifications*". The best known example is the Japanese Total Quality Management system where every part of the organization works towards "*customer delight*". Closely associated with this conception is "*value for money*" in terms of achieving greater efficiency and effectiveness. Performance indicators are the main methods of assessment of efficiency. Effectiveness, which has a statement of purpose component, is less seldom assessed. While "*fitness for purpose*" has many advantages over "*quality excellence*", it cannot, and does not attempt to, answer the question of whether programme x is better than programme z.

1.3. Quality as transformation

This approach attempts to enhance the abilities of students regardless of their initial level, and regards "*adding value*" as the key objective. An institution that

enrolls the best students but adds little to their skills is of poorer quality than one that manages to add value to less-prepared students. The assessment of "*added value*" is still a weakness of this approach and an unresolved question is whether these different types of qualities should be applicable to different types of institutions, or whether they can be accommodated within the same institution.

In general, the "*quality*" nomenclature uses quality assurance as the composite term, which includes quality control, quality audit and quality assessment. (SHF, 1993)

The next section will show that the different conceptions discussed above do not just reflect philosophical differences, but are also linked to different interests and constituencies.

2. CONTESTATIONS

In this section I want to point to a few key factors, or pressures, that affect quality in higher education.

2.1 Quality and the Form of the State

The literature on quality in higher education, with a few notable exceptions such as Maassen (1995), Van Vught (1991), Neave (1991) and Westerheijden (1994) is silent about the underlying political and social trends that frame debates about quality in different societies. For example, Neave and Van Vught have shown how in some European countries the shift from an "*interventionist to a facilitatory*" state has led to much greater government interest in quality assessment. The shift from interventionist to facilitatory means that the government changes from active involvement to a situation where it sets the framework within which higher education can operate fairly autonomously.

One of the ways in which the form of the modern state is changing is the shift from close control over specific sectors or institutions to assessing outputs. By switching to the evaluation of outputs, more detailed and closer bureaucratic control over institutional policy can be abandoned. (Neave, 1991). Instead of

asserting direct political and/or bureaucratic control, the new state establishes "*regimes of regulation*" which have two central features. Firstly, the focus is on policy and regulatory frameworks within which institutions operate with greater autonomy in terms of their own planning and implementation. Prof. Luhanga from Dar-es-Salam evocatively describes this as "the state setting the menu, but staying out of the kitchen". (Shabani, 1997)

Secondly, the "*new state*" consists of more partners as semi-state or statutory bodies are established outside government departments to regulate and self-regulate (Moja, Cloete & Muller, 1996). The aim is greater joint and self-regulation, which in the end means more autonomy as well as more regulation. The Dutch Minister of Education and Science warned that this does not mean an "*absent government*", but a more "*selective interfering*". (Maassen, 1995) The French philosopher Foucault described this as "regulation" at harness more participation with regard to both innovation and regulation".

Quality accountability takes different forms within different neo-liberal societies. The 1985 Netherlands policy paper entitled "Higher Education; Autonomy and Quality" gives Dutch universities more financial and managerial autonomy in exchange for proving to society (namely, the government) that they deliver quality education. While the government had intended the newly established Inspectorate for Higher Education to carry out the quality assessment, the parties had to compromise and settle for the existing "buffer" body (Association of Cooperating Universities in the Netherlands - VSNU), and the role of the inspectorate became to evaluate the evaluation. With the system being owned and funded by the universities a shift occurred from accountability to quality improvement. This means that goals requiring formative quality judgments are stressed more than goals requiring summative judgments. Briefly, the Dutch quality assessment procedure consists of study programmes (rather than departments) doing a self-

evaluation that includes a check list constructed by the national committee (VSNU). This internal quality assessment is evaluated by a visitation committee that "tours" all the study programmes in the designated knowledge area in the country. The seven-person visitation committee consists of at least one foreign expert, an education expert and experts from outside the institutions under evaluation. There are also attempts to include a student in the group. The report on the visitation committee goes to both the institution and the government. While the government has not yet taken direct action in response to negative reports, institutions have done so. (Maassen, 1995)

In the United Kingdom the 1991 White Paper led to profound changes in British higher education - instigated by a conservative neo-liberal government claiming to promote privatization and independence. In the UK, the following quality systems are in place:

- Quality control - mechanisms that institutions put in place to maintain and improve quality.
- Quality audit - external scrutiny aimed at providing guarantees that institutions have quality control mechanisms in place. This is carried out by the Higher Education Quality Control of the Committee of University Vice Chancellors.
- Quality assessment - external reviews and separate judgments of the quality of teaching and research carried out by the newly established funding councils. The UK is currently probably the only country in the world where institutional funding is directly linked to quality assessment. (Maassen, 1995).

In the US, with its strong emphasis on federalism and the market, there are plethora of quality assessment and improvement activities. Research quality is largely market-assessed, with federal, state and private grants funding agencies using panels to assess proposals. Teaching quality, on the other hand, is mainly student driven, with certain states such as Wisconsin having state-legislated mandatory course

evaluation - and in many cases the evaluations are published. Similarly, ratings of the 10 "best" departments, mainly in the professional fields, are also published regularly. In a few states such as California, institutional assessment by an external review panel, operating in eight-year cycles, is mandatory. The closest to a national system in the US are the voluntary regional associations of accreditation. The regional associations appoint committees of academics to visit their members and report on whether they are "reasonably decent institutions" (Trow, 1996) and how they might improve themselves. The voluntarism of this arrangement was threatened in 1994 when a Democratic Party-dominated Congress proposed new legislation that threatened to give federal and state governments a larger role in the accreditation process. Before the Mellon Foundation-appointed commission could report, the legislation was dropped by the new Republican Congress.

In the Dutch case the government applied pressure for quality assessment, but the higher education sector managed to gain control over the process - i.e. self steering rather than government steering. In this British case the government acted as both initiator and steering agent and the higher education system is pretty much at the mercy of the government funding council. In the US, the market is the main force, both in terms of competition for grants and in accountability to clients.

The above shows that three types of so-called "neo-liberal" modern democratic states have quite different ways of dealing with quality. In all three, however, quality is an academic and very political issue.

2.2. Trust and Accountability

Maassen (1995) explains the reasons for the prioritization of quality as an issue in higher education saying: "the upper limits of public funding for higher education have been reached, higher education has undergone an enormous quantitative growth in the last three decades, all western societies are going through a

transition process to become technology-based economies and there is a need to mobilize human resources nationally as well as internationally" (p. 63). As Maassen intimates, there are number of explanations for the "Rise of the Evaluative State".

The argument that quality has become a priority (and politicized) because the "upper limits of public funding have been reached", does not explain why in most underdeveloped countries - which are often spending an even larger proportion of their scarce public resources on higher education - there is not an even greater demand for quality debate to a change in the relationship between higher education institutions and their communities. According to Trow, the change is most starkly reflected in the increased demand for accountability, accompanied by a decrease in trust.

The fundamental questions about accountability revolve around who is to be held accountable, for what, to whom, through what means and with what consequences. Accountability can be categorized roughly into *external*, meaning the obligation to supporters and society at large to provide assurance that they are pursuing their mission and using their resources responsibly; and *internal*, meaning the accountability of those within the institution to one another on how several parts are carrying out their missions and responsibilities, how they are performing and whether they are trying to learn where improvement is needed. (Trow, 1996)

Accountability serves a number of positive purposes in a democratic society. It is a constraint on arbitrary and corrupt power, it raises the quality of performance by forcing critical reflection on operations, and it raises the legitimacy of the institutions. On the negative side it reflects a loss of trust in higher education. Trust is the basis on which higher education institutions raise large sums of money for research and teaching - both from government and private donors - as well as being central to the autonomy of institutions. The argument for autonomy is that the scientific specialization of the university has resulted in a cognitive rationality, with

rules about verification and falsification, and standards of what constitutes legitimate explanations and interpretations. This cognitive rationality is not only the format but also the practical norms of the university and it can be maintained only by collegial, self-governing structures of faculty control. Other standards more representative of the community, student body or state threaten academic life in this sense and if other group interests intervene the delicate mechanism for sustaining cognitive rationality can break down easily. (Alexander, 1986; Menand, 1996)

A major shift is that quality, as a component of accountability, has become one of the steering mechanisms of the new state. As part of the new regulatory regime, the very nature of what is unquantifiable in education is used as one of the new steering mechanisms. According to Trow (1996) it can become a "force for external influence on institutional behaviour, an influence which can vary from a broad steer, leaving a measure of autonomy over the implementation of policy, to the direct commands of an external regulatory agency which uses accountability (and quality) to ensure compliance with specific policies and directives". (p. 311); The obvious, and some would say most crude, example is the new UK model.

Accountability in higher education is clearly a double-edged sword. On the one hand, some would argue that it makes higher education part of a more democratic society where every body, from politics to business, is forced to be more transparent, more goal directed and more reflexive about their actions. Accountability, with quality as an important component is thus part of the greater (or apparently greater) democratization of the society. On the other hand, Trow somewhat bemoans the loss of trust between higher education and its communities. Trow argues that two of the most successful higher education programme in history, the *Morrill Land Grant* of 1863 and the *G Bill* after the second World War, involved huge amounts of money with very little government steering. These programmes, which

developed a host of different kinds of relationships between higher education and their communities, changed US higher education and US society in a fundamental way.

2.3. The Nation State and Globalisation

Globalization has become a dominant feature of late twentieth century modernization. The concept refers to multiple changes in the economy, culture and communications in advanced economies. Globalization requires greater flexibility in production design to meet increasingly diverse global consumer needs obtained by using the new computer-led technologies and employing more educated labour in more participatory forms of work organization. These include teamwork, multi-skilling, flattened management structures and strategic linkages. The new "*smart workers*" have multiple, transferable skills that enable them to deal flexibly with problems, tasks and new technologies. Where research and development functions would have been carried out-in house before, many firms are now opting for joint ventures with other firms. higher education institutions and parastatals. Of crucial importance is global financial integration, under which autonomous national financial policies became unfeasible. In essence, while socialism collapsed during the 1980s, capitalism underwent a fundamental restructuring. (Carnoy, 1993; Castells, 1996; Kraak, 1996)

The new modes of production are increasingly dependent on knowledge and information technology. Advancements in information technology have dramatically affected how and where knowledge generation takes place. Knowledge and "*informationalism*" has become central to globalization. The sources of higher productivity are increasingly dependent on knowledge and information being applied to productivity. The increasing generation and accessing of knowledge has led to what is often referred to as the "knowledge society", promoted mainly by higher education institutions. Castells (1995) asserts

that "if knowledge is the electricity of the new informational international economy, then institutions of higher education are the power sources on which a new development process must rely".

The acquisition of knowledge and access to new knowledge creates new power relations, that is those nations which cannot access knowledge and information technologies will continue to be dominated by nations with that kind of power. Dominance in the changing world is reordered because countries and regions fit into the worldwide information economy in uneven ways. Nations without access to information become disenfranchised or marginalised and their opportunities for full participation in the global economy become increasingly limited. In the words of Fernando Cardoso these countries will not even be considered worth the trouble of exploitation, they will become inconsequential, of no interest to the developing globalized economy. (Castells, 1996, p. 14)

In an overview of Africa's recent economic evolution, Castells (1996) argues that "the dynamics of social exclusion of a significant proportion of the population as a result of new forms of inclusion of countries in the global economy operates on a large scale in the case of Africa - being a major part of the *"Fourth World"*.(p. 14) According to Castells, the systematic logic of the new global economy does not have much of a role for the majority of the African population in the newest international division of labour. Most primary commodities are useless or low priced, markets are too narrow, investment too risky, labour not skilled and flexible enough, communication and telecommunication infrastructure inadequate, politics too unpredictable and government bureaucracies inefficiently corrupt. He argues that the motive behind channelling international aid to African countries "is the hope of still taking advantage of some valuable natural resources, and with the purpose of preventing massive famines that could trigger large-scale migrations". He concludes that the experience of Africa's transition into the new global economy is that

"*Structural irrelevance*" is a more threatening condition than dependency. (p. 15)

Parallel to economic and cultural globalization is "deglobalisation", that is the formation of powerful regional cooperative blocks. Despite globalization, it is estimated that 95% of all products and services sold in the European Union are produced in the European Union.

The integrating of economies and increasing importance of skilled workers and knowledge is another new pressure on quality. Because however defined, there is a general common sense that quality knowledge and training is a key component of competitiveness - and a crucial part of the country's development path. It could be argued that focus of modern governments on quality education and research is not based only on political control, but has a very real economic interest. It is therefore quite possible that higher education will in future receive more, and not less attention from governments. Simultaneously, this development offers higher education a claim to greater resources, assuming their government regards, human resource development and knowledge as central to their development. At the moment, neither the Macro-economic Policy nor statements by senior Department of Finance officials give the impression that higher level skills are a priority in South Africa. Even the new Green Paper (1996) on higher education does not present a strong argument for the key role of higher education in the reconstruction and development programme in South Africa.

If Africa does not accept being declared "structurally irrelevant" in the new global order, then it can be expected that governments will increasingly look at higher education as a key component of becoming part of the "knowledge society". In order to achieve this, governments will probably try to steer, or direct higher education towards producing more "flexibly skilled workers" and more "relevant/applied" knowledge. It is clear which policy levers will be used, but it is unlikely that outcomes based accountability measures will not

be one of the instruments.

2.4. Elite and Mass Higher Education

The shift from elite higher education to mass higher education is not just the expansion of numbers in the same system (Trow, 1973). It involves a fundamental transformation of higher education, both in terms of internal operations and also in terms of its relationship to government and society. In a mass system, the diversity of the number of institutions, staff, students and learning programmes undermines the authority (trust) of the elite system. The concept of a "gold standard" of quality does not apply to the wide range of institutions, students and staff coming from an increasingly diverse range of class, age, ethnic and race backgrounds. Even if the elite system was not completely homogeneous, it usually consisted of a clear hegemonic group, which was invariably linked fairly closely to the ruling elite of the day. The "chaps from the colonies" did not threaten the standards at British universities in the same ways as Mexican and Asian Americans do now as they become the majority in the Californian mass higher education system.

It can hardly be a coincidence that the decision by the British government to introduce its new quality system coincided with the decision to massify the system from a participation rate of less than 15% to around 40% in a decade. In South Africa, during the 1990s, the white-dominated press and residents of white suburbs developed an unprecedented interest in and concern for standards and quality. The fastest growing sector of higher education is private higher education, which has, ironically, apart from some very loose and often dubious connections to an "overseas" institution, no public accountability or quality measures. Many high performing white students, and an ever increasing small group of black students, prefer these institutions over some public institutions with well-established international reputations. Apart from naked racism, the effective market strategy of the private institutions is pitched at outcomes (assured

results in terms of dedicated teaching and high employability) without any demonstrated evidence. In the new South Africa it seems that outcomes have a higher currency than reputation.

The mix of public, private and commercial higher education will continue to increase demands for standards and quality. In both Zimbabwe and Kenya, the higher education commissions have concerned themselves with accreditation and quality assessment in the private higher education sector. However, private institutions are now demanding, quite justifiably, that public institutions be subjected to the same scrutiny, and the Kenya Higher Education Commission is also being given powers by parliament to accredit public institutions.

The changes in the dominant forms of economic production and the rapid increase in knowledge have produced an enormous demand for recurrent and continuing education. This is being met both by the publicly funded higher education sector and by a growing number of private providers. The scale and importance of these forms of education have grown in response to two developments. The process of microeconomic reform associated with flexible specialization requires a more educated and trained workforce. Second, growth in recurrent and continuing education is an educational response to other changes in society. It can be seen as an attempt to improve the learning methodologies available to adult learners. For example, most part-time recurrent and continuing education is occurring within "open learning" systems, a combination of residential or contact-time alongside distance education methods, increasingly learner or client focused (indeed, the curriculum is increasingly "contracted" by an employer) and in many instances supported by information technologies. All these initiatives have the capacity through open learning, distance education and the use of information technology, to link recurrent and continuing education to important national economic and social goals-goals which are being shaped by economic reform and

globalization.

Such a diverse and complex system required is on the one hand regulated by the market, because most of these courses are market related. Another alternative, proposed by the National Commission on Higher Education in South Africa (1996) is a National Qualifications Framework (NQF) that will require programmes to be registered through National Standard Setting Bodies (see section Quality proposals for South Africa).

Few countries in Africa have massified higher education systems, but there is no doubt that the quality and accountability complexities associated with an increasing range of institutions, a more diverse student body and a far greater interchange of students between countries is, and will require more complex accreditation systems.

2.5. Traditional and New Forms of Knowledge Production and Dissemination

A century ago universities could claim to be leading site of knowledge production as a modernizing force, but that is no longer the case. The contemporary multitude of multinational, parastatal and private-sector research laboratories, national and regional research council, the industrial-military complex and a variety of cultural councils have relocated the university as one among many of the main contributors. Concurrently, post-industrialization has reordered the economy and methods of production have changed. It is in these shifts and interactions between different agents and forces that knowledge production and its dissemination, and by implication higher education practices, have been radically revised.

One way in which these changes have been characterized recently is in the development of an analysis based on *mode 1* and *mode 2* types of knowledge production. While these characterizations are "ideal types" which necessarily overemphasize differences and suggest a greater degree of homogeneity than is the case in reality, they nevertheless serve to

illustrate the extent of the changes we are witnessing and illustrate the profound implications for the values, structures and organization of higher education.

Mode 1 is broadly the traditional discipline based model of knowledge production in the academy with the following characteristics:

- Knowledge production is linear, cumulative and causal. Science generated in the university or laboratory is transferred to an application site. The primary aim is to generate new ideas; it is a bonus if some ideas are applied. Generation and application are two different functions performed by different agents in different settings. The ultimate source of innovation is pure science; which privileges this form of knowledge and its practitioners.
- Science is a closed system; not in the sense of being secret, but closed in the sense that only the scientific community counts for determining what is science and what is valid (quality). The ethos is individual.
- It is reductionist in the sense that an elite scientific group works in a limited terrain; expertise is defined in commanding a clearly specified and increasingly limited area. Knowledge is vertical as scientists attempt to "deepen" their knowledge. Disciplines and departments with clear boundaries are established around such bodies of reduced knowledge. University faculties are loose conglomerates of groupings of independent disciplines.
- Funding is regarded as a public responsibility, in an environment of independence and autonomy.
- To ensure optimum space for reflection and enquiry, management is collegial and as non-intrusive as possible.

In contrast, some of the key features of *mode 2* are:

- Multivariant, unsystematic and could even be anti-coherent. Knowledge is generated not only in the academy, but also in the market place or the community; but most frequently in the borderland between the higher education institution and the market place/society. Knowledge production,

assessment and implementation are concurrent, rather than linear. The ethos is participative and corporate.

- Knowledge production is an open system in which a number of actors from different disciplines and from outside academia are participating. Knowledge producers, knowledge brokers (interpreters) and implementers could all be working simultaneously and validation is not only scientific but also utilitarian and practical.
- Synoptic rather than reductionist. To solve "context-of-application" problems requires the construction of cross disciplinary knowledge that is horizontal rather than vertical. In some cases it draws from vertical knowledge, in other cases it creates new knowledge and new methodologies relevant to the context. It is by definition multi-or-trans-disciplinary (not inter-disciplinary). Knowledge is a process, because concepts, techniques and users are tightly interwoven.
- Funding is almost always from more than one source which requires different forms of interaction and management.
- Central to this process is not autonomy but participation and accountability.

While the "ideal types" mode 1 and mode 2 represent two distinct modes of operation, the degree of interaction between them must not be underestimated. Mode 2 depends on the disciplinarity (deep knowledge and methodological rigour) of mode 1, which in turn increasingly depends on mode 2 for context, methodologies and application. (Gibbons, 1994; Muller, 1996)

The major changes are thus that knowledge is generated not only in its traditional applied linear manner in the academy, but also in the market place or the community, knowledge production, assessment and implementation are concurrent, rather than linear; the ethos is participative and corporate. Knowledge production is an open system in which a number of

actors from different disciplines and from outside academia participate. Knowledge producers, knowledge brokers (interpreters) and implementers could all be working simultaneously and validation is not only scientific but also utilitarian and practical. Knowledge is horizontal rather than vertical in some cases it draws from vertical knowledge; in others it creates new knowledge and new methodologies relevant to the context. It is by definition multi-or transdisciplinary. Central to this process is not autonomy, but participation and accountability.

The growth in new modes of knowledge production and distribution has many implications for higher education. Some of the effects on higher education are already clearly evident, albeit in differing degrees in different institutions and in different disciplines. Transdisciplinary work is pursued by teams of knowledge workers who may be located in different departments of an institution, in different institutions, in different cities or in different countries. In common with industrial and commercial enterprises a consequence of this is the increasing tendency to move away from traditional organizational structures and boundaries. Traditional boundaries are being transcended and renegotiated and in higher education generally the discipline-based department and faculty is giving way to looser academic structures, such as schools or matrices. There are examples of transinstitutional schools (in Holland for instance) and transinstitutional research teams. Such operations are redefining institutional cooperation and what is meant by "centres of excellence". Formal academic structures (faculties and departments or whatever structure is adopted in their place) are increasingly the structure through which resources are managed, while the intellectual centres are constituted by research groups or teaching teams which are reconstituted to meet changing interests and demands.

Different management styles are emerging as a result of these changes. Research, for example, is organized and regulated by management structures

that are less hierarchical, flatter and far more collaborative than the traditional academic department. In this process, even the dissemination of knowledge changes. Results are distributed not so much through journals and conventional conferences, but rather through the scientific and management skills which members of transdisciplinary teams carry from one project to another. The administration of multiple sources of funding, in some cases across institutional boundaries, requires project management skills and more flexible and more accountable financial arrangements.

These changes also have profound effects on accountability and quality assessment. Accountability is more linked to society and the market. Accountability is to some extent part of the research design, "not only determining research questions and influencing the selection of the best solutions but also shaping the epistemological and methodological processes for producing good sciences" (Scoot, 1997) Accountability cannot be conceptualized only in terms of the methodology of the discipline, but also in terms of wider social accountability - to donors, to local communities and to diverse disciplines.

Unlike disciplinary research with its peer-group-assessed internal criteria of scientific excellence, and unlike conventional applied research with its single corporate client and unproblematic criteria of utility, the quality of new types of knowledge organization and production is increasingly being assessed against the canons of the discipline and in terms of needs of national research systems, knowledge clients and donors agencies. Peers can no longer be easily identified, not only because of extreme specialization, but users are as important as producers. This shift is sometimes called a change from peer review to merit review, the latter requires a panel of users to be added to peer review panels. (Scoot, 1997)

One manifestation of mode 2 work is an increase in consultancy. The need for consultancy is driven both by the necessity for income supplementation and to link

higher education to knowledge work outside the university. Perhaps a distinction should be made between consultancy that contributes to new knowledge and consultancy as business, meaning professionals routinely practicing their craft outside the university during "university time". Both these practices link academics to society and improve relevance. Consultancy can also be regarded as the new form of community service. Modern knowledge workers in higher education divide their time between knowledge production, knowledge distribution, of which face-to-face teaching is a decreasing component, and consultancy. The form and content of the old trinity of research, teaching and community work are changing radically and irreversibly. To assess the quality of consultancy, as accepted in the market, is a nettle that higher education institutions are struggling to grasp. How to assess consultancy, in term of producing relevant new knowledge and resources for the institution which promote its reputation, is something that higher education is trying to ignore instead of tackling head on. While it can be beneficial to the individual, and indirectly to the institution and the community, consultancy produces a tension with traditional research and teaching which the institutions will have to learn to manage better in terms of benefits for the individual and the institution.

2.6. Information Technology

The way in which the information technology (IT) revolution is changing the manner in which higher education institutions carry out their research and teaching and administer their affairs is closely linked to changes in knowledge production and dissemination. The availability of IT opens up equally exciting possibilities for teachers and learners (students) in higher education. Teaching and learning activities need no longer be located solely within fixed institutional boundaries such as the lecture theatre, classroom or laboratory, nor delivered in traditional forms such as lectures, tutorials or seminars, and tested via essays,

written examinations or practical exercises in the laboratory. Where the technological infrastructure permits, students may work from home or from their student residence, or from specially equipped spaces in community-based locations. They can access electronic learning materials from a variety of sources (the "virtual library") and prepare their work on a personal computer, they may then submit work electronically for marking and discuss it almost instantaneously over the network with peers, teachers and other sources of support. This can take place both within a single campus setting or across widely dispersed settings thereby improving student support and facilitating learning.

Advances in TT is increasingly making it more possible for European, American and Australian institutions to offer courses in developing countries. The potentially huge education market can be entered with a minimum of cost and the added attraction of an "internationally recognised degree". Quality and content control over these courses will be extremely complicated because any form of quality assurance, not to mention content assessment, will raise double-edged questions for the national institutions - if these courses are subjected to stricter regulation, then at some or other stage the same treatment will be deapplied to public institutions.

The latest, and very ambitious example is the proposed "virtual university" of the World Bank in collaboration with a number of African countries. Apart from issues of coordination and funding, such programmes raise questions about quality, content and relevance. On the one hand, if managed cooperatively, they can provide an exciting new way of assuring quality, relevance and international cooperation. On the other hand, in conjunction with the already established global cultural dominance, this could be another important element in the second colonization of Africa.

3. QUALITY PROPOSALS FOR SOUTH AFRICA

In South Africa, quality assurance mechanisms have varied across the three higher education sectors. In the college sectors, the dominant form has been nationally, provincially or departmentally set examinations for the certificate and diploma programmes. In the technikon sector, the Certification Council for Technikon Education (SERTEC) has performed an important programme accreditation function that incorporates many of the international common features outlined earlier. (An important contextual factor is that technikon programmes are all offered in terms of broad curriculum guidelines agreed upon nationally by the technikon sector in conjunction with the relevant industry/professional/employer grouping).

In the university sector, quality has been assured via professional accreditation (where applicable) and through a peer-based system of external examination, although in the latter case not uniformly so. A recent development is the establishment by the Committee of University Principals (CUP) of a Quality Promotion Unit. Overall, in the previous system quality assurance was erratic, the use of external examiners inspired little confidence and quality was largely determined by reputation.

Drawing from international experience, the Commission on the Higher Education (NCHE Report, 1996) concluded that there are certain commonalities among more established systems. Firstly, most include an initial self-evaluation process followed by an external (typically peer) assessment of the results and process of self-evaluation. Secondly, through self-evaluation and the role of peers in the external evaluation, higher education largely "owns" the quality system. Thirdly, an independent body usually coordinates the external evaluation which is conducted in terms of more or less standardized criteria ranging from detailed norms to more flexible checklists. Fourthly, the results of evaluation are in most cases

made public. Finally, in nearly all countries, negative sanctions can be a consequence of the assessment procedure.

The Commission proposed that a developmentally based quality assurance system should include three functions: institutional auditing, programme accreditation and quality promotion. Firstly, a Higher Education Quality Committee should be established, as a committee of the Higher Education Council. The Higher Education Council should be recognized by the South African Qualifications Authority (SAQA) as the umbrella coordinating body for quality assurance in higher education programmes. The Higher Education Council should exercise this authority via the quality committee. The Higher Education Quality Committee should be responsible for institutional auditing and programme accreditation, and should be managed by a board made up of individuals drawn from inside and outside the higher education system. The Higher Education Quality Committee should encourage and monitor quality promotion activities within higher education, but not undertake such activities itself. The Commission has recommended that the Quality Promotion Unit of the Committee of University Principals, with an expanded mandate, be considered as a possible body to undertake this function on an agency basis.

It is integral to this quality assurance system that a single qualifications framework should be developed for all higher education qualifications, as part of the National Qualifications Framework. The framework should include intermediate exit qualification within multiple-year qualifications and should consist of a ladder set of qualifications at higher education certificate, diploma and degree levels. All higher education programmes should be registered on the NQF, at minimum at the exit level of whole qualifications, with National Standard Setting Bodies determining the appropriate form of registration in terms of the use of unit standards within qualifications. National Standard Setting Bodies

should also be charged with ensuring that a coherent ladder set of qualifications is developed and registered in each field, and is responsible for developing effective articulation mechanisms between the different qualifications. It is vital that this be done in all professional fields where problems of articulation have often been most acute. The Higher Education Council should ensure that the decisions taken by SAQA and its National Standard Setting Bodies on how the registration of qualifications is to occur provide an effective basis for incorporating higher education programmes into the National Quality Framework. The fields and levels should be compatible with the subject categories and levels used in the higher education information and planning systems. Higher Education Programmes should be able to be registered as either "national" programmes offered by a number of providers or "institutional" programmes that are relatively unique to the provider institution or partner institutions. (NCHE Report, 1996)

Programme accreditation will be pursued through a combination of self-evaluation and independent assessment. The purpose of the evaluation is to grant or maintain accreditation to programmes that have met the minimum acceptable standards as determined by the relevant National Standard Setting Bodies and ensure the enhancement of the quality of programmes.

The evaluation procedures for institutions and programmes will include: an institutional/programme self-evaluation process, and an evaluation by independent assessors including, where appropriate, professional bodies and visits by teams of experts. In addition, the Commission also proposed that a new national information system be established that will include a set of performance indicators that are sensitive to redress, quality and developmental indicators.

The Green Paper on higher education released by the government in December 1996 broadly endorses the Commission's position by stating that "the Ministry agrees that quality assurance of programmes has been

a priority within higher education internationally in recent years as a way of ensuring accountability and value for money (p. 32). The Ministry also agreed that the primary responsibility for quality assurance rests within higher education and proposes that a Higher Education Quality Committee be established as an independent umbrella body.

Observations

The National Commission on Higher Education in South Africa realized that to hold the balance between equity and development, the massification of the system would have to be within a framework of quality assurance to make the system legitimate. The quality assurance systems proposed tries to accommodate both external and internal accountability demands. A serious problem in South Africa is the great inequalities, and variation in standards, across the system. To some extent it may force the implementation of a "fitness for purpose" system, largely based on outcomes approach. The proposed National Qualifications Framework is the most controversial. In Australia and New Zealand where National Qualifications Frameworks have been identified as a basis for bringing together education and training, the higher education sector, and in particular the universities, have generally responded with reservations. This has arisen from the following areas of concern:

- The concept of a National Qualifications Framework originated from the labour movement and is aimed at improving human resource development, with the emphasis often on dealing with inequalities in the workplace, including education and training opportunities. Higher education institutions perceive a possible drift towards vocationalism and undesirable standardization arising from the application of prescriptive framework requirements.
- There also fears that rigid frameworks could have a negative impact on the necessary diversity of higher education programmes. The characteristics of the

proposed frameworks, with an emphasis on outcomes, are perceived to be overly reductionist and behaviourist, and generally antithetical to the goals and ethos of universities in particular.

It is clear that an emphasis on unit standard methodology and on the construction of qualifications from multiple units of learning is a highly contested issue within higher education. The time, cost and effort involved in reaching agreement on thousands of registrable standards, at different NQF levels, with different credit values, must be compared with the benefits to be gained in the short to medium term. A different approach, compatible with the inclusion of higher education in the NQF through the registration of whole qualifications at the relevant levels, consists of determining, at national or regional level, the bridging requirements between the different qualifications on the single framework. Such requirements could be acquired before transfer to the new programme or within the receiving programme by courses designed for this purpose. Many such articulation agreements already exist between individual institutions. While these tend to be ad-hoc arrangements, involving different approaches in the absence of an agreed national framework, they could form the basis for national and regional agreements. Such agreements can be implemented rapidly and cheaply, making them an attractive option in the short to medium term while the NQF is being developed. (NCHE Report, 1996)

Institutions are nevertheless still sceptical. In its response to the Green Paper, the University of Cape Town "urges the Minister to consider carefully whether the application of the NQF to higher education is practical at present, and especially whether a wholesale unit standard approach to qualifications registered in a single framework is desirable at a time when unit standards are losing credibility internationally". (UCT, 1997; p. 5-6) Neither the Commission nor the Green Paper tried to take on the complex issue of quality

assessment for "new knowledge" and consultancy.

4. COMMENTS

This paper has discussed the rise of a new state-form which regulates at a distance *inter alia* by stressing the need for greater accounting to various constituencies for its production of "quality". The move to the evaluative state, to a stress on quality, is thus also substantially a move towards greater accountability.

Accountability is often regarded in quality assessment literature as an undiluted virtue. It is said that the move to accountability is part of the global trend to democracy and transparency, and presented as such, it is hard to gainsay its general social benefits or to make a special case to exempt higher education from it. Nevertheless, the matter can be slightly differently put. For Martin Trow (1996), part of the success of the old elite (high selectivity) system and its monastic institutions lay not so much in their separation from society (in their ivory townerness as the common-sense argument about autonomy still couches it) but rather in the particular quality of social relation that pertained. Trow characterizes this quality as one of trust, where the various constituencies in society by and large take it on trust that higher education will produce the knowledge and skills, the know-what and the know-how that a society needs to survive and prosper. Under these circumstances, society does not dwell on quality simply because it believes that it will anyway get it, and therefore does not even consider the question of accountability. To be accurate, then the old elite system, especially as it matured in the nineteenth century, could be characterized as a high trust-low-accountability one. This was the system that invented a particular form of disciplinary knowledge and a particular mode of accessing it. There are many names for it, but the laconic label of mode 1 knowledge production Gibbons (1993) is a good as any.

In a shorthand way it might be said that as a country's system moves from elite to a mass one that demands for accountability arise, but this would be misleading. This certainly characterizes the passage of the British system, but not that of the American one, which is probably the most massified but also the least accountable. The answer lies partly with the particular state form in each country. The British system was largely state-funded. The American system was always more dependent upon private foundations especially in its elite institutions, and many of those institutions remain rather elite largely because of the trust of major foundations and "trusts", and of society at large, in its outputs even as they may criticise its high selectivity.

But the state-form does not account for the preoccupation with quality accountability entirely either. We have also to introduce the concept of a national system of Research, Innovation and Knowledge Use (RIKU) - (Rip, 1996) . In societies with extensive, mature and productive RIKUs, trust is also more benevolently bestowed, and accountability demands restrained. We may say more colloquially that society indulges its higher education institutions so long as they deliver the goods. This is why America gets away with its curious hybrid of elite and mass institutions - because they are articulated and interlinked. In other words, because together they sustain and regenerate the RIKU, or as Castells (1993) will put it, they function as a composite "engine of development".

In Britain, the system massified at the same point as the country slipped alarmingly from its elevated perch in the global competitiveness ratings and society's trust was put to the test. It is at times of high social turbulence like these that the age-old refrain of "relevance" is raised against education system. The referent of "relevance" may differ, but its good index of withdrawal of trust and angst calls for accountability. Britain has arguably moved quite violently and quickly to a *low trust-high accountability* system helped in no small measure by imperious and heavy-handed state measures under Thatcher.

There are many other factors that should also be considered when discussing the withdrawal of trust and the use of accountability, like the growth of social perceptions of greatly enhanced risk (Beck, 1993) as advances in productivity and competitiveness became more and more science-driven and dependent upon an increasing rate of innovation and new knowledge. It is not the place to expand upon this theme here. The elite knowledge production- mode 1 knowledge production - thrived under conditions of high trust. Condition of accountability drive towards the production of knowledge which is more immediately and obviously useful, worldly, less esoteric - in a word, towards what Gibbons calls mode 2 knowledge production. Where demands for accountability are high, there is a danger that arguments for the continued importance of mode research and its public support lose their persuasiveness, or are not tolerated by society. Why is this a danger ? Because research on study substantial RIKU's show that the common knowledge reservoir must contain a continuum of mode 1 and mode 2 knowledge. Some writers will even claim that mode 2 capability depends upon a on-going mode 1 capability (Muller, 1996). The danger of an astringent climate of accountability thus, all its secondary advantages of enhanced democracy aside for the moment, is that it runs the risk of shifting public and private sentiment away from hard-to-account-for knowledge (mode 1) to superficially easier-to-account-for knowledge (mode 2). In so doing, it may erode the conditions necessary for producing continuing mode 1 excellence, and may deflect funding to the new vogue for distance education, and the like exclusively, a delivery mode that can only ever deliver mode 2 knowledge, if that. In other words, a precipitate transition from high trust-low accountability to low trust-high accountability runs the risks of killing the goose that lays the golden egg, an essential part of the RIKU without which global competitiveness is impossible.

What should we then say about countries in Africa with small, unconnected higher education systems and

fragmented RIKU ? They must somehow develop and consolidate their mode 1 capacity and develop mode 2. And they will not be able to do this in a fully-fledged low trust-high accountability environment. This is the heart of the problem with structural adjustment programmes applied to the tertiary sector, but also why the traditional defense of that sector, namely appeals to autonomy, has been so ineffectual.

In a nutshell, the demands for "external and internal" accountability (Trow, 1996) has been intensified due to the changing nature of the state, who for different reasons in different societies are making increasing accountability demands. I indicated how this differs amongst three modern neo-liberal states and how it manifests itself in a restructuring state such as South Africa. In all these states one of the accountability steering mechanisms is quality, which for external requirements tends to over-focus on outcomes, which has both positive and negative consequences for higher education. Secondly, global competition and massification brings new demands on both accountability and quality, which again takes different forms in different societal contexts. Thirdly "new knowledge" production poses new accountability and quality challenges. All these pressures bring higher education into different relationships with society - both with regards to accountability and relevance. It also poses new management challenges. Finally, relationship within academia are being irrevocably altered.

The combined pressure of changing state, global competition and massification are well reflected in the following statement by Ajayi to the 1994 AAU conference: *"Most of Africa's universities are indeed a mere shadow of their earlier glory ... surrounded by an air of democratization and incipient decay ... and an accelerating demand for higher education ... they are at the same time, besieged with a growing demand for high quality service and public accountability"*. (Ajayi, et al., 1994, p. 189)

Ajayi et al. offers the following solution; it is "therefore contended that work with the gifted and uniquely talented students, the probable geniuses, must be one of the major tasks for African universities ... and the development of centres of excellence in countries with a multiplicity of universities might perhaps cater for the gifted" (p. 191). From the preceding discussion it is quite clear that while Ajayi et al. wish for a more elite, less accountable set of "centres of excellence" is quite understandable, and not without merit, it is also quite out of touch with the configuration of current pressures on higher education.

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CHAPTER 17

Quality of Training and Research in Higher Education

Herme J. MOSHA*

1. INTRODUCTION

A number of writers (Steers, 1977; Omari and Masha, 1987; Coombe 1991, Saint 1992 and Dill, 1995) maintain that educational quality is perhaps the most elusive concept to measure. It is elusive because there is lack of educational benchmarks that are comparable over time. Yet, it is most important because it sets the standards that define a university's intellectual environment which in turn conditions the vision and capacities of graduates and the capacity of a nation to manage its affairs well (Saint, 1992). Wandira (1977 p.7) adds that *"a university which does not enjoy international acceptance of its standards prejudices the academic future of most of its promising graduates. Mediocrity today leads to greater mediocrity tomorrow."* Quality teaching, learning and research are the main missions of a university. Hence Omari (1995) observes that they should be the priority number one for all persons.

Quality of higher education is crucial for any nation, and more importantly developing nations for a variety of reasons:

- It is the key to being in a competitive edge, and there is nothing like quality when it comes to the achievement of corporate excellence (Ross and Klatt, 1986).
- Promotes the reputation of the institution, its staff,

*Professor of Education, University of Dar-es-Salaam, Tanzania.

- students and management;
- Markets the products of the institution as it enhances employment opportunities of quality graduates;
- Sets an international mark of recognition in terms of national and international Nobel prizes on research products;
- Enhances demands for its works including- publications, artifacts and prototypes...;
- Improves the competitive edge for admission and employment;
- Attracts resources and opportunities from national and international organization;
- Act as a fulcrum for rapid national socio-economic and political development and produces top class leaders and professionals.

Despite the significance of quality higher education, several writers (Saint, 1992; Mwapachu, 1995; and Omari; 1995) have observed that the gold standards of excellence that were explicitly sought by the early elitist universities have gradually been compromised. There are symptoms of downward trend in performance. These are reflected in declining performance in university examinations by students, admission of poorer quality students and staff, declining research and publications output, complaints by employers of poor preparation of university graduates for employment and inability to take a leading role in resolving various problems within their areas of expertise.

The purpose of this paper, therefore, is to clarify the concept of quality in higher education, explore related concepts of standards and criteria for monitoring quality; identify and isolate major contributing factors and discuss viable measures that higher education institutions in developing countries -especially in Africa- undertake in order to improve performance and promote excellence as we approach the 21st century.

Quality Defined

This writer conceptualizes *quality as the level of excellence in performance*. It can be measured by establishing an acceptable criteria and standards of good performance. Criteria of merit constitute the dimensions along which an individual, unit, department, faculty, institution or system has to perform well in order to achieve overall merit. Standards on the other hand are levels of excellence, the ideal state, or acceptable results or goals. Standards of excellence or merit are set by authority, custom of general consent. They are used for appraising or grading the ascertained quality (Moshia and Bhukala, 1985). Standards can be absolute (fixed) or relative (flexible). Hence an agreement must be reached before they are used. When standards are too low, practitioners may be content with mediocre performance. Similarly if standards are too high, achievement might be impossible. This can result into disenchantment and sometimes despair. Optimal standards can be set by banking on knowledge of experts and inputs from stakeholders and survey of what is generally accepted globally as being a mark of excellence.

Given the fact that the manifestation of quality is the level of performance in realizing the given missions of higher education, the goals of these institutions must be the major focus of any appraisal of quality. The goals are supposed to reflect the general expectations of the major stakeholders-students, employers and community-that supports higher education institutions. Goals change over-time, hence evaluation of the goals themselves sometimes is important. One also needs to realize that quality in higher education is influenced by many factors, including contextual setting of a given system, the basic inputs and the transactions/processing of inputs into outputs/outcomes of given institutions. Hence, quality in higher education is a multi-dimensional concept which should involve study of the interaction between contextual factors, inputs, processes of

teaching and learning, research and consulting in order to realize cherished goals. These factors combine to produce given quality.

2. FACTORS THAT INFLUENCE HIGHER EDUCATION QUALITY

In this paper higher education refers to post-secondary ('O' and 'A' level) programmes leading to the award of degrees or advanced diplomas depending on the route. Degree programmes are mainly offered by universities while advanced diplomas are offered by selected institutes. Most higher education institutions have parliamentary statutes that established them, which specify their mission and system of management. Most of the illustrations in this paper are drawn mainly from universities, institutions which the writer has had the widest contact.

The quality of higher education should not be seen to lie in the specific list of characteristics of discrete additive elements that are identified hereafter, but in the creation of a whole efficient working system, which includes its staff, structure, relationships, ideologies, goals, intellectual substance, motivation and will (DAE, 1995). Quality of teaching/training in higher education institutions can best be understood if one visualizes them as social system.

Higher education institutions are characterized by a clearly defined population, a complex network of formal and informal social relationships, their own unique culture within the larger education/community environment and an interdependence of parts within the institution. These elements form a single social entity. Second the interactions among various factors that are characteristic of higher education institutions are complex.

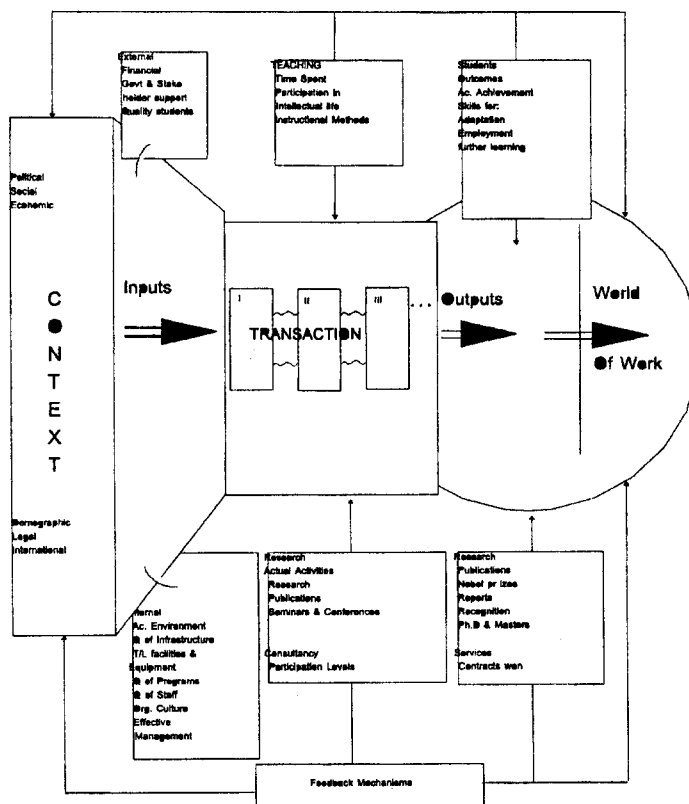
To help simplify the understanding of the relationship among the most commonly-cited quality related factors in the higher education the literature as well as experience drawn from practice was used to identify the variables of focus. These key variables are

the context of the environment surrounding the institution, the supporting inputs, enabling conditions, institutional culture and climate, teaching and learning environment; all of which are considered to affect outcomes. These attributes are summarized in Figure 1 which shall constitute a model of the "Factors that influence the Quality of Teaching and learning in Higher Education".

Context

Organizations operate within a given context or environment. Hall (1977) posits that there are two types of environment from which organizations-higher education institutions get their input and to which it supplies output. These are the general and the specific environment. Important aspects of the general environment that warrant focus in this include the following,

Fig. 1: Factors influencing the quality of teaching and research in higher education



- (i) *Political conditions.* These are the ones that bring about new laws and regulations which exert effects on higher education institutions. Presence of civil peace, the nature of the political culture, the policy environment of higher education, level of state control and interference in running higher education institutions and the limits it might set to academic freedom; are all factors that can affect positively or negatively attainment of quality.
- (ii) *Economic conditions.* These deal with the wealth and resilience of the national economy in which higher education institutions are operating.

"Changing economic conditions serve as an important constraint on any organization" (Hall 1977:307). Hence, in periods of economic distress, like the situation facing many African countries today, these are likely to result into budgetary cutbacks, underfunding and ad hoc funding of universities thus affecting quality of teaching and limiting research activity.

- (iii) *Legal Conditions.* These deal with laws and regulations that guide higher education institutions. Many of the statutes that establish higher education institutions-especially universities-two decades ago, are said to be inadequate and outdated to guide operations effectively. Nations with oppressive laws or whose systems of governance are not guided by the rule of law, might fail to tolerate the flourishing of the fundamental principles on which universities were established -academic freedom in the pursuit of truth.
- (iv) *Demographic conditions.* In the words of Hall (1977 p.309) this are related to "the number of people served and their age and sex distribution". The rapid expansion of secondary education for instance, has resulted in the production of more school leavers who are in turn putting pressure on universities to admit more students -social demand forces. Another pressure is from advocates of equity and access-genderwise. Mere admission of more women without requisite intervention programmes is likely to affect quality. Similarly where expansion is done without due consideration of additional inputs needed will affect quality.
- (v) *Cultural conditions.* These include the values and behaviours of the indigenous population. A predominantly semi-literate society will rarely realize the need for quality higher education. Hence it might not be very willing to support it.

Sometimes the learned are castigated as constituting the elite-hence the "Msomi" syndrome.

- (vi) *International conditions.* Universities are directly or indirectly influenced by international community and organizations. Substantial resources for development of infrastructure, provision of basic equipment, supply of books and other teaching/-learning materials and staff development have come from these external sources. They have also been instrumental through link arrangements especially during periods of severe economic distress to support academic programmes in African universities. Some international organizations have also introduced adjustments programmes to national governments which were "hostile to the university development (Coombe, 1991 p.9)". All these contextual attributes need to be clearly analyzed and understood, for according to Hall (1977), revolution cannot accomplish change without the presence of the appropriate conditions for organizational development.

3. INPUTS

Inputs comprise the essential requirements that are acted upon to facilitate realization of quality outcomes in teaching, learning and research. In this paper the inputs are divided into external - mainly from the wider society and internal to the organization. A brief analysis of the key inputs is provided in the ensuing section.

3.1 External Inputs

Three major external inputs are analyzed in this section. These are financing, strong parents and stakeholders support, and quality of students.

- (i) *Financing.* Effective financing has been identified by various writers and researchers to be one of the most critical factor that affect quality of higher

education in developing countries.

Lack of adequate financial resources to support the higher education institutions is one of the key factors that has prompted conflicts, crises - student unrests and closure of universities in the sub-region. These have in turn resulted into inefficiencies in the system for class-boycotts and closures affect teaching and on- going research. It is also the major cause of the conflicts of interest between individual and organizational goals (Mosha, 1994).

Mwapachu (1995) maintains that ineffective funding and budgetary cutbacks on universities is visible in terms of the unabated academic flight, moonlighting, erosion in standards of teaching, accommodation and service facilities, deferment of development and maintenance of physical infrastructure, failure to increase student enrollment, declining library standards due to acute shortage of new text and reference books and journals, poor job satisfaction and performance, and erosion of research activities.

During periods of financial squeeze staff salaries were frequently favoured at the expense of textbooks, library acquisition, other educational inputs, research, staff development, and the maintenance of equipment and buildings. Saint (1992) cautions that *"while such a strategy may well be appropriate as a short term response to a budget shortfall, it can prove disastrous when pursued consistently over a decade.* The ultimate result is to under cut the essential university objectives of teaching and research and to isolate the African academic community from the mainstream of intellectual life on the planet." The writer is of the view that when management starts encouraging reduction of time allocated for field practicals, doing library research instead of field research (particularly given the appalling conditions in our libraries - where current textbooks and periodicals are those published in

the 1960/70's, and allowing hand written reports; also doing theoretical practicals due to lack of basic materials and equipment-) standards shall be compromised and universities turned into extensions of poor quality high schools.

Mwapachu (1995) raises important questions worth addressing. "*Can universities save themselves from the budget butcher's knife? How?*" Nyerere (1995) has added - in real financial crisis how far should budgetary cuts go? What is the impact of cuts on quality? *Should the cuts be allowed to go even below the minimum* on which even the most cooperative staff and students can function properly? What elements or aspects of university teaching and life can be sacrificed without converting the institution into a pretence of a university?

Of equal significance is an objective analysis of how much funds were being allocated by government to universities and why that percentage of the total government budget? Similarly how much money is apportioned for teaching and research in African universities. Is the problem really lack of funds or misuse of funds allocated for research in Ministries and parastatal research budgets? It is not self-evident whether most governments have set their priorities right by assessing the pay-off factor of investing more in higher education and less in other sectors.

- (ii) *Parents and stakeholders support.* Although government responsibility in funding higher education is well known, its capacity is limited. Hence the call for partnership in financing higher education. The current wave of cost sharing require parents' cooperation in funding higher education in order to enhance its ability to provide quality higher education.

Some of the critics of university education are future employers of the graduates. Should they just continue to use products of higher education

institutions without contributing part of the training costs? Similarly are employers providing, objective and candid feedback on the products and pursuing such feedback in order to ensure corrective action is taken to improve quality of teaching/training and research?

- (iii) *Quality of students.* Universities can only teach to their required levels if students enter with recognizable and adequate qualifications. Universities mainly depend on secondary schools to provide them with quality students for admission. If that quality is poor, the university output will be of poor quality also. Hence if our lower schools-secondary and primary-are handicapped by large classes, and absence of textbooks or basic equipment and inadequately trained teachers-production of quality products at this and subsequent-levels will be difficult to come by. One also needs to be careful in responding to social pressures for expansion/participation in higher education in order to enhance efficiency and ensure maintenance of quality standard. Else, if done haphazardly, standards will be compromised.

Introduction of remedial programme at universities, however, will force universities to divert financial resources into re-evaluation, and remedial instruction, thus diminishing the resources available for sustaining the quality of regular academic programmes. Similarly wastage rates are likely to increase in the form of rising failure rate. Hence, intervention has to occur earlier in the system.

3.2. Internal Inputs

The most critical ones include academic environment, quality of infrastructure, teaching/-learning materials and equipment, quality of programmes, quality of staff, organizational culture and effective management.

- (i) *Academic environment.* This involves the culture and motivation by management, staff and students to excel in the pursuit of cherished goals-quality teaching and learning as well as research. It also encompasses positive support, advise and encouragement by clients in order to attain quality outcomes. Furthermore, the academic environment encompasses the nature of relationships pertaining in work place. Mosha (1994) has observed that where internal climate is hostile staff may be psychologically affected and become stressed. As a consequence personal and organizational resources are misallocated as parties devote time, thought, and materials to doing battle instead of doing business. Performance across the board is diminished as parties let conflicts sap them of energy.
- (ii) *Quality of infrastructure.* Poor physical infrastructure is a common feature in many universities today. Introduction of new programmes and expanded intake without matching development of the physical infrastructure has resulted into some students standing outside lecture/seminar rooms and listening to what is being taught, sometimes without being able to take notes. Similarly halls of residence rooms that were formerly occupied by two students are being shared by four to 8 students thus providing limited space for private study, and homework, let alone breathing. Some buildings have seriously deteriorated and contain deteriorating furniture or no furniture at all. Some electrical fittings have been vandalized hence it is difficult to use overhead projectors. Fans were not working and classrooms were poorly lit. Laboratory, xeroxing, typing and computing equipment were either broken or out of order, which made teaching and student learning to be carried out in very difficult conditions.

- (iii) *Teaching/learning materials.* Some universities are missing simple inputs such as basic textbooks and periodicals, chalk, duplicating paper even for course outlines, let alone preparing handouts. Equipment and chemicals/materials for undertaking scientific research were in short supply. Burchan et al (199 p.195) have disclosed that *"there is now substantial body of research which demonstrates the importance of textbooks and supplementary materials in increasing student performance and academic achievement. Book provision is widely regarded as being the single most cost-effective factor in upgrading educational quality."* Yet, within the total education budget, book provision is a very small item. Students show little interest in independent reading to enrich classroom teaching. Observers maintain that the principal - and sometimes the only - study reference for most students is their own hand-written notes summarizing sometimes poor classroom lectures. One, therefore wonders how universities were still producing first classes and upper and lower class honours despite the terrible conditions of the libraries, laboratories, classrooms-or are standards being compromised?
- (iv) *Quality of programmes.* Many universities in Africa are still offering traditional programmes that were designed two or three decades ago. Some of these programmes might not be adequately responsive to contemporary market demands. Elements of focus should be analysis of how these programmes are designed, and overall satisfaction by students and employers of the products of these programmes. A good measure of units/departments/faculties offering quality programmes is reflected in the number of qualified students appearing for entrance but no space, as well as number of new subjects being offered as a response to demand.

- (v) *Quality of staff.* Many universities in Africa can pride themselves today by the number of Ph.Ds and high percentage of local staff in their establishments. Levels of academic rigour of some of them was, however, in doubt. The strength of institutions cannot, however, be assessed on the basis of ranks or numerosity of high qualification. It is rather by the number of qualified applicants (of international calibre) for jobs in departments and ability to retain them. Omari (1995:9) observes that "*the cornerstone of excellence of a university is the ability to attract and keep outstanding members of the faculty.*" It also includes the ability to address the psychological and physical absence of such members of staff. Saint (1992) laments that time and resources are often used on staff development to obtain professional degrees only to discover that subsequent remuneration do not meet their basic expectation. This results into loss of staff, often the most talented, to non-university employment. Even where staff remain linked to university there is a tendency to limit time commitments to classroom teaching in order to pursue other income generating activities. The result is poor preparation of lectures, infrequent staff contact outside the classroom, minimal participation in the intellectual life of the department, and university administration, and neglect of research. Universities that lack resources to support staff development programmes and sabbatical leave and participation in conferences and workshops limit their ability, knowledge and opportunity to have their research findings challenged by the community of intellectuals and practitioners. Omari (199 p.59) therefore, warned that faculties/departments cannot be effective in teaching and research if they are "cemeteries for deadwoods and refuge for retirees".

- (vi) *Organizational culture.* Mosha (1994) maintains that organizational culture provides people with a sense of direction, a framework for which to interpret events, inspire a sense of unity and opportunity to transcend their routine of students and staff work lives. *Establishing and nurturing a culture of pursuit and sustainance of quality is, therefore one of the most important undertakings that universities can assume.* The norms and values that prevail in university environment will shape the expectations and behaviour that students will take to their professional careers following graduation. Where students observe that their teachers and university management ignore professional commitments and compromise on standards, they will learn to do so as well.
- (vii) *Effective Management.* Effective management is creative, has high integrity and high moral calibre (Teal, 1996). It is also innovative. It is able to motivate, inspire and influence others towards a goal (Mosha, 1994). It is also able to create "a vision about the desired future state which seeks to enmesh all members of an organization in its net (Bryman, 1986 p.6)". We all have varying experiences about quality of university management and their level of concern about improving the quality of teaching, learning and research, hence enhancement of performance. The writer is of the view that with effective leadership in most universities a lot more could be done in people management, challenging their talents and using them more targetedly in improving quality despite hardships facing higher education institutions in Africa. Effective leadership should have the courage and tenacity to take risks of making hard decisions on individuals who are often physically absent leading to poor teaching and poor research. It should also be able to experiment on various strategies for raising more funds for the institution.

4. PROCESSES

Several studies have established that status characteristics accounted for only a small proportion (about 10%) of the variation in student performance or academic achievement (Kilinowski and Sloane, 1981). About 80-90% of the explained achievement variance was due to activities at the institution and to what teachers and students do in the teaching/learning process (Heyneman and Loxley, 1981). Hence mere availability of basic inputs was not sufficient in realizing excellence. What was more important was effective and judicious use of the inputs in order to realize cherished outcomes. The important processes that need to be considered are the following.

4.1. Teaching and Learning

This is a process whereby knowledge and skills are imparted to students across faculties/centres of a university. The fundamental question is: Are faculties/centres across a university providing equal opportunities for students to acquire knowledge? The following factors are important in promoting quality teaching and learning.

- (i) *Time for preparation, teaching, advising and learning.* Effective teaching and learning can only take place if teachers devote adequate time for preparing their lectures/tutorial/practicals so as to:
 - stimulate students' imagination and creativity;
 - increase students' motivation for worthwhile forms of success, personal growth, development and satisfaction;
 - make students aware of how knowledge and understanding have been accumulated and added by great discoverers, thinkers and innovators;
 - secure commitment of students to accuracy, care of expression, meticulousness in search for knowledge, and caution in drawing conclusions; and

- develop sound judgement in students, both in public and private life (Omari, 1995).

In short, a well prepared and taught course should not only enable students acquire basic knowledge but also skills and culture for further independent learning and application of knowledge in resolving real life problems. The underlying question, therefore, is to what extent are teachers creative, imaginative, curious, visionary, resourceful in improvising and facilitating of learning in our universities?

It was disclosed in previous sections that several dons in universities were either physically or psychological absent most of the time, had little time for preparation; thus resorted to using same "brown notes"; had limited or no time allocated for consultation with students and sometimes scheduled their lectures late in evening when both the faculty and students were physically and mentally tired. Such practices were, therefore, not amenable to effective teaching and learning sustenance of good quality. One also needs to find out how much time is spent by students on serious self-study, library work and related intellectual activities, for all have an influence on performance.

- (ii) *Participation in the intellectual life of the department.* University dons and students alike can only refine and advance their knowledge and intellectual horizons through preparation, presentation of papers and reports in staff-students seminars, participation in panel discussions, presentation of research proposals and research findings in academic fora for peer review and critique. One wonders what is the current level of intellectual activity in our departments and faculties today? What are the reasons for the current state of affairs? What could be done to remedy the situation?

- (iii) *Variety of teaching strategies.* Evidence from many African universities indicates that the lecture method is the most widely used strategy. This is even reflected in the titles of most faculty - assistant lecturer, lecturer or senior lecturer. It is important to note that students at universities differ greatly in aptitudes and inclination to learn. Thus using only one teaching strategy might be monotonous and may not be effective with all students. As Dewey (1930) once stated, variety is the spice of life. One needs to explore why university dons were not using other methods of teaching-group work, tutorials, practicals, private consultation... in order to enhance students learning. How could the given problems be overcome?
- (iv) *Regular students assessment and feedback.* Assessment is a process of determining performance in order to discern the extent to which intended goals were being realized. Regular student assessment provides useful information that can be used to judge progress made and on the basis of the feedback, the learner and the teacher can take remedial measures to improve performance. These are good teaching and learning habits if they are carried out regularly. In institutions characterized by long periods of physical and psychological absence of faculty, one wonders as to what extent is evaluation and feedback a regular and common feature of appraising students and peer performance. If not what were the bottlenecks and how could they be overcome. Similarly, how effective is the system of external examiners? They moderate examination questions and check consistency in marking. They rarely evaluate classroom teaching and learning. Efforts to evaluate classroom teaching and learning by peers and students are always met with mixed feelings. Similarly, feedback from such evaluations is rarely pursued in order to ensure improvement in

classroom teaching and learning. Also, the evaluation of academic staff performance, based on annual staff review are very individualistic. How effective are they? Little effort has been made by many African universities to undertake regular comprehensive internal and external audit of units, departments, faculties and institutions as a whole in order to determine their health in teaching/training, research and consultancy. Omari (1995) maintains that if the university is to achieve corporate excellence, then both the individual and the institution need to be appraised for collective responsibility in attaining quality teaching and research.

4.2. Research

Mwapachu (1995) argues that research is the fulcrum of academia. It is research that makes academics earn their professional mark and are judged for career advancement. Without research, teaching is like cultivating a "shamba" until it ceases to be productive because no fertilizer is injected. The writer maintains that research is the major ingredient that distinguishes universities from other institutions in terms of nourishing, advancing, and refining knowledge and skills imparted and sought for by students in the teaching and learning process. It also serves as a springboard for innovation and subsequent development. Research is instrumental in the pursuit of truth and providing clear basis for action. Nyerere (1995) has added that research is the hub of and stimulus for any kind of scientific action.

The level of research activity can be gauged through assessing the amount and nature of pure individual and group research for generation, advancement and refinement of knowledge, and the volume of applied research for amassing data and pursuit of truth to illuminate action. Underfunding of research limits opportunities for young scientists to visit top-class laboratories and work with top class colleagues thus limiting their ability to do the work they were trained

to do.

Of equal significance is analysis of post graduate programmes being offered in institutions. The debate on whether to concentrate resources in research institutes so that they are able to do research and offer postgraduate programmes or establish centres of excellence for research and postgraduate studies has its merits and demerits but details are not pursued here. However, the major issue is where should research capacity be developed and why?

The key factors that seem to be affecting volume and quality of research in universities are underfunding, quality of staff in terms of skills levels, limited facilities and equipment and motivation to do pure research instead of contractual research/consultancies in return for quick money. Underfunding of research is manifest in university budgets. Most universities were spending less than 5 per cent of their total university budgets on research. Many staff in African universities also fail to make subscription to even scholarly associations. Similarly the level of activity including conferences, workshops and seminars are clear manifestations for a healthy unit or institution. Most of the funds earmarked for research in universities were mainly used for individual post graduate research projects. Insignificant amounts were used for large pure research projects meant to advance and refine knowledge or lead to major discoveries and innovation. Many of the good research institutes were externally funded hence future sustainability of such establishments was in doubt. The writer is, however, of the view that the problem is not lack of funds for research but rather misdirection of research funds to government departments and parastatal research units which rarely do any meaningful research, but could always find easy ways of spending research money and accounting for it. Hence, the major interest is how to have such funds rechannelled to universities and research institutes where they could better be used for higher returns.

Materials and equipment for doing basic scientific research are also in short supply or out of order. There was also a shortage of current literature. Advances in connecting African universities to the global net through the CD-ROM and the internet might, therefore, be a positive move in the right direction of accessing new source of knowledge.

4.3. Service to the Community

A nation finances a university so that it can play a useful role in resolving the problems of that society. Effective Universities cannot, therefore, be judged merely in terms of action to enhance quality of teaching, learning and research but also in terms of level of participation in providing quality advisory services to the institution, nation and the community. Complaints by some people/institutions that the quality of advisory services provided by universities to government was wanting is debatable. A succinct summary of the debate on relevance of university programmes on national development is provided in Mosha (1994:35-37).

5. OUTCOMES

Outcomes refer to cherished expected results of an institution. Dror (1968) maintains that any appraisal of quality can provide one with the following outcomes - expected and desired, expected and undesired, unexpected and desired results and unexpected and undesired results. The focus of the paper was on two principal products of a university-students' outcomes and research output including service to the community.

- (i) *Students outcomes.* One obvious indicator of outcomes is the distribution of students across pre-determined levels of performance-1st class, 2nd upper and lower class Honours and Pass. If there is gravitation towards lower second honours and pass there is often concern about quality. Second judgement is often passed by stakeholders,

who are curious to know whether universities are producing learned people who have also learned how to learn, are creative, motivated and confident.

Similarly students' parents and guardians, apart from being happy about attainment of certificates also consider success as being able to secure good employment or have the skills for self-employment. One doubts the wisdom of many governments declaring that they can no longer employ university graduates on claims that the market was saturated. The writer is of the view that developing countries with populations of over 20 million and that were producing less than 2000 graduates per annum from their universities CAN NEVER claim to have a surplus of graduates in a decade or so to come. What they need to do is to systematically and objectively assess the literacy levels of their civil servants and workers in parastatal organizations and the private sector and replace them with more competent-knowledgeable, skilled individuals. A more literate working force is most likely to be better endowed with knowledge, skills, values, aspiration for enhanced production and rapid national development. This is precisely what the First World countries are striving for today.

Employers also measure university products in terms of relevant knowledge, skills, aptitudes and culture for quality work and enhanced productivity. One, therefore, needs to be able to monitor feedback from potential employers. Evidently there have been complaints about quality of products. How genuine are they? How can they be minimized or overcome? What can the employers contribute towards minimizing the complaints?

- (ii) *Research output.* It was stated elsewhere that research was the fulcrum, of academia; was what made academics earn their mark and was the

major basis for determining their career advancement. One of the primary objective of universities is the search for truth, advancement and refinement of knowledge. Research was instrumental in providing basic data for problem solving. Research outputs are manifest and can be monitored in terms of number of books published per year; the number of periodicals published, their quality and frequency; the number of original review articles published in reputable local and international journals; number of Ph.D. and Masters graduates each year; and the number of staff/students seminars, national, regional and international conferences hosted by the institution to share research findings. The quality and level of productivity of many African Universities was wanting. Hence, the volume and quality assurance in research can only be realized by addressing problems cited in a preceding section on research.

- (iii) *Consultancy Outputs.* Nyerere (1970, 1980 and 1995) has repeatedly maintained that African universities need to provide balanced education that is biased in favour of knowledge, understanding and an ability to apply, any or all aspects of it in solving Society problems. Nyerere (1995) is of the view that universities will have failed developing nations of Africa if they do not take the lead in understanding the world forces which are rapidly changing the very basis for economic and social development and suggest how this can be done. One might wish to find out whether universities were being given opportunities to use their expertise fully to undertake contract research and advise governments on political economic and social problems that hindered development. Where this is being done, what made it possible? The writer would wish to commend institutions like Makerere University and the Uganda Government for

positive strides made on this frontier. Quality Universities, therefore, will by and large be judged on the basis of number of new large consultancies and contract research projects won by staff and units of the universities and excellence of the products and impact the institutions had on society especially on the development agenda.

6. POLICIES AND STRATEGIES FOR PROMOTING QUALITY OF TRAINING AND RESEARCH IN INSTITUTIONS OF HIGHER LEARNING IN AFRICA.

The paper has posed more questions in the preceding sections than has attempted to answer. This was deliberate as situations vary across countries, within countries and within universities. Thus making universal judgement and recommendation might be simplistic and absurd. Furthermore, as Coombe (1991) has cautioned, recovery in the quality of teaching, learning and research throughout the region needs .. long-term perspective but long-term requirements should not deter immediate action. The quality of training and research in institutions of higher learning was affected by contextual factors within the environment, the availability of basic inputs from outside and within the institutions, the processes and ultimately the consumer of higher education products. Hence, any viable future policies and strategies for promoting quality of training and research in institutions of higher learning in Africa must be holistic in nature.

The writer is, however, of the view that despite the many suggestions contained in the text the following should constitute the main areas of focus. First is a critical appraisal of universities/ state relations. Excessive control of the universities by the state has in the past led to curtailment of academic freedom by harassing critical academic staff and students, crises and closure of most of the universities in Africa. One wonders whether there is any university in Africa which has been spared from the trauma. A number of

contemporary writers (Van Vught, 1992 and Nyerere, 1995) and other intellectuals have maintained that according academic freedom to a university that is reciprocated with accountability and responsibility, with the state assuming mainly a supervisory role, is the most effective way of running universities for high quality outcomes in training and research. To this effect Nyerere (1995 p.6) has stressed that university staff and students "*must have untrammelled freedom to think, and to exchange thoughts, even if the thinking leads to some of its members to become orthodox in their conclusion*". Joint planning of transformation processes in Government and Universities in order to pave way for improved quality might lead to changing of state/university relationship from control to supervision.

On economic conditions, continued lamenting about the economic distress facing many African countries, given problems facing them today cannot improve conditions without heavy investment in the education sector and higher education in particular. Indeed one of Africa's most respected leaders, Nyerere (1995:12) has categorically stated that "*Education and training, especially in Science and Technology are the keys to survival as well as development in the future.*" He emphasized that African nations "*MUST INVEST IN THESE THINGS NOW.*" He urged universities to take the initiative and work in cooperation with other scientists and other educated nationals working elsewhere in order to help legislators and other policy-makers to understand why this kind of investment must be made urgently. They must also suggest how this can be done. Effective articulation of the pay-off factor for investing more in education in general and higher education in particular might pay off dividends.

University faculty, scientists and other educated nationals should also counter any external influence for reducing investment in higher education. All campaign manifestos of politicians in the First World-USA and Japan have education and health as their topmost priority, because they all realize the role of

quality training and research in the socio-economic and political transformation and development of their nations. *Why should African nations respect any advise to the contrary?* Improvements in internal efficiency of education systems is crucial, but advise for further budgetary cutbacks after optimal efficiency levels have been met must be resisted and rejected.

The writer further maintains that improved budgetary allocation to education sector in general and higher education in particular will lead to lowering of costs in other sectors as nations will have better trained and informed population who can plan size of family, take better care of their roads. It is also self-evident that although Government MUST meet a lions share of higher education costs, parents guardians and employers, key educators, students and donors, must share part of the cost. For such a scheme to be successful all interested agents must be involved in the process of determining who must pay what, when and why.

A question worth posing is, would provision of adequate funding to universities, supply of requisite materials and equipment necessarily lead to enhanced quality? It is prudent to note, that higher salaries and benefits for staff, availability of basic inputs like textbooks and periodicals, physical infrastructure, materials and equipment are insufficient on their own in attaining envisaged levels of excellence in teaching, learning, and research in African universities. Although adequate funding was an essential pre-requisite for the attainment of excellence; what is done with the investment in pursuit of quality improvement in teaching and research is equally important. Effective management and mobilization of the human and financial resources and time had a significant role to play in enhancing quality of teaching/training and research.

Quality of management involves the ability of government and university management to attract back several marooned individuals who have left universities and engage them effectively in improving quality of

teaching and research. It also involves efforts made by management to limit the physical and psychological absenteeism that threatens the contribution of such members of staff. Good management is keen about people management so that their talents are challenged, and used more targetedly and constructively. Management can make the work more interesting and challenging rather than people merely treading through their work (Omari, 1995). Hence in order to make university management more effective, the appointment process of university managers and the processes of constituting committees structures should all lead to having academic/professional leaders (and not political leaders) who are able to steer the envisaged changes to success and promote the ideals of quality training and research in universities.

Good leadership should also be able to establish levels of commitment, that may reasonably be expected from the lecturer and researcher by the university at each particular salary step and establish accountability systems to ensure that this commitment is met. Ursprung (1988) maintains that in crisis ridden institutions effective management has to act as leaders and avoid attitudes of resignation.

Quality assurance is another important factor that require special attention. National governments and universities have rarely made a comprehensive assessment of their strengths, weakness, opportunities and threats (SWOT analysis) and used such findings as a basis for transformation. The universities of Eduardo Mondlane in Mozambique, Zambia and Dar-es-Salaam in Tanzania have taken the lead in this direction. Hence, there are important lessons to be drawn from their experiences.

Universities have relied mainly on appraisal of individual staff members performance in teaching/-training and research through annual staff reviews to appraise their performance. One wonders whether objective criteria were used in these reviews. Similarly quality of teaching/training is often done through a system of external examiners who may be keen in

checking course outlines, moderating examination questions and checking consistencies or inconsistencies in marking. The process is often rushed (1 week) and examiners rarely appraise the process which has immense effect on outcomes. It is, therefore, recommended that *strategies of evaluating the teaching/training process-students evaluation, peer evaluation and system of internal and external audit of units, faculties universities-need to be institutionalized, appraisal carried out regularly and feedback pursued in order to bring about desired changes.*

On research (pure and applied) most universities have not developed comprehensive research plans. Furthermore they had not accorded similar importance in budgeting for research despite research being of equal, if not higher significance than teaching and consultancy in realizing the missions of a university. Hence the need for proper planning and defense of research budgets. In the process of developing research plans they also need to objectively appraise the inbuilt capacities in order to know who is most capable of doing what and determine means of realizing them. Research plans/proposals must be developed and effectively marketed.

The research capacity among some faculty especially in quantitative data analysis and effective use of computers was low. Hence they need internal training and or opportunities for short visits outside to enable them improve their skills. Senior faculty have not, on a consistent basis been empowered (resourcewise) to provide leadership in research by teaming up with junior colleagues to conduct significant original pure and applied research as, a strategy of capacity building, as well as advancing, refining and disseminating knowledge. In most universities of the North professors are known for their research. Block sum of funds should be allocated to them so as to be able to demonstrate their academic authority not only in producing research reports but also publishing books and producing scientific journals. Through greater advocacy, strict discipline - being responsible and

accountable, governments and international donor communities will build trust and find reason for directing more resources to universities for quality research.

Most of the problems that affect African Universities cannot be resolved by merely being aware and talking about them. *Affirmative action must be taken* in order to translate the recommendations contained in this paper into action.

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**MANAGING AND FINANCING
HIGHER EDUCATION**

CHAPTER 13

Management of Higher Education with a Special Reference to Nigeria

Peter OKEBUKOLA*

1. INTRODUCTION

Higher education system has as constituents, all institutions offering post-secondary degrees and diplomas. Within this broad framework is the delimitation of three institutional types - universities, polytechnics and colleges of education which on the basis of their preponderance, are specifically taken to make up the higher education system. It is to these three institutions that this paper is focused. Mention of "university" in the paper is largely taken to refer to the broad concept of higher institution.

The story of higher education in Africa is largely the story of mixed fortunes. The region lays claim to being the site of one of the earliest universities. Universities and other higher institutions in Africa have made respectable impact on the socio-political and economic advancement of nations in the region. These institutions alleviated the pains of decolonization. Gaps in high-level manpower created by the departure of colonial masters were in large part, filled by the products of the higher education system.

Higher education is of paramount importance for the future of Africa. The region requires both highly trained people and top-quality research in order to be able to formulate the policies, plan the programmes, and implement the projects that are essential for

*Professor of Education, Lagos State University, Nigeria.

economic growth and development (Baranshamaje, 1996). Preparing individuals for positions of responsibility - in government, in business, and in the professions - is a central role of the continents' universities; supporting these individuals in their work - with research, advice, and consultancy - is another equally important role.

First, tertiary institutions prepare the people needed to fill high-level scientific, technical, professional, and managerial positions - that is, they educate the elite leadership of a nation's development effort. Of special importance is the preparation of teachers, scholars, and managers for the education sector itself, especially for its most advanced teaching and research functions. These people as Baranshamaje (1996) notes, are the core of national capacity for producing trained humanpower, setting standards, maintaining quality, and adjusting the education system to changing circumstances. Second, African countries look to higher education institutions to generate the knowledge and innovation needed for development, through indigenous scientific research and as agents for the acquisition, adaptation, and dissemination of scientific and technical knowledge developed elsewhere.

In pre-independence era, the universities, polytechnics and colleges of education in many African countries had viable linkages with "mother" institutions to which they were originally patterned in the colonising country. The days of glory of these institutions could be said to have peaked during this period. The eighties saw declining economic fortunes and structural adjustment. The major consequence of these events for education and higher education in particular was the onset of decay in the delivery apparatus and delivery process. It would seem that this condition could tide over to the early years of the 21st century with its attendant management problems. The goal of this paper is to examine the management of higher education in Africa within the present economic milieu and make prescriptions that could alleviate

some of the management problems that relate to access, financing, autonomy and instructional delivery systems. Suggestions that could serve as input into the forthcoming World Conference on Higher Education are also made in the paper.

2. MANAGEMENT ISSUES IN HIGHER EDUCATION

The mobilisation and deployment of human and material resources for the attainment of institutional objectives is taken as the operational definition of *management* in this paper. Within the context of this definition, several issues arise which relate to students, staff, facilities, instructional delivery systems, interactions with governmental and non-governmental agencies, as well as curriculum and certification. While management is strictly looked at as an activity by those traditionally referred to as the Management Committee - Vice-Chancellor/Rector/Provost and other Principal Officers, an expanded scope involves actors outside this group. Students' and Staff Unions and the Governing Council are important elements in this wider group. What are the key management issues in higher education in Africa? Which issues will have greater visibility in the 21st Century for which preparations will need to be made? It is to these three important questions that attention will now turn.

Seven clusters of management issues will be discussed. The clustering points are on students, staff, infrastructure, funding, curriculum and instruction and institutional governance. The students' cluster includes such issues as access, behavioural patterns and unionism. The staff cluster includes quality and quantity, motivation, unionism and continued professional development. Funding includes who pays, what is paid for and the issue of under-funding. Curriculum and instruction includes such issues as relevance, quality of instruction, maintenance of standards, evaluation and certification. On institutional governance is the role of government, governing councils, academic freedom and institutional

autonomy. A common factor to all these issues that is given a deserved prominence is accountability.

3. THE ISSUES OF ACCESS TO HIGHER EDUCATION AND EQUITY

The issue of access can be defined in terms of enrolment opportunity into a higher institution and/or in terms of physical proximity of the institution for potential beneficiaries. On enrolment opportunities, the last twenty years have witnessed tremendous expansion in terms of the number of such institutions. This expansion has been brought about largely as a result of the Universal Primary Education (UPE) scheme which was a feature of the mid-70s in many African countries.

The U.P.E. scheme opened the doors of primary schools to many school-age children. Five, six, or seven years later depending on the duration of first level education, these children were ready for secondary schools. After their secondary education, a good proportion of these children were ready for admission into higher institutions. It was in response to this upward pressure of numbers that many more universities and other higher institutions were established.

In spite of the increase in the number of available places in the higher institutions, many qualified candidates are still unable to secure placement. In Kenya, only about half of such candidates are admitted while in Nigeria, less than 15% are lucky. Other higher institutions such as the Colleges of Education and Polytechnics provide alternatives for those who are unable to secure university admission. Even with these outlets, a good number of eligible candidates are unable to be placed. This exemplifies the pyramidal nature of the higher educational system and underscores the limitation in access to higher education.

University student population on the continent grew by 63 percent between 1980 and 1995, rising from

337,000 to an estimated 622,800. To attempt to meet this growth, universities have grown from six in 1960 to approximately 99 in 1995. However, enrolments are increasing faster than the capacity to plan for and accommodate this growth. The result has been overcrowding, a shortage of teaching staff, materials and laboratories, deterioration of physical facilities, strain on administrative systems, and reduced performance by staff and students. It is expected that the student demand for higher education will continue to increase.

Despite this enrolment growth, the number of university students per 100,000 persons continues to remain low in comparison to Asia, Latin America and the Middle East. The so-called enrolment "progress" of African higher education becomes particularly stark when one compares, for example, sub-Saharan Africa's enrolment of 542,700 out of a population of roughly 550 million to the State of California which has over one million tertiary students out of a population of 30 million (Baranshamaje, 1996). The magnitude of the failure of higher education is further highlighted when one considers that in 1990 the average Sub-Saharan Africa's enrolment rate for tertiary education was reported to be 2% of the eligible population compared to 50% in high income countries. It is important to note that there is a fundamental paradigm shift occurring in which the reasons for these low enrolment rates in sub-Saharan Africa can no longer be attributed to low student demand but rather to the inability to supply enough places within the university system.

Enrolment increases have been unbalanced in many regards. There are obviously wide disparities between countries of sub-Saharan Africa, with some having a large number of enrollees and others with very few. As mentioned earlier, enrolments have remained mainly concentrated in (or restricted to) the traditional fields of the humanities and social sciences, which are less expensive and easier to teach using existing human and physical facilities. There are countries where certain disciplines, particularly in the areas of science and engineering, are non-functional or non-existent.

For large segments of the population in sub-Saharan Africa, higher education is still not a viable option. This is particularly the case for non-fresh high school graduates for whom no opportunities currently exist for entering higher education either for an initial degree or for updating their skills.

The policies on education of most African countries emphasise unhindered access to primary education, not so for the higher education level. Higher education is restricted to those who are eligible and who can fit into existing places. Access is thus restrained by stringent admission requirements and also by the number of institutions available. On admission requirements, further imposition of quota makes possibility of admission tighter still. For example in Nigeria, aside from a high score in the University Matriculation Examination (UME), candidates go through filters of quota for merit, catchment area and discipline. The discipline quota of 60:40 of Science to Arts translates into stiffer competition and hence high rejection rate for the Arts students. The relatively few science students have improved chances of admission. In the non-professional science courses, the cut-off point for admission is usually low.

As a way of further enhancing access of candidates to science-based courses, many universities in Nigeria have established pre-degree science programmes. These programmes are basically remedial in nature and they serve the major purpose of increasing the pool of potential candidates for degree programmes in the sciences. Successful implementation of these programmes has made it possible for many universities to meet the 60:40 Science/Arts ratio.

While women are encouraged to take advantage of higher educational opportunities, no deliberate attempt is made to lower admission standards in favour of women. Enrolment statistics continue to show a disproportionate profile in favour of the men especially in the sciences. This inequity is a carry over from the gender inequity in secondary education. Cultural factors and other socio-economic variables converge to

impede the access of women to higher education in Africa. As a way of enhancing access of women to higher education in Nigeria, there is a move to establish an all-women university.

Access, seen as ease of physically getting to school by virtue of proximity has been an important basis for the establishment of many urban-based, non-residential universities. It is also the basis for the catchment area quota for admission. The expectation is that such neighbourhood institutions will be cheaper for students and by their non-residential nature, cheaper to run by the proprietors. Also many more students can be admitted since the facilities that could otherwise be used for students' residence are available for academic activities. Examples of this model abound in Nigeria especially among the third-generation universities.

The major management issues that relate to the subject of access are the control and diversification of admission, meeting of quotas, and enhancing the access of women. Control has to do with the mode of admission and who has final responsibility for admission. There are two main models of admission control. The first is where the university takes total responsibility for advertising programmes, conducting selection examinations and offering admission to students who satisfy examination and entry qualification requirements. There is the high chance of multiple admission as a bright candidate can perform well in the admission examination for different institutions.

In the second model, there is a central examination body that conducts entrance or matriculation examination for all the higher institutions. In Nigeria for example, the Joint Admissions and Matriculation Board (JAMB) conducts the University Matriculation Examinations (U.M.E) for the 40 Universities and the Polytechnic and Colleges of Education Examination (P.C.E) for the Colleges of Education and Polytechnics. Candidates have two choices of institution for each of these examinations. If the first choice institution is

unable to admit a candidate, he or she is considered by the second choice institution, failing which the candidate is not admitted for that season and may have to re-enrol for the examination at the next available opportunity.

While some have called for the scrapping of JAMB owing to a few administrative lapses, many still endorse the potency of the Board in sanitising the admission process. Indeed, some countries e.g. Ghana have adopted the Nigeria model of having a central body to serve as clearing-house for admission.

The quality of students from the secondary schools who take matriculation examinations has been recorded to be getting poorer. The decay in the secondary school system is accounting for the poor quality products that form the pool of potential candidates for higher education. These poorer quality "raw materials" into the system demand that adjustments be made especially in the implementation of the curriculum in order to be assured of good quality products. The access of poor quality secondary school leavers is thus a management problem worthy of note in our higher institutions. This problem can be handled through the institutionalisation of bridging programmes as it is done for French.

The number of foreign students in many African universities is rather low. Even in high-tourist zones like East Africa, the proportion of foreign students enrolled is small. This situation could be due among other things, to inadequacy in the marketing of the programmes offered. Unlike universities in Europe, North America and the many other developed countries where the programmes are marketed through elegant advertisements in international newspapers and magazines and during fairs and exhibitions, many universities in Sub-Sahara Africa hardly engage in such promotional activities. In order to broaden the scope of admission to attract international students and through this earn foreign exchange, management of our institutions would need to be more aggressive in advertising their programmes outside their national

boundaries.

On enhancing access of women, university management could institute incentives such as bursaries and scholarships for women. Since some of the impediments to access are cultural, public enlightenment programmes that are targeted at shifting people away from such hindering beliefs could be mounted. Also, more women should be employed into teaching and administrative positions in our higher institutions to serve as role models for the younger ones.

The Forum of African Women Educationalists (FAWE) should be encouraged to support programmes at the regional and national levels that would enhance access of women to higher education. The idea of a Women's University being proposed in Nigeria should be studied closely and if successfully implemented could be adopted by other African countries with sufficient resources to support such a scheme.

Graduate unemployment is making some people wary of full-time university education. A trend that is increasingly in vogue is to undertake part-time degree programmes while retaining present job positions. These part-time programmes normally run at convenient times for the worker especially in the evenings and at weekends. The programmes are usually self-financing and they offer avenues for the higher institution to generate funds. At a time when there is call for the reduction in the number of higher institutions in some countries as a result of funds constraints, these part-time courses could provide the opportunity for institutions that have survived the down-sizing process to continue to offer service to the same number of students, and even more, and make some money on the side.

In the bid to grant access to many more students and make some money, the commercial side of the coin, rather than the purely qualitative and academic is given greater visibility. In order not to depress quality, the management of our higher institutions must stress the admission of good quality candidates

and offer qualitative instruction to the students. Equivalence should be ensured between the quality of education given to the full-time students and that offered to the largely commercial part-time students. In this regard, internal quality control mechanism should be instituted and where in place, strengthened. In a later section, the broad area of distance education within the context of higher education will be discussed.

4. STAFF-RELATED MANAGEMENT ISSUES

Five staff-related management issues will be discussed. These are quality and quantity of staff, training, motivation and welfare. On the issue of quality, it is getting increasingly difficult to attract and retain high quality staff in our higher institutions. The difficulty arises from unattractive welfare scheme for teachers, a situation that leads to the drift of many of such teachers to greener pastures offered by the private sector or by overseas institutions. This brain-drain has robbed many higher institutions in Africa of many of their highly qualified and experienced professionals. The situation is particularly acute in such disciplines as medicine, engineering and the sciences.

In Nigeria, the expansion of student enrolment has not been matched by the growth in the number of teachers (Omorieg & Hartnett, 1995). System-wide, the number of academic staff increased by an average of 2 percent each year between 1988 and 1994, while student numbers grew at a rate of 12 percent each year. By 1994, the average student/teacher ratio was 1:21, a marked increase from 1988's ratio of 1:14, and above the Nigerian Universities Commission (NUC) norm of 1:12. A number of universities are operating at staff levels far below the level recommended by the NUC.

As further revealed in the report by Omorieg and Hartnett, (1995), in 1993/94, student/teacher ratios by faculty from the 21 federal universities show that the engineering, environmental design, and sciences faculties are the most severely understaffed, and that

the condition has deteriorated in these areas since the late 1980s. The engineering faculties at Lagos, Ilorin, Minna, and Port-Harcourt, for example, report about 26 students per academic staff member, significantly understaffed relative to the NUC-recommended ratio of 9:1. System-wide, however, two disciplines - arts and social sciences - remain over-staffed relative to the NUC norm.

With the brain-drain in bloom, teaching positions are taken up by relatively inexperienced and not-so-qualified staff. In some universities, most faculty positions are held by non-doctorate degree holders. These staff are saddled with teaching and administrative responsibilities which make little time available for them to do research and get on with the business of taking the Ph.D. This situation breeds mediocrity and could be a major cause of lowering of standards. It is, therefore, an important management problem. This problem can be addressed among other things, by improving the welfare scheme for teachers, thus, encouraging their retention on the job, providing on-the-job training for staff, and offering appointment to retired lecturers on contract or to former lecturers in the private sector on part-time basis. These interventions have been found to be successful in the Lagos State University especially in the Social Sciences Faculty where experts from the private sector especially in the banking and finance industry are employed to teach courses in economics at the undergraduate and postgraduate levels. The environmental science and education programmes also draw personnel from the manufacturing industries and from national and state environmental protection agencies. We have found this to be a good and profitable example of university-industry partnership.

Worthy of mention as an important intervention to the brain-drain problem is the UNDP Transfer of Knowledge through Expatriate Nationals (TOKTEN) programme. This programme supports short-term re-entry of highly-skilled professionals who are currently engaged overseas into the country. The professionals

“transfer” some of their knowledge and skills for the development of their native country. It is also envisioned that the brief sojourn could speed up the decision of the professional to return home. The TOKTEN experiment has been largely successful in Nigeria in terms of transfer of knowledge and skills and also in terms of getting some of the consultants to take up permanent appointment in a Nigerian establishment. This scheme should be encouraged and expanded in the years ahead to support many more professionals than it presently accommodates.

The quality problem can also be addressed through within country and between country staff exchange. The UNESCO/UNITWIN programme is an initiative that is facilitative of such an exchange.

On the issue of quantity, there are fewer academic staff than are required in several disciplines including Law, Medicine, Engineering and the Sciences. This has resulted in high teacher-student ratios with its consequence on quality of instruction. The brain drain phenomenon is one of the causes of the staff shortage. Other causes include budgetary limitations, and facilities handicap. There is also the need to keep a manageable number of staff that will be optimally utilised. A mix of different levels of teaching staff specified as ratios also places limits on the number of staff to be employed or promoted to the different levels.

Women in the work-force in higher institutions are also relatively few. Just a sprinkle of women are found in Engineering, Medicine and Science. There is the need, therefore to encourage more women to get into academia as teachers.

Training of staff in academic, administrative and technical areas, can help to alleviate the problems of quality and quantity. Funds constraint has not made overseas training which used to be a feature of the 60s and 70s readily available for staff wishing to take up such training. Except for support received from fellowships and scholarships granted from overseas foundations and international agencies, many staff of universities in Sub-Saharan Africa have continued to

find overseas training out of reach. Local training of staff would, therefore, need to be encouraged with the older and well established institutions offering training ground for staff in the newer institutions. The establishment of centres of excellence for training is also a viable pathway to solving the problem of quality and quantity.

5. ACADEMIC FREEDOM AND AUTONOMY OF UNIVERSITIES

On paper, African universities have the benefit of academic freedom and autonomy in line with age-long university tradition. In practice, however, this freedom and autonomy are hindered by political and economic limitations. Whereas academic freedom permits the university teacher to teach, do research including publishing research results, and offer community service on the basis of his/her expertise or knowledge without restraint. Such activities which are out of alignment with the prevailing political orientation in the country are restricted. University staff have been subjected to harassment by security operatives on account of divergent views held on the basis of their research. Only in a few African countries has this situation not been reported.

Academic freedom is also taken to the extreme by some university staff. Under the guise of academic freedom such staff would want to come to class when they like, teach students how and what they like and evaluate students using unorthodox techniques. Academic freedom would need to be seen and exhibited on the basis of existing university rules and regulations. University management would need to re-orient staff with weird understanding of academic freedom through some form of public enlightenment.

The "ivory tower" is expected to enjoy autonomy especially in such areas as admission and discipline of students, recruitment; training and discipline of staff; and what and how to teach, that is, curriculum and instruction. Unfortunately, what seems to be prevalent

in many African universities is partial autonomy where external forces especially government, in spite of the existence of the Governing Council, directly interferes in the running of such institutions (Gaidzanwa, 1995; Aina, 1995; Sewedago, 1995).

University autonomy is not fully achieved by the "who pays the piper, dictates the tune" attitude of government. The heavy dependence of most universities on government for funding results in the severe erosion of autonomy. Another factor which makes autonomy difficult to achieve is improper management on the part of university chief executives acting alone or in concert with Senate or Council. Management problems have brought about external criticisms and intervention by self-made "wise men" from outside the universities especially in government. Areas where university autonomy have been trampled upon include the appointment of Vice-Chancellors and other Principal Officers, as well as admission and discipline of students.

Worthy of mention in a discussion on academic freedom and university autonomy is the growing menace of students' gangsterism, cult practices, examination malpractice and other forms of violence and disruptive behaviours. While university laws provide sanctions for erring students, external influence by parents, politicians and other "sympathisers" put pressure to bear on management against enforcement of such sanctions. The law courts to which some of these students turn hardly help matters. There is a clear need for a rethinking of discipline in our higher institutions if these institutions are to train good leaders of tomorrow.

The role of open and distance education

Distance education is a delivery system that uses a variety of media and a system of feedback to teach people who are unable to attend traditional schools. Distance education usually combines the use of media broadcasts, printed materials, and some kind of face-to-face study. Distance teaching programmes can range

from in-school programmes, in which broadcasts supplement learning activities in the classroom, to out-of-school programmes, such as correspondence lessons in which students may never meet their tutors and may have little or no contact with the regular education system.

Over 80% of African universities are urban-based, yet the population is largely rural. Open and distance higher education becomes important for the potential clientele residing outside the urban centres, for those who are working and those who for other reasons e.g. cost and family commitments are unable to take advantage of the regular university education.

As noted by Assie-Lumumba (1995), distance learning has good potential as demand is expressed in every corner of each country. Even if new institutions are created, there will still be only a few, concentrated in larger urban areas. People who want further education will have to continue to move to those institutions, creating logistic problems. However, distance education will take knowledge to the homes of the learners. Some African countries have limited experience in this area, while others do not (the majority have experience only in the area of teachers' continuing education). The new perspective is to open the programme as a full option for students who might otherwise rely either on traditional institutions or who might give up any ambition to undertake higher education. Communication problems may arise, but they may not be insurmountable, if careful planning is undertaken. An agenda for higher education in Africa for the 21st Century should give prominence to open and distance education.

The World bank would appear to be on course in the implementation of such an agenda through the African Virtual University (AVU) Project. The rationale behind the AVU concept according to the project document is twofold: (1) to improve the quality and relevance of science, engineering and business instruction in sub-Saharan Africa (SSA), and (2) to significantly expand enrolment levels in these areas. To

meet these objectives, the AVU would first seek out the most relevant knowledge and information being produced by universities, conferences, professional associations, and negotiate for their purchase. Rather than engaging in the costly process of directly producing knowledge, the organisation will focus on adapting the content of the procured packages into lectures, seminars, courses and degree programs that are appropriate for and relevant to the African audience and on delivering this repackaged content through various emerging and established technologies. Second, the AVU will also seek to increase the quality and access of higher education within SSA by creating and stimulating competition between tertiary institutions within a country or region. Third, AVU will engage in the production of top quality instructional material in Africa by Africans.

On-line databases provide a good example of how this idea would work. The on-line organisation buys information from producers and packages it into a convenient service that can be purchased in various quantities and levels by consumers. The role of the on-line organisation is to market the service, maintain and continue to develop the database (keeping it up-to-date, adding information sources, increasing user-friendliness, etc.) and provide help and support to users. Due to improvements in technology, outsourcing of already produced content is a better economic alternative to vertical integration which translates into in-house production. As a matter of fact, the decade of the eighties has seen the emergence of a new marketing philosophy under which producers of information (and other goods for that matter) sell their information in bulk to distributors through various channels and formats. This new economic paradigm whose other manifestation is the end of geography and locational advantages based on proximity emerged with and was brought about by the information revolution.

Three distinct design features make the African Virtual University unique: the organisation's corporate

structure and operating philosophy, its mix of products and services, and its marketing and distribution strategy. What will make the organisation distinctly different from existing tertiary institutions and constitute its strength will be its ability to adapt to demands of the market place. The structure of the organisation will be critical to this philosophy. One organisational form being considered is that of a privately-held non-profit company. The AVU will be connected to a consortium of universities, governments, private organisations, professional associations and foundations from around the world. In order to meet the diverse target groups and their specific needs in a rapidly changing environment, the organisation will be driven by the principles of adaptability and cost minimisation. To keep up with the rapidly changing market and the diverse needs of its client institutions, the AVU must be able to assess and invoke competencies in different areas. This involves being able to undertake and engage in a range of activities. However, most of the organisational functions will be out-sourced in order to keep the organisation lean and focused and to keep its overhead costs low. One of the fundamental premises behind the AVU which confers it a degree of flexibility is its virtual nature which implies that it need not own university buildings or laboratories nor will it have a permanent cadre of teaching staff or large administrative staff to conduct its business. To be successful, the AVU should adopt an organisational model which facilitates: Flexibility in its operations, short lead and processing time for materials development and the offering of value-added support services. It should have the capacity to market its services effectively and collect revenues; work with clients and suppliers to develop pedagogically sound and relevant programs and follow-up materials; organise the training of professors and assistants; and, install and service the hardware and software.

6. FINANCING HIGHER EDUCATION

The institution of higher education has two primary missions - teaching and research - which have traditionally made it a resource-intensive enterprise. Higher education in sub-Saharan Africa has followed the model of a traditional publicly-supported residential university. Running the university under this model has typically required a significant investment in providing and maintaining a basic level of infrastructure - facilities, faculty salaries, administrative staff, residential housing, etc. Universities in sub-Saharan Africa have been supported by government funds with little contribution by the students (World Bank, 1988). Governments typically finance at least 90 percent of the costs of a student's higher education; in Francophone Africa, with its generous welfare system including fellowships, food, lodging and health, the figure becomes 100 percent.

In past several years, budgets of sub-Saharan Africa universities have been under tremendous pressure due to declining budget allocations and rising enrolments. Higher education's share of national education budgets initially increased in the early 1980s. It grew from an average of 15.5% during 1970-74 to 18.3% in 1975-79 and 19.1% in 1980-84. It then gave ground, with its average share for 1985-88 declining to 17.6%. The tremendous pressure for expansion of higher education has placed additional demands on the financial resources which have proved inadequate to meet even the current needs. Declining budget levels and rising enrolments for higher education have combined to force down unit costs in many sub-Saharan Africa countries.

Unlike the situation in some other parts of the world, tertiary education in Sub-Saharan Africa is overwhelmingly public in ownership and operational control. Private institutions of higher education are often explicitly proscribed in fundamental legislation and administrative regulation. Public ownership and control of higher education in Africa has meant for all practical purposes that tertiary education - including

the living costs of its students, which are not properly an education expense - is entirely financed by the public budget. With few exceptions, students, their families, and their future employers are spared having to make any contribution to the costs of higher education beyond the general incidence of the tax system and the income forgone while studying. The extent to which the private rate of return to higher education exceeds the social rate of return to a useful index of public subsidization of education, since most of the difference between the two is due to including the state's contribution to costs in the social rate calculation and excluding them in the private rate calculation. The available evidence suggests that in Africa private rates of return to higher education are, conservatively, 150 percent greater than social rates, a multiple more than three times higher than in Latin America or in industrial countries generally and more than fifteen times higher than in Asia (Negrao, 1995).

In Nigeria, direct NUC funding dominates, and represents an increasing share of the Universities' income. From an estimated 85 percent for eight Federal Universities in 1985/86 (World Bank 1988), the NUC provided about 86 percent of total income in 1990/91 and 1991/92, and 93 percent in 1992/93. Estimates for 1993/94 and 1994/95 put this figure at 96 percent. As financial dependence on government increased, university management autonomy became circumscribed (Omoriegbe & Hartnett, 1995).

Besides the recurrent grants from NUC, federal universities receive small amounts of income from other sources. These sources include fees for postgraduate courses and examinations; bank interest payments; gifts and endowments; and income-generating activities, such as consultancy services and farms. According to the NUC parameters, these local sources should equal 10 percent of total income. However, local income represented just 7 percent of total income system-wide in 1992/93, down from 13 percent in 1990/91. Further declines are estimated for 1993/94 and 1994/95.

Income from student tuition fees system-wide represented 3.7 percent of total income in 1991/92, and just 2 percent in 1992/93. Estimates for 1994/95 suggest a continuing trend downward to 1.6 percent. Universities vary in terms of their reliance on fees as a portion of total income, and those with large sub-degree or postgraduate programmes may benefit more from tuition income. Jos, for example, with enrolment in sub-degree and postgraduate programmes at about one-third of total enrolment, received 12 percent of total income from tuition fees in 1991/92.

Investment income, representing 6 and 3 percent of total income in 1991/92 and 1992/93, respectively, is primarily the proceeds from staff and student accommodations, including hostel fees; interest earned on bank deposits; and business operations. Its significance in terms of total income varies considerably, from a low of 0.5 percent in 1992/93 at Sokoto to a high of 11.3 percent at Abuja.

The NUC parameters recommend that universities allocate at least 60 percent of their total expenditures to the academic units, and the remainder to administrative support, which includes central administration, works and maintenance, health and other students' services, and general university expenditures. In 1992/93, the universities' devoted 56 percent of total expenditures to the academic units, an increase from the previous year's 50 percent that was probably a result of both the increased allocation to library development and the enhanced academic staff allowances that also resulted from the Academic Staff Union of Universities (ASUU) agreement. The greatest proportion to academic units was at Maiduguri, where about 75 percent of expenditures were devoted to academic costs in both 1991/92 and 1992/93. However, four universities - Owerri, Kano, Sokoto, and Nsukka - spent less than 50 percent of total expenditures on academic units in 1992/93. At Nsukka, academic units received 43 percent of expenditures compared to 1984/85's figure of 53 percent. (Omoregie & Harnett, 1995).

Several options are being discussed and proposed to try to reduce the financial pressure on universities (Negrao, 1995). The first involves a careful re-examination of the basic services offered as well as of the cost structure that underlies the residential university model. Second, although unit costs have come down dramatically, some believe that room still exists for gains in financial efficiency through improved administrative and management practices, rationalisation of disciplines and courses, better faculty staffing and tenure plans, etc. The third option is to shift government subsidies from universities directly to the students through such measures as vouchers (similar to the programme in Chile).

The fourth option involves cost-sharing and cost-recovery. This tuition-based approach has all of the benefits of the voucher system (and may be combined with such a system for equity purposes) but it also helps to generate resources for the system. Although cost-sharing and cost-recovery have been widely supported by the donor community, they have been highly controversial and sensitive in Africa and other parts of the world as students view free higher education as a "right" that they are entitled to rather than as a "privilege" which they should pay for.

Recovery of some greater portion of the real costs of providing tertiary education is an imperative. This would be achieved through such measures as:

- allowing the establishment of privately owned and financed institutions of higher education operating under state-set standards of quality;
- introducing fees in public establishments, initially for non-instructional services such as food and lodging and then as tuition for instruction;
- imposing national service obligations - for example, to teach school, work in distance education centres, or participate in adult literacy campaigns - before, during, and after enrolment in higher education.
- promoting an educational credit market;
- imposing a special tax on earnings of tertiary-level graduates during a transition to an effective system

of graduated income tax.

Expansion of cost-sharing to include the beneficiaries of tertiary education and their families does not mean that governments should lessen their financial support to the sub-sector.

The Factor of Political Will: The Lagos State University Experience

If all the management problems facing higher education in Africa were to be decomposed into two, political will and funding will emerge as variables. For instance, much, if not all the management problems relating to students, staff, resources and the implementation of the curriculum will be successfully tackled if sufficient funds are mobilised and judiciously deployed. If pressed further for the single most important factor, one would say political will. It is political will that unlocks and makes available the funds. It is political will that ensures that lip service is not paid to educational policy implementation. Political will is obviously the guarantor for success.

An example of political will in the provision of high quality university education in Nigeria is given by the Lagos State Government since Colonel Mohamed Buba Marwa assumed office as Military Administrator of the State in September 1996. Previous Governments did their best in providing funds for the prosecution of teaching, research and other responsibilities of staff of the Lagos State University. In spite of yearly pressures since 1988 for the provision of sufficient funds to ensure more meaningful actualisation of the objectives of the University, Government yielded little grounds and less than a third of real needs were provided. Income from other sources were minimal. The resultant effect was "learning with tears" for students and teaching and research under harsh conditions for staff. There was a lot of political talk about education being given priority. What was on ground was, however, *ad contra* to this.

In September 1996, Colonel Marwa turned things around and provided an example of how not to pay lip service to education. Worthy of note is the fact that his political will to make life worth living for the average citizen in Lagos State is felt in other social service sectors including transportation (roads), housing, and security. A few sessions with him on the management problems of Lagos State University in September during and immediately after the national strike action of the proscribed Academic Staff Union of Universities (ASUU) were enough to activate the mechanism of his political will to turn the fortunes of the University around in a positive direction. The funding profile of the University soared as a result of his intervention. By substantially increasing the subvention to the University by about 80%, the science and engineering laboratories and workshops which used to be bereft of teaching and research activities are gradually coming back to life with the conduct of practical sessions. The library now has some funds for the procurement of books and journals; the health centre can now buy and stock drugs; some research grants can now be released; and a number of staff and student welfare schemes are being put in place. Although more funds are still needed to meet N.U.C. accreditation of some programmes, it is noteworthy that some minimum level of government funding which the University had sought over the past eight years did not materialise until the important factor of political will surfaced in our favour with the appearance on the scene of governance of Colonel M.B. Marwa who holds Masters degrees from two prestigious American universities. The moral of this story is that the buck for the successful management of our higher institutions stops ultimately with our leaders. Without political will from their end, the conclusions from this important Summit in charting a course for the delivery of high quality university education in Africa in the 21st Century will come to nought.

7. CONCLUSION

In this paper, an attempt is made to examine some issues that are important in the management of higher education in Nigeria. Focus was on access, teacher training and welfare as well as financing.

The next century will be critical in the determination of whether or not the university system in Africa will sink or swim. The outlook for the future is however bright giving good leadership with commitment to the delivery of good quality higher education.

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CHAPTER 14

Financing Higher Education and Partnership with Production and Service Sectors

Ernest. H. WRIGHT*

1. INTRODUCTION

Higher Education in Africa is carried out mainly in Universities and Colleges and to some extent in higher polytechnics and various specialized institutes. The mission of higher education is universal and is essentially tripartite in nature, namely:

- education and Training at the tertiary level;
- research and Development Activities;
- National and Community Service encompassing a Kaleidoscope of activities outside normal or conventional academic work and perceived to be of importance within the context of crying national needs and overall National Developments.

The relative emphasis of tertiary education institutions on the various components of their perceived mission depends on several factors, for example:

- the type of institution, - University, college, polytechnic or specialized institute;
- the age of the institution;
- the vision and quality of leadership within the institution,
- the material, manpower, financial and other resources of the institution.

* Professor, Fourah Bay College, University of Sierra-Leone.

There are of course several constraints which militate against Higher Education Institutions fulfilling their mission effectively? One important constraint is finance or the lack of it, and in this paper we examine some important aspects of financing higher education, using the Sierra Leone example to illustrate.

2. FINANCIAL MANAGEMENT AND ACCOUNTABILITY IN HIGHER EDUCATION

Higher Education Institutions generally require or in any case usually put forward budgets with colossal financing for their operations. They often do not readily get support to meet all their perceived financial requirements and so it is important that there should be in place sound financial management systems in these institutions

The detailed structure of the financial management system in any Higher Educational Institution would of course depend on the structure of the institution and the administrative management therein but the financial management should encompass the following:

- overall control of the receipt and expenditure of all finances;
- financial management of the Institution's resources including:
 - preparation of Estimates;
 - allocation of Resources;
 - determination of an overall cash flow policy;
 - the organization of Banking and Investment;
 - budgetary control;
 - preparation of the Annual Accounts;
 - the costing and Analysis of the Institution's development Plans;
 - control of cash flow;
 - the Maintenance of an Inventory of fixed Assets and of all furniture, plants and equipment;
 - the Payment of Salaries to Staff;
 - The supervision, monitoring or administration of the institution's Pension or Staff benefit Schemes;
 - the Administration of Loans to members of staff.

- the Receipt, accounting and financial administration of students fees;
- the administration of Research grants and contracts;
- the Preparation of cheques and payment of creditors;
- the administration of supplies and stores;
- the administration of all insurance;
- the Audit process: Internal and External Auditing of the institution's Accounts.

The above items bear directly on Financial Management, and give a clear focus on Accountability. The Institution should, of course have laid down financial management policy developed by its highest governing authority such as its council, court or whatever called. In the day to day administration of financial management there needs to be a strong Financial Office headed by a well-qualified Finance Director and the Finance Office itself should be structured in such a way to be able to carry out the multifarious functions entrusted to it.

The Auditor of Auditors should audit the annual statement of income and expenditure, the balance sheet and other accounts of the Institution and make a report to the council or court at least once in each year.

The structure of financial management in the University of Sierra Leone is completed by its history and structure. In accordance with the 1972 University of Sierra Leone act, a unitary structure prevails. However, the university consists of three colleges, Fourah Bay College, Njala University College and College of Medicine and Allied Health Sciences, each with its own campus and administration together with three out-of-campus Institutes - The Institute of Education, the Institute of Public Administration and Management and the Institute of Archive, Library and Information Studies. Each of these Institutes also has its own administration. From a historical standpoint, each of the two main colleges, - Fourah Bay College (founded in 1827) and Njala University College (founded in 1964) was at some point in history completely

independent of each other and used to going their separate ways in all spheres of endeavour, for example in management of academic courses, in the system of accreditation, in administrative and financial management.

The first attempt to bring these two colleges together was accomplished in 1967 by a University of Sierra Leone Act which brought in a Federal Structure for the University. On hindsight one could say that this was merely a half-hearted attempt to unify two diverse systems and very little was really achieved in rationalizing structures and systems, for each of the Colleges continued its separate ways, even in financial management and the primary visible accomplishment of the 1967 University Act was that all students who graduated got a University of Sierra Leone degree.

In the University of Sierra Leone of today, there exists a central Secretariat which has a Finance Officer and assisted by a number of Assistant Finance Officers administering:

- Financial Management and Budgetary Control;
- Payment of salaries, superannuation and other related staff matters;
- General income and expenditure and accounting matters;
- Contracts and Supplies.

However, each of the three colleges also has a Finance office headed by a senior Assistant Finance Officer and assisted by a number of Assistant Finance Officers and Finance Assistants. The colleges manage not only their own Financial Resources but also resources passed on to them from the Central Secretariat. Thus financial management in a college includes:

- Preparation of College Estimates;
- Banking of, and accounting for, monies received in the college, for example, student fees, income from rents and investments, income from income-generating activities;
- Budgetary control process of all commitments raised

- by academic and other departments, institutes and units based and operating in the College;
- Financial and management accounting for business and amenity activities in the College;
 - The administration of Cash Flow in use in the Colleges;
 - The maintenance of an inventory of college assets;
 - The Payment of Salaries and Wages to certain categories of salaried staff for example Senior Supporting Staff, Intermediate Staff, Junior Supporting Staff as well as Daily Wage earners;
 - The certification and presentation of College Expenses.

In all these functions there sometimes must occur overlap of functions between the Central University Finance Office and the College Finance offices but the general intention is that *financial management* is directed and effected from the University office whereas the *business-administration* is conducted by the college.

Looking at Financial Management in Higher Education Institutions from a National perspective, it would seem necessary to establish a National Tertiary Education Commission which should be an independent and autonomous body with the following functions in the area of financial management and accountability:

- Realistically scrutinising all budgetary proposals of all Higher Education institutions in relation to their mission;
- Seeking the necessary funding from prospective donor agencies, including the government, for the Institutions;
- Ensuring that the financial management policy of the government is fully complied with; this should include the proper keeping of the books of financial records and the timely production of audited accounts of the institutions as provided for in the relevant Acts establishing the institutions;
- Allocating available funding and grants to Higher Education Institutions in accordance with realistic

guidelines such as:

- The enrolment and type of students in an institution, e.g. Science, Engineering, Agriculture, Medical students which cost more to train than Arts, Law Social Science students,
- the number and type of staff,
- the revenue generating potential or ability of the institution,
- the geographical and environmental location of the institution,
- the state of the existing infrastructure of the institution,
- the realistic and supportable development plans of the institution as perceived in relation to National needs.

It is expected also that each Higher Education institution should have a financial management committee to coordinate and discuss financial matters among the different colleges, campuses, institutes and units making up the institutions.

3. FUNDING HIGHER EDUCATION

Many Higher Education Institutions in Africa including, Universities, polytechnics, higher Education Colleges, Vocational and Technical Centres often depend on the National Government to provide the bulk of the finances necessary to meet re-current expenditure and also expect substantial assistance for development and equipment grants. In the face of stagnant, deteriorating or barely sustaining economies in many African countries these expectations are often not met to any reasonable or satisfactory level. Taking the University of Sierra Leone as an example, Table 1 shows figures for a six year period (1990-96) of budget estimates put forward by the University and of actual government grants made available.

**Table 1: University of Sierra Leone Budget Estimates
[1FCFA = 1,52Leones]**

Year	Budget Estimated (million Leones)	Actual Government Grant (million Leones)	Percentage of Actual over Estimates
1990-91	0.88	0.53	60.2
1991-92	1.67	1.00	59.9
1992-93	7.11	1.47	20.7
1993-94	5.88	1.17	19.9
1994-95	5.33	1.31	24.4
1995-96	11.93	1.74	14.6

It should be noted that over the period in question there was a continuing massive devaluation of the National Currency, the Leone, in relation to the United States Dollar and the British Pound Sterling accompanied by a corresponding escalation in the cost of living and an unsatisfactory economic climate worldwide. Much of the period given in Table 1 also encompasses the five-year period of civil strife in Sierra Leone during which a higher proportion of the National budget went to providing the wherewithal to defend the nation.

Any government has to prioritize the areas for budgetary allocation, for in developing economies, many sectors do present a case for higher prioritization, for example the Health Delivery Sector, infrastructural development such as roads and the transportation system, the Agriculture and Food Sector, Housing, Mineral Resources, Marine Resources, Energy and Power, Portable water supply systems, etc. So any government can, at best, only allocate a certain (reasonable) fraction of its resources to the Education Sector. But even the education sector itself has many constituent parts such as Primary, Secondary, Vocational and Technical, Tertiary and Teachers' education.

In Sierra Leone, the University of Sierra Leone Budgetary requirements go through the Ministry of

Education and for the 1995/96 budgetary year, the percentage of Ministry of Education grant to Tertiary Education was only 13 percent of all the grants to the educational sector, and 61 percent of this (13 percent) went to the University. In other words, only 8 percent of the education grant went to the university (see Table 2 for figures).

It is an attractive proposal to prescribe that Higher Education Institutions should try to generate income to meet the shortfall of their needs over government and other grants (e.g. research grants, consultancies, etc.). However, the reality for the University of Sierra Leone is that income generated from such sources as tuition fees and other charges, agriculture and other business related activities, savings and bonds, vacation residence charges, sales from College Stores, etc., is very small compared to the Total University Budget (Table 3).

Table 2: Budget Allocation in the Ministry of Education, 1995/96 (in Million Leones)
[1FCFA = 1,52 Leones]

Sector	Salary	Allo- wance	Goods and Services	Wages	Over- time	Total
Office of the President	34.222	12.232	1821.4	3.404	0.332	1871.591
Planning and Development Service	7.078	2.394	83,200	0.127	--	96.8
Pre-Primary and Primary Education	6,143.466	2032.227	1242.700	0.476	--	9419.673
Secondary Education	4,534.822	1405.9	1173.3	6.651	--	7120.673
Tertiary and Teachers Education	0.866	0.3	*3,268.000	--	--	3269.155
Technical and Vocational Education	133.951	317.634	238.6	1.9	--	1892.085
Physical and Health Education	7.487	2.016	86.9	--	--	96.403
Total	12061892	3773.703	7914.1	13.06	0.332	23763.087

* Allocation to the University and Teachers Colleges

Table 3: Income-Generated and other Funds (Le M)

Year	Govt. Grant	Income-Generated and other Funds	Percent Income Generated over Total University Budget
1993-94	1,474.740	39.905	2.63
1994-95	1,166.000	13.315	1.13
1995-96	1,305.000	22.315	1.68

Now low funding of the University from government sources as well as from income generated is detrimental to efficient or even satisfactory operations of existing departments. As it will be unreasonable to expect the government to be able to meet in full the increasing needs of Higher Education, it will be instructive to examine or consider existing and other ways to make up the short-falls.

3.1. Government Funding

Assuming that the Higher Education Institutions are totally geared to and committed in meeting the required manpower needs of the country, then assuming that they make realistic and unambiguous estimates of their needs it would seem reasonable to expect the government to give a minimum grant of at least 60 percent of the annual requirements of Higher Education for effective and efficient operation. Indeed, Higher Education Institutions are National Assets and the taxpayer should be prepared to meet a reasonable proportion of their running costs.

Furthermore, there needs to be some forward planning in Higher Education Development and Financing, and Government and the already mentioned Tertiary Education Commission should prepare a five-year Finance plan for Higher Education based on the projected needs of the Higher Education Institutions; the finance plan should include a commitment from government to fund at least 60 percent of the anticipated requirements.

3.2. Student Fees and Other Charges

Students fees are often considered in the light of the prevailing socio-economic status of the country. Thus, one may argue, and somewhat convincingly too, that in a country with a low socio-economic status where the G.D.P. is low with consequent low wages and salaries, it would be unrealistic to charge economic fees, since this would tend to deprive the majority of the people of the country from the benefit of higher education. Yet, it is in these same countries that the virtues of a free market economy are preached and practised, it is in the same countries that transportation costs, cost of staple food, hospital bills, medicines, etc. keep rocketing upwards in line with local and international market forces.

Higher Education is a business, and a very expensive business at that. There is no cheap way to train a modern doctor, or economist, or banker, or engineer, or scientist, or architect, or lawyer. There is no cheap way to recruit and retain quality staff so necessary for sustaining higher education, there is no cheap way to equip laboratories and classrooms with modern and reliable equipment. It would therefore seem logical to expect that those who benefit directly from higher education (i.e. the students) should be expected to meet a reasonable proportion of the cost of their training. Thus, a figure of 20 percent of the cost of training as the level at which students fees should be fixed seems a reasonable compromise. It is noted that some students may not be able to pay tuition fees however low they are fixed. Accordingly, it would be necessary to consider various schemes to meet students needs in the cost of their education. Such schemes could include the following:

- a) Competitive Full government scholarship for the most able students;
- b) Partial grants-in-aid for students;
- c) Loan Schemes for students involving a revolving fund, with a grace period given for repayment after graduation and employment.

With such schemes in place, higher education institutions will be better placed to fix more economic tuition fees. Further differential tuition fees should be charged based on several criteria such as:

- a) the level of study, i.e. 1st year, second year, third year, etc..;
- b) the nature of the programme, i.e. whether certification, diploma, degree or post graduate;
- c) the type of programme, i.e. whether Law, Medicine, Science, Engineering, Agriculture, Education, Social Sciences, the Arts, etc..

With regard to criterion (c), it is well known that it is more expensive to train doctors, engineers and scientists than social scientists and the Arts. But it does not necessarily mean that at all times and for all times tuition fees for Scientists and Engineers should be higher than those for economists and linguists. Indeed, the reverse may sometimes be made to hold, even if temporarily, in a situation where there was a deliberate national drive to discourage students from taking up courses in the humanities, and encouraging them to go for Science and Technology. Whatever the case, the real costs for training have to be met somehow.

3.3. Funded Research Projects

One of the major components of the mission of Higher Education is research, and this component is also an expensive business. Higher Education institutions, through well-organized internal research coordinating Centres, should on a regular and continuing basis, encourage their staff to write research proposals and seek funding from both internal and external funding or donor organizations, agencies or industries. Writing of research proposals is an art, and staff may need to be trained in this art so that they could present their proposals in such a way to attract and sustain the attention and interest of a funding agency. Of course, topics for research proposals are not abstract but should in fact be relevant for

sustainable national development while also showing some coincidence of interest with the possible funding bodies. Higher Education Institutions can indeed raise substantial funds in this way to help meet the high cost of research activities.

3.4. Consultancies

The University has a lot of expertise in its service as could be guessed from the large number of Faculties and specialized Institutes it has. The manpower resources therein can serve as a good base from which the University can launch a profitable Consultancy Service. In a developing country like ours, there are always several opportunities for Consultancy service in the offing from several quarters, including government, industry, non-governmental organizations and other private sectors. Higher Education Institutions should maintain a register of their consultants and their capabilities and should seek out and find consultancies in the offing, making competitive bids for them. A well-organized Consultancy Services Bureau in Higher Education Institutions has the potential of bringing in substantial funds into such institutions.

3.5. Commercial Sector

Higher Education Institutions should create a strong commercial wing or link to the productive sector of the economy and even develop the where-withal to commercialize applied research results. The Central Secretariat of the University of Sierra Leone had made some endeavours in this area by establishing both a department of Commercial Enterprises and a Limited Liability company known as UNICOM, and ventures attempted included diamond mining, commercial road transport service, insurance brokerage, petroleum importation, clearing and forwarding business. However, these business ventures all ended in losses and failure due mainly to inefficient management and lack of appropriate expertise, Constituent Colleges of the University - Njala University College and Fourah Bay College have also ventured into some business

activities such as in agriculture, poultry, reprographic services, etc, and some of these have yielded or are yielding reasonable levels of income.

The University and its colleges, Institutions, and Units, in going commercial, should completely isolate the administration and management from the academics, and develop an independent commercial business structure with business managers running the show. The expertise of the academics will come into play when it comes to providing the knowledge for commercializing the results of applied research, but business is business, and a new look on restructuring University business is required. A shining example to learn from is the business wing of the University of Salford in the United Kingdom, which provides a substantial percentage of that University's funding from its profits.

3.6. Indirect Taxes

Another way to raise funds for the operation of higher education Institutions is by indirect taxation. Indirect taxation is used the world over for raising funds to meet general or specific national objectives, and those who pay such taxes soon forget that they are paying it at all. In Sierra Leone, for example, there are already a number of indirect taxation in place for example on fuel, where a fraction of the cost of every gallon of fuel sold goes to the Road Authority responsible for constructing and maintaining the National Road network. Other indirect taxes include sales tax, entertainment tax, airline ticket tax, etc..

The development and maintenance of a good Higher Education system is of extreme national importance, and the imposition of an indirect education tax needs serious consideration. For example, indirect taxes could be levied on such things as lotto tickets, cigarettes, hotel and entertainment charges, luxury goods, foreign travel, etc. this type of taxation is likely to raise substantial funding for higher education.

3.7. Workshop, short-specialized and other useful Courses

Substantial funds can be raised by Higher Education through running of workshop and short-specialized courses for different types of clientele outside the institution. The range of such workshop and short-specialized courses which could be run with profit is limitless, and it only requires the imagination, foresight and will of the institution to identify and organize such courses. These could be done on a continuous basis both during term time as well as during vacation periods. An important consideration is that there should be a need for the courses identified and that the targeted groups will be willing and/or able to pay for them. Courses targeted on business concerns, financial and administrative management, specialist areas in primary and secondary education, adult education; etc., are likely to stimulate enough interest both from individuals and from the private and public sectors. The Institute of Public Administration and Management of the University of Sierra Leone is already deeply involved in running such courses, and raising substantial funding in the process and other arms of the University should follow this example.

Higher education Institutions can raise some funding by instituting "Zero Year" or "Access Year" courses for potential students to their institutions. Many times, students are not fully aware of the requirements to study in a particular discipline, or even when they are aware they have failed to meet the requirements from their secondary education. The university can run courses to enable unqualified students to gain access to University courses, charging at the same time economic fees. the "Zero Year" or "Access Year" is to be looked upon as service the University or other higher education institution is rendering to its potential clientele, and not part of the normal university programmes or curriculum.

3.8. Distance Learning Classes

Not all those qualified to enter University or other higher education institutions will enter such institutions as regular or part-time students. Again, there exists a large potential clientele of students outside higher education institutions, who through lacking in the formal admission requirements, may have acquired enough practical work and worldly experience to enable them to profit from programmes leading to tertiary education qualifications. In these days of modern communication and transmission systems through the radio, the television, the computer, the satellite, etc., it is possible for higher education institutions, with all the expertise at their disposal to develop modular programmes of study for persons who are not regular students in the Higher Institutions, leading, on successful completion, to the award of the institutions' certificates, diplomas or degrees. Such programmes are already in existence in many parts of the world, and in some countries institutions known as Open Universities are wholly engaged in such "distance learning" programmes. In other instances, qualifications of institutions can be obtained through correspondence courses. There is no reason why our institutions of higher learning cannot embark on such distance learning programmes and in the process raise substantial funds for themselves. The suggested modular nature of distance learning programmes will enable students to work at their own pace depending on their individual abilities, their normal employment or business schedules, etc. with the assurance that eventually on successful completion of the modules relevant to their student programme, they will earn the qualifications sought.

3.9. Investment in Profitable Business Concerns

Corporate bodies like Higher Institutions should, just like individuals do, invest for profit in appropriate business concerns. What business ventures are profitable depends on the economic climate and varies

with time, with country as well as with various other parameters, but, it is possible always to identify profitable business concerns in which to invest either as shareholders, or as partners, or in other ways, and such areas of profit should be constantly reviewed and assessed by competent personnel within higher institution with a view to making investment for profit.

4. PARTNERSHIP WITH PRODUCTION AND SERVICE SECTORS IN ENHANCING THE ACCOMPLISHMENT OF THE MISSION OF HIGHER EDUCATION

The idea of partnership, cooperation and interaction between higher educational institutions and the production and service sectors (both public and private) is not novel. Many have in the past made pronouncements and written papers on, for example, the need for University-Industry interactions in Africa and there have indeed been a number of symposia and seminars on the subject. It is easy to observe fruitful University-Industry interactions that have developed over several decades (and still continue to develop) in highly industrialized countries of the world, whereas such interactions and cooperation in Africa remain essentially rudimentary. In the industrialized countries, contract research in Higher Education Institutions supported by Industry in common, and increasingly industry finds it to its advantage to contribute large sums of money towards the purchasing and installation of sophisticated equipment in the laboratories of Higher Education Institutions. Some of the gains to industry from such investment include improvement of product quality and competitive standing of industry both domestically and internationally, on application of the research results from the Institution.

Now it is business of Higher Education to produce high-level scientific, technical, professional and managerial personnel to chart the nation's development effort, it also has to generate knowledge and innovation needed for development through

indigenous scientific and technological research and should also be an agent for the dissemination of scientific and technical knowledge developed indigenously and extraneously. Higher Education Institutions should also provide the necessary services needed for development both in the public and private sectors.

We are all aware that there is need for a rapid rate of development of the African Continent and would seem that Higher Education Institutions can play a pivotal role in this development if they operate in partnership with the production and service sectors of their nations. Some of the ways in which this partnership can operate are identified as follows:

- (i) In the designing of various diploma and degree programmes of study, Higher Education Institutions can interact with public and private sectors, the service and production sectors, in ensuring that course content and level of instruction are of the required quality and standard, the service and production sectors ensuring that content, emphasis, orientation, type of instruction and supporting facilities meet the ever-changing requirements of industry and of the service sector. Courses in various branches of engineering, courses in finance, in administration, in management, commerce and banking, in law, sociology and political science, can all profit from constant interaction, not only at the planning stage but also from regular review of courses in updating and reviewing them, to meet the ever-changing needs of the world of work.
- (ii) Higher Education institutions interacting with the productive and private sector should be able on a regular basis, to mount short courses relevant to these sectors, including in-service training courses, specialist workshop, updating seminars, etc These, as mentioned previously, could serve as an additional source of income for the institutions.

- (ii) Interaction can result in the development of a permanent mechanism for students undergoing various types of courses in the sciences, in engineering and technology, in banking, commerce, finance and management, in agriculture, home economics, pharmacy, etc. to have periodic attachments to the daily working operations in the productive and service sectors during term time and/or during vacations, so that students, while still under training, can be exposed to the worldly realities outside the setting in an educational institution, and so gain practical experience in their areas of study, as well as the attitudinal setting in the workplace.

- (iv) Staff exchange between Higher Education institutions and the productive and service sectors is another area that should be institutionalized to mutual benefit. Higher Education staff teaching in critical areas with industrial or commercial applications, e.g. telecommunication, highpower electrical transmission, banking, finance, maintenance of machine , etc. could gain significantly through periodic attachments to these sectors ; on the other hand, competent staff with proven experience and expertise in these sectors can infuse significant improvements and service sectors to give courses in Higher Education Institutions. This interaction can also be institutionalized by appointing industrialists and other specialists in the world to work as "Associate Fellows or Associate Professors". This practise is not uncommon in highly industrialized countries.

- (v) In the area of Research Projects and Research Activities, there is a lot of scope for interaction with the service sector and production sectors. Firstly post-graduate research students and Research Teaching Assistant working for their Masters and Doctorate degrees could choose

research projects for relevance to developmental issues in industry such projects being designed in consultation and with the active participation of industry ; secondly research projects initiated in Higher Education Institutions, especially those which are development oriented in areas of direct and immediate relevance to National development goals could approach the production and service to assist in funding ; such projects could include researchers on raw materials, natural resources, process development, market research, product development, etc. which on successful completion would be of much benefit to the public and private sectors.

- (iv) Now in Africa, from a worldly point of view, remains essentially non-industrialized African share of the total world manufacturing output is probably under 1.0 percent and its share of output of the developing world just around 10.0 percent. The breakdown of the manufacturing output is as follows: consumers non-durable - about 70 percent, intermediate goods - 15 to 16 percent, capital goods including consumer durables - 14 to 15 percent. Thus with the exception of a few countries in which basic metal (Metallurgy), chemicals and rubber industries are relatively well-advanced, and some North African countries where chemicals and rubbers industries have been developed, light manufacturing is what is predominant in Africa at the present time. This is of course an unsatisfactory situation when it is realized that intermediate and capital goods industries constitute the heart of industrialization and hence economic growth, since they essentially shape productive capacities such as skill and technology development and supply the means of production not only to themselves but to other sectors of the economy as well.

Higher Education can profit significantly where there are a significant number of large modern sector industries ; such industries often make substantial profits from their operations every year, and such industries could be encouraged to commit themselves to the general overall development of higher education, for it is this sector of education that supplies them with their diverse high level manpower needs. Such industrial commitments could include block grants for equipment and buildings, endowment of chairs, provision of funds for setting up new departments and courses/programmes, etc.

From the foregoing it should be noted that for Higher Education to profit significantly from this source. National Policies and strategies should be such as to encourage investment in larger modern sector industries.

The University of Sierra Leone, though an organization known as FORSTAD (Forum for Research in Science, Technology and Arts for Development) has set in motion a mechanism for interaction and cooperation between the university and the community. The main objective of Forstad is to establish permanent interaction and forge links between the University, Industry and the Public and Private Sectors, so as to foster National Development. The specific objectives of Forstad are:

- to forge intimate linkages between the University, Industry and other private and public sectors enterprises, so that the training needs of the students can be identified and incorporated into the curriculum to produce the high quality graduates the nation expects;
- to establish effective communication between the University, Industry and other private and public sectors enterprises, so that they can benefit from the Consultancy capacity of the University ;
- to utilize the technical facilities available in local industries and other private and public sector enterprises that will give the students and staff of the University the practical experiences they need ;

- to enhance the complementary role of Scientists and Technologists in generating new ideas and innovation;
- to provide the enabling environment to facilitate student internship in Industry and other Private and Public sector enterprises.

The structure of Forstad includes an Executive Board and four Technical Advisory Committee, namely Research and Documentation ; Medical Education ; Commerce ; Accounts and the Social Sciences ; Science and Technology Education.

Some significant interactions between the University and the private and public sectors have already taken place, for example inputs from Sierra Leone Telecommunication Company (Sierratel) into the curriculum for the B.Eng degree in Electrical and Electronic Engineering, Student internship and joint research/development projects. The future of FORSTAD seems quite promising.

5. PRIORITISATION OF EXPENDITURE IN HIGHER EDUCATION IN THE CONTEXT OF THE MISSION OF HIGHER EDUCATION

Higher Education needs to play a pivotal role in nation building, but in order to be able to fulfil its mission, it must develop its strength and eliminate its weaknesses in developing its strength, priority areas of focus should include:

- strengthening institutional management capacities ;
- evolving integrated approaches to management training and strategic planning;
- providing adequate basic necessities such as libraries, laboratories and equipment;
- modernizing rehabilitating and expanding infrastructural and other facilities;
- ensuring the recruitment and retention of well-trained, well-qualified, well-disciplined, committed and quality staff-academic, administrative, technical and other supporting staff.

Thus higher education needs to integrate attention to educational quality, output mix, finances, staff development, research and access to facilities and their maintenance in order to be able to fulfil its mission effectively. Note the use of the word *integrate* which is a pointer to the fact that one cannot just take one issue at a time for resolution but that all priority areas relevant to institutional development should be considered contemporaneously. However the weighting given to the various areas of strategic development would depend on the situation on ground.

Different planners, administrators and managers have different ideas on the management structure and administration of Higher Education, but considering what the mission of higher education is, or should be, it would seem wise to give the greater priority to those areas which have the greatest bearing on the development and maintenance of the academic stature of Higher Education Institutions.

In many universities, including the University of Sierra Leone, academic staff often complain that too high a proportion of funding of the university goes to non-academic areas, and in particular to the administrative areas. They buttress this assertion by pointing out that:

- the number of non-academic staff employed is far higher than academic staff, even though the business of a university is essentially academic;
- the salaries and other conditions of service of administrative staff are made comparable to those of academic staff, and that the equivalence of grades practised between academic and non-academic staff is unfair;
- the offices of senior administrative staff are furnished and better equipped than those of academic staff;
- the rigour for moving up the academic ladder from lecturer-professor is absent in moving up the administrative ladder from Administrative Assistant to Senior Deputy Registrar or Secretary and Registrar.

Table 4 shows a breakdown of academic and administrative staff in the University of Sierra Leone

**Table 4 : Academic and Administrative Staff,
University of Sierra-Leone, 1995-96**

Unit employment	Academic Staff	Administrative Staff
Fouray Bay College	171	754
Njala Univ. College	114	455
College of Medicine	54	92
Institute of Public Admin.	14	56
Institute of Library Studies	13	9
Institute of Education	--	35
University Secretariat	--	72
Others	--	3
Total	366	1,476

In Table 4, academic staff include professors, associate professors, senior lecturers, lecturer I & II, temporary teaching assistants and part-time lecturers; administrative staff include senior, senior supporting, junior and daily wage workers. A further breakdown of administrative staff show that 213 of them are senior and senior supporting, while the remaining, 1143 are junior and 120 are daily wage. It is clear that in terms of salary, allowance and other benefits, the academic staff take a lower proportion of funding than the administrative staff.

Table 5 shows some figures for personal emoluments, where available, for 1995-96 in the University of Sierra Leone. From this it is clear that Senior Administrative Staff and Junior Staff together take up over 63 percent of the charges on personal emoluments.

**Table 5 : Recurrent Expenditure - Personal emoluments,
1995-96, University of Sierra Leone
(in million leones)**

Unit of Employment	Senior, Senior Supporting Admin.	Academic	Junior	Total
University Central Secretariat	118.1	--	--	118.1
Fourah Bay College	--	--	--	--
Njala Univ. College	89	171.5	185.4	445.9
College of Medicine	43.1	93	36.1	172.2
Institute of Public Administration	19.4	45.6	--	65
Institute of Library Studies	15.4	--	--	15.4
Institute of Education	27.6	--	--	27.6
Total	312.6	310.1	222.5	844.4

Now the central Secretariat of the University of Sierra Leone consists of the Vice-Chancellor's office, the Secretary and Registrar's office, the University Finance Office, and in addition other units such as the Planning Office, the Public Relations Office, the University Research and Development Services Bureau and all these swell the proportion of funding allocated to the University Budget. In the area of other charges however, certain recurrent expenditure listed under the Central Secretariat, such as passages, staff training programmes, external examiners, congregation expenses, Senate and Courts meetings, subscriptions, etc. do have strong academic bearing.

At the same time we note a dwindling of funding allocated to such important academic sectors as the library (for journals, books and other didactic materials), the academic departments for sundries expenses, for maintenance and repair of existing equipment, for replacement of old and out-dated equipment and purchasing of new additional necessary equipment, the repairs and maintenance of structures such as lecture room, laboratories, etc.

Thus the weakness in our Higher Education Institutions today are many, and these include lack or inadequacy of basic services such as water, electricity, books journals, a reliable or operational telephone system, poor state of repair and maintenance of buildings, lack of equipment, lack of funds for purchasing spare parts, lack of enough academic staff of stature, low salaries and low salary differentials, etc. Surely such matters should be high in the prioritization list of any Higher Education Institution. Pointing out the weakness in our universities and other Higher Educational Institutions should not be regarded as a negative approach in our perception of these institutions, it is merely meant to give focus to those areas which may require immediate financial resources in Higher Education.

Indeed our other Higher Educational Institutions have strengths, and significant strengths at that. The main area of our strength lies in the fact that Higher Education Institutions have (or ought to have) the best brains in the nation and this, together with their research activities serve (or should serve) as a storehouse of information of the country's history, geography, geology, culture, politics, government, religion, biology, agriculture. Again our Higher Education Institutions have (or can develop) all the basic academic programmes pertinent to our manpower needs in National development. The balance between scientific, technological, technical and vocational programmes on the one hand and the social sciences and Arts programme on the other hand, may be tipped on the wrong side (i.e. on the side of the latter), but progressive educational policies can change this over a period, and it is for Higher Educational Institutions to prioritise their expenditure that will satisfy the crying needs of their nation and present the image of well-managed institutions, strengthening their basic infrastructure, pursuing the many new intellectual opportunities opening up in academia and expanding their visa by a continuous process of innovation and restructuring of course offerings and curricula to meet

the ever-changing demands of our developing nations.

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CHAPTER 15

Management of Higher Education with Special Reference to Financial Management in African Universities

Bikas C. SANYAL*
&
Michaela MARTIN**

1. INTRODUCTION

Higher education is at the cross-roads all over the world today. Dramatic changes in geo-political order, globalization of the economy and society, explosion of scientific knowledge and technological development, especially in the area of informatics and biotechnology, artificial intelligence and telematics, are affecting the education system in general, and the higher education system in particular. Moreover, emergence of new socio-economic structures, creative destruction of existing power relations, new ways of producing and doing things and changes in the value system are also affecting the content, method and structure of higher education.

The importance of knowledge for society has led to the diminution of the monopoly of the formal higher education system as the sole producer of knowledge, and the system is now facing increased competition

*Senior Adviser, International Institute for Educational Planning (IIEP), UNESCO, Paris.

**Programme Specialist, International Institute for Educational Planning, UNESCO, Paris.

with other agencies including private industries. Higher education has been diversified in terms of delivery systems on the one hand, and in terms of control on the other. Public resources for higher education are on the decrease all over the world and the product of the system is less and less a public good. Stake holders of higher education, the students, the employers and the government are being increasingly critical of the institutions of higher education. Everybody demands "value for money".(1)

The situation in Africa has not been free from the effects of these changes in the international context. In addition, the economic uncertainty, political and social upheavals have affected higher education in Africa. In several countries in the continent, higher education has been suffering from considerable destruction of infrastructure and facilities from civil wars.

Campuses have been abandoned. The severe economic recessions of the last two decades and the structural adjustment programmes imposed by the lending agencies have devastating consequences for the universities and other institutions.⁽²⁾ "In fact, the first impression one gets of an African university campus in the 1990's is one of an all pervading state of physical, managerial and intellectual dilapidation" according to one of the UNESCO-BREDA studies.⁽³⁾

Diminishing financial resources from inside and outside the country have affected critical inputs: books, equipment, journals. "This is also manifested in most African universities in the squeeze on student accommodation, collapse or decline of municipal services, crowded classrooms, teaching reduced to chalk and talk, frustrated teachers who must hustle for additional income, libraries where acquisitions votes have been nominal for years on end, and impoverished research".(2, *ibid*, p.146)

In spite of the crisis, the universities have shown a remarkable capacity to survive as one author has noted:

"Despite the brains that have been drained out of them over the years, and the compromises they

have been compelled to make with their own standards, [these] universities remain great national storehouses of trained, informed, inquiring and critical intellects, and the indispensable means of replenishing national talent. They have considerable reserves of leadership and commitment on which to draw. Impoverished, frustrated, dilapidated and overcrowded as they may be, they have no substitutes”(4)

Voice of hope is also heard from another corner: “When resources are limited, the task is how best to transform even the shortages into meaningful educational and institutional services. Allocation of scarce resources demands a commitment to realism and a determination to face a hard future and make the best of it. Nevertheless, the university in Africa should continue to be propelled by the quest to manage not just for survival, but also for excellence”.(2, *ibid*, p. 155)

The International Institution for Educational Planning of UNESCO, having foreseen the problems facing the higher education institutions in the developing countries, especially those in Africa, launched a research programme on the problems of higher education management at the institutional level to create a knowledge base on the methods of better utilisation of existing resources.

“The IIEP research began with an extensive literature review and creation of an information base, the writing of a series of papers on methodological issues and the preparation of 14 in-depth case studies on different types of innovations. The results of these activities were used to prepare a set of training materials for intensive training courses. The exchange of individual university experiences in managerial innovations in these training courses provided an additional knowledge base for IIEP”.(5 p. vi)

The present paper draws exclusively from this knowledge base.

Looking for ways and means to improve management of higher education institutions, we shall first give an overview of the management concepts and techniques in higher education followed by institutional management practices defining different government steering policies leading to the different types of decision-making models in the higher education systems. This section will be followed by some basic concepts of financial management, e.g., the context of higher education financial management including the relation between the mission of higher education and financing, organizational structure of an institution and its relation with financial management procedures and mechanisms of finance, the main functions of financial management, and finally, a section giving the examples of changes in management of higher education with special reference to financial management in selected industrialized countries and African countries.

2. MANAGEMENT CONCEPTS AND TECHNIQUES

In many countries, reflection on the practice of higher education management has taken place within a context of an ideological shift with regard to public policy. Policy-makers have increasingly attempted to diminish State intervention and encourage entrepreneurial behaviour and accountability in the public sector. The experience in the USA provides a useful overview of a number of the concepts and techniques available to higher education management.

Particularly during the late 1960's and early 1970's, several systems for university management appeared in the discussion among practitioners and experts on higher education. These systems were derived from concepts developed either for State agencies or, more often, borrowed from those existing in the literature on private sector enterprises. The main focus of all these concepts is their emphasis on the clarification of

institutional goals and objectives as a basis for the systematization of subsequent managerial action.

During the mid-1960s, the Planning Programming and Budgeting System (PPBS) was imposed on all Californian State agencies including higher education institutions. It prescribed a rather complex, linear procedure of establishing an institutional mission and detailed quantifiable targets to be implemented through annual budget specification. However, due to its complexity and high staff and computing costs, PPBS was quickly succeeded by Management by Objectives (MBO).

MBO was based on the assumption that the lack of clearly stated institutional goals constituted a major obstacle to increased institutional effectiveness. These institutional goals were first to be clarified by the academic community and then to be expressed in quantitative objectives to stand as standards of performance. Such standards should apply equally at the overall institutional level as well as to individual staff members.

MBO was followed during the mid-1970s by the Zero-base budgeting approach. This third system required that the goals of an organizational unit should determine the budget and not the budget determine the goals to be achieved.

By the end of the 1970s, the concepts of strategic planning first and management later, borrowed from the literature for business enterprises, came up in the discussion on higher education management. The concept arose within a context of diminishing public resources, the expectation of declining student numbers and, therefore, increased competition among institutions amounting to a threat to survival. The new and fundamental idea of strategic planning was that institutional planners and administrators should be continuously outward looking, assess changes in their relevant environments and plan for these changes with a long-term perspective.

Strategic planning can be described as having the following major components:

- institutions identify external threats and opportunities through environmental scanning of political, economic, social, demographic and cultural change in the environment;
- institutions undertake a continuous assessment of internal strengths and weaknesses with regard to research and teaching programmes, finances, facilities, resources, as well as management processes and institutional values;
- external opportunities and threats are related to institutional strengths and this two-fold evaluation process leads to the determination of the basic mission of the institution, that is, the statement of its basic purpose and its distinctiveness as opposed to other institutions of higher learning in the country and abroad;
- the mission is translated into long-term goals which are broad statements on the fundamental directions for the future; goals are then detailed in more operational and short-term objectives specifying clientele groups, the mix of programmes and services, as well as the comparative advantages of these over competing institutions;
- the 'mission statement' which summarizes these functions and priorities serves to inform potential clients (students and sponsors of research or consultancy) and government funding agencies of the particular niche that the institution fills in the national higher education system.

Strategic planning and management is process oriented:

- it calls for participative approaches in the determination of the organization's mission, goals and objectives, as well as the establishment of a set of measures by which the organization can test the achievement of these goals and objectives;
- major institutional stakeholders are expected to be involved in the internal and external assessment process;
- departments may be requested to develop their own

strategic plans which will be integrated into the overall strategic plan of the institution.

It is often emphasized that it is the process of strategic management which is more important than the written plan being developed.

Since the mid-1980s, the concept of Total Quality Management (TQM) has emerged. Again, it is a concept borrowed and adapted from private sector management. Total quality management for higher education institutions is based on many of the assumptions inherent in the strategic management concept. It takes up the concern for improved quality of higher education output, a concern widely expressed by many governments and their agencies and discussed in the literature on higher education management.

It emphasizes the importance of setting up a mission which describes, in a detailed manner, the organization's specific beneficiaries, their needs and the means to attain the best customer satisfaction. TQM, like strategic management, is process oriented. It is characterized by teamwork, systematic analysis of the problems, and the intensive use of information to achieve the object of continuous improvement of services with regard to the beneficiaries' needs. Also, TQM is participative and stresses the need for staff development. It emphasizes the setting up of teams including those who will actually implement the change or perform the work and those who share ownership in the process being planned or improved.

In recent years much attention has been focused on the development of performance indicators for higher education systems as measures of accountability and effectiveness. Increasingly, governments are insisting on performance indicators to help them decide whether the substantial public funds being allocated to higher education are being efficiently and effectively used. Usually based on quantitative information these indicators assist in checking on the appropriateness of the mission of a system or an institution and the extent of fulfilling the mission. Performance indicators

can be used to show five aspects of the performance of higher education:

- the quantitative dimensions of the main inputs (students, staff, buildings, equipment, books, money, etc.) into the system/institution;
- main outputs in quantitative terms (student places, graduates, research publications, patents, etc.);
- the relationship between inputs and outputs (student-years per graduate, student/staff ratios, cost per graduate, research publication/patents per faculty member, so-called efficiency measures);
- the quality of the system's/institution's activities (examination success rates, employability of graduates, impact of research on national and /or international academic community and/or productive/management process); and
- processes within the system/institution that may be amenable to management decisions (amount of service teaching by one institution/department for another, average length of time faculty takes to return student assignment, degree of student satisfaction with instructions, etc.).

The last three aspects can be combined to be called "process indicators" while the first and second are called "input" and "output" indicators, respectively.

3. INSTITUTIONAL MANAGEMENT PRACTICES

It is clear that institutional management is significantly influenced by the type of governmental steering policy in force. Four major types of governmental steering policies for higher education have been articulated:

- systems operating under self-regulation with a broad framework of accountability with greater use of free market incentives, which are found in the USA, the United Kingdom, the Netherlands, Canada;
- systems in transition from centralized planning to self-regulation which are found in the Nordic countries;

- Systems operating under self-regulation but experiencing difficulties, e.g., the Russian Federation and some Eastern European countries; and
- systems under direct centralized planning and control as seen in some Eastern European and some continental European countries (e.g., Austria, France, Italy, Portugal) and a large number of developing countries, especially in Africa.

These four types of steering policies have led to four types of decision-making models in the institutions of higher education, including decision-making in financial management.

The first and the longest surviving model is called collegial or consensus model where:

- decisions are made by academia on a democratic basis through councils and/or committees based on long deliberations;
- the head of the institution has less power and remains on the job for a short period; and
- the administration is generally weak and provides mainly logistical support.

The implications of this model are slow and soft decisions, individual academic freedom and absence of university-wide objectives.

The second model is called political decision model where:

- decisions result from permanent negotiations among the stake holders (professors, students, administrative staff, government, business, local community, industry and labour unions);
- the negotiations in this model may take more time and are more complex than the first; and
- although university-wide objectives exist, individual academic freedom is less.

The third model is called bureaucratic model. Its characteristics are:

- nation-wide systems for higher education, strict government rule for recruitment, promotion, salary

structures and study programmes;

- administration is strong: professors and heads of institutions are pure executives;
- conservative, uniform and less innovative, suffer from less initiative and from prevalence of rules over results.

The fourth model is called entrepreneurial model. The institutions in this group are:

- entrepreneurial and autonomous;
- supply services of teaching, research and consultancy and are paid by their customers, namely, students, government, enterprises, regional/local community, etc.;
- competitive and are concerned with cost-effectiveness and accountability, multi-source funding, strategic alliances and use of modern management techniques.

In real life, an institution will make a combination of the above four models to suit its own context.(6)

4. THE CONTEXT OF FINANCIAL MANAGEMENT IN THE INSTITUTION OF HIGHER EDUCATION

The financial management of higher education operates within constraints determined by three main factors:

- the mission;
- the organizational structures;
- the sources and mechanisms of finance.

4.1 Mission

As mentioned above, for a large and complex system of higher education, the mission statement has the particular function of informing the potential clients (students and the sponsors of consultancy and research services) and the funding agencies of the government to examine the special role and place of an institution within the national system of higher education.

There are often a reciprocal relationship between mission and funding:

- an institution's mission may influence the public funds it receives;
- however, the funds it obtains, and the way they are allocated, help determine its mission.

It is self-evident that the financial management of an institution ought to operate within its mission. An institution with a mission that emphasizes community service will not allocate resources in the same way that a major research institution will, for example.

However, in practice, and possibly because they may be seen as a constraint on future flexibility, mission statements tend usually to be couched in very general terms and are often interchangeable between institutions.

4.2 Organizational structures

Reduced to the simplest terms, the organizational structure of a full fledged institution of higher education consists of four areas:

- a central administration;
- centrally provided services;
- specialized teaching and research departments;
- non-academic services.

Even this simple model of the organizational structure of an institution allows for seven basic financial management procedures as listed below:

- all resources are received by the centre, and are allocated, managed and administered from the centre (the pure bureaucratic model);
- strategic decisions are taken at the centre but routine decisions and implementation are made by departments (decentralized bureaucracy);
- strategic decisions are taken at the centre based on a consensus within the framework of collective bargaining (political decision model);
- income is top sliced for central administration and services: the remainder is allocated to departments

- to use in accordance with academic priorities (collegial model);
- income is "earned" by departments but administered from the centre (corporate entrepreneurialism);
 - income is earned by departments: it is "taxed" to cover central administrative costs and the remainder is spent by departments according to the requirements of the external "purchasing" agency (managed entrepreneurialism);
 - income is earned by departments and retained by them: they "buy" central services as they are needed (liberal entrepreneurialism).

In practice, of course, resource allocation procedures are usually a mix of more than one model. For example, externally funded research often requires somewhat different financial management procedures from the centrally funded core activities of the institution of higher education

The models are best seen as points on a spectrum:

- at one extreme all resources - staff, space, and consumables - are allocated centrally;
- while at the other extreme, faculties or departments are almost autonomous cost centres meeting their own requirements from income that they themselves have generated.

Some institutions of higher education are very near to the top end of this spectrum and others are at the bottom. Many African countries still have very bureaucratic systems of financial management imposed on them by governments, but everywhere there is some shift towards devolution downwards of financial management responsibilities.

Financial management has become increasingly concerned with what economists have come to call the "principal-agent" problem. In other words, how does the person who controls resources persuade those using them to act in ways that are consistent with the objectives of the "principal". The larger and more complex an organization, the more difficult it is to do

this.

In broad terms the decisions on how resources are to be allocated can be made in the institutions by different management procedures following the four decision-making models described in the previous section.

The role of financial management is different in the four cases:

- in the collegial management systems academic criteria tend to be paramount, and institution administrators are seen to be performing a supporting role - in extreme cases the institutions may be seen to be run for the benefit of its academic staff;
- with the political decision model collective bargaining becomes dominant; the administration plays a consensus building role;
- in bureaucratic management structures the roles are reversed, decision-making is hierarchical, the administration is dominant and academic staff are "managed" by professional managers and administrators;
- in entrepreneurial organizations, individuals and departments best able to generate income are dominant partners and the most important function of financial managers is to ensure that there are adequate incentives to encourage them to do so - customers decide.

4.3 Mechanisms of government finance

During the past 10 years, many countries have experienced a shift from input-based to output-based public funding of institutions.

In input-based funding systems, public funds are provided to meet the costs of the input into the institution, for example, staff salaries, equipment, consumable items, buildings. Institutional managers are required to spend the funds on the inputs for which they are provided, but within these constraints it is the institution which decides what outputs to produce.

Output-based funding pays the institution for the services it provides. In effect the government “buys” services from the organization. It is for the institution to decide how to allocate resources between the various inputs to produce the contracted outputs.

It is important to appreciate that these shifts from input-based to output-based funding are occurring not only in higher education; most public services are experiencing similar developments. The shifts reflect ideological and technological changes that go far beyond higher education.

The implications for financial managers of a shift from input specification to output specification are very large indeed. It represents a shift in the power relationships between the institution and the external funding body, and also within the institutions between the managerial and the academic staff.

Broadly, there are five methods in which government can fund universities.

- The institution submits a periodic (usually annual) budget based on its estimate of the costs of its commitments to staff salaries and other essential inputs. It may bargain with the government over the percentage of this budget which is to be met. The grants are “earmarked” or “hypothecated”, which means that the university must spend the funds on the items specified by the government.
- The institution receives a single block grant based on the grant received in the previous period plus an increment, and is free to spend this money as it wishes within very broad legal limits.
- Funds are based on a formula reflecting past performance, but the university is able to spend the funds as it wishes once they are received. The basis of most formulae is student numbers (weighed by subject, level of study, etc.). But, increasingly, governments are trying to include in the formula a weighting to reflect the academic performance of the students, the quality of training and research undertaken.
- The government buys academic services from the

institution. This is similar to 3 above but funds are based on prospective future performance rather than performance in the past.

- The institution sells its teaching, research and consultancy services to a wide variety of different customers, student, employers and public authorities.

Again, the actual mechanisms are often a combination of two or more of these models. In particular, various combinations of 3, 4, and 5 are often discussed. For example, formulae may determine much of the funding while a proportion is determined by the "sale" of incremental student places to the government. One much discussed possibility is student vouchers, whereby students pay fees but are reimbursed in whole or part by government grants.

However, it is usually possible to identify a dominant model corresponding to one of these ideal types.

Another important point is that most funding models are, in practice, incremental in that institutions receive last year's allocation plus or minus an increment, with differing consequences:

- when the increment is positive, there are few problems;
- when it is negative, there are usually considerable difficulties in allocating the cuts and firm financial management is needed if the effects are not to be randomly distributed (for example, staff reduction based upon individual departures rather than policy decisions) in the long-term detriment of the institution.

It is not possible to relate these external funding mechanisms exactly to the internal resource allocation procedures, but experience in many countries suggests that method 1 above and, to some extent, method 3, require a substantial measure of bureaucratic regulation to ensure that resources are spent as required by the government or central funding agency. Method 2, and some aspects of method 3 usually

permit some degree of collegial management in which academic priorities are very influential. Methods 4 and 5 enquire in varying degrees market-orientated management in which entrepreneurialism and the satisfaction of market demands are rewarded.(7)

5. FUNCTIONS AND PRACTICES OF FINANCIAL MANAGEMENT

The main functions of the financial management include:

- the acquisition or mobilization of resources;
- encouraging income generating functions;
- management of cash reserves;
- the allocation of resources;
- production of financial indicators;
- the utilization of resources;
- evaluation and auditing;
- protection of finances.

5.1 The acquisition or mobilization of resources

The majority of resources are normally received from governmental authorities, or raised by tuition fees plus additions from a variety of other sources, such as the community, parents, charity, etc. While public subsidies are likely to remain the major source of funding for higher education in most countries, they are becoming increasingly insufficient to ensure the financial viability of higher education systems which are rapidly expanding under the pressure of rising social demand. Even when government funding is forthcoming, it is felt to be disadvantageous for the institution to rely on a single financial source.

With less State support and limited opportunities to impose or increase fees, many universities have had to become involved in a wide spectrum of income-generating activities. In this context, it is important that university councils include representatives from business and industry in order to strengthen the linkages important for forming partnerships and in order to develop marketing methods.

The following is a list of possible sources of funding:

- private students;
- variations of tuition fees;
- examination fees;
- residence fees;
- contracts for research, courses and consulting (usually a percentage of revenue earned goes to the Department concerned);
- intellectual property rights (patents and books);
- commercial activities (printing, software);
- investments in productive areas;
- endowments (this is a tradition in the USA and prestige universities in the United Kingdom and Japan);
- foreign aid.

Various routes have been followed to diversify funding sources. Traditionally, income is generated by undertaking research and service contracts on behalf of public and private companies. The returns on services such as consultancies and developmental work are expected to cover all costs and indeed to provide the institution with a net income.

In many countries public institutions are free to make use of these earnings, but in Germany and Denmark, for example, it has been necessary to amend the regulations governing the finances of institutions, or to make other special provisions to enable them to retain their outside earnings. However, it is obvious that countries which are predominantly agrarian or have a small modern industrial sector, have limited scope for service contracts.

Another traditional way of raising financial support from industrial and commercial firms is in the form of grants or scholarships for specific academic or professional programmes. As far as developing countries are concerned, direct donations have been strongest in Asia, where the establishment of foundations offering financial support for students has been common. Private foundations, for instance, have

developed in Indonesia, Thailand and South Korea. However, even under the most favourable scenario, these additional resources are not likely to represent a high proportion of institution's budgets.

Any income-generating activities should be applicable to the modalities of a particular higher education institution, be demand oriented and locally specific. In addition, they should be tested by means of an experimental phase.

5.2 Encouraging income generating functions

The previous function overlaps that of encouraging individuals and units in the university to generate income on behalf of the university as a whole and to reward them for doing so.

There are two ways in which individuals can be rewarded for undertaking activities that produce extra income:

- one is to treat such activities as part of the normal work programme of the university and to enable consultancy work to count as a criterion in applications for promotion or senior posts;
- the other is to allow individuals to retain a part of the income that is generated, either for themselves individually, or for the department or centre in which the individual has a specific interest.

5.3 Management of cash reserves

The extent of this function, management of the institution's cash reserves, depends largely on the overall legal framework within which the institution operates.

In countries where institutions have no financial autonomy and no cash reserves, obviously the function does not exist. However, as more and more countries move in the direction of decentralization and devolved budgets, this function becomes a very important one.

In countries with a well-developed banking system, properly managed cash reserves can generate a significant income for the institution. The management of the institution's income-generating enterprises is

growing in importance. Bookshops, guest-houses, printing services, conference and sports facilities, consultancy services, intellectual property rights and many other services which generate income, costs and cash balances need to be properly managed in the interests of the institution.

5.4 The allocation of resources

The allocation of resources reflects the priorities among all the activities of the university. In the short run, these decisions are highly determined by the resources the institution has already acquired, but over time more options for changing allocations may become available. The current resource constraints and decisions are reflected in the budget plans drawn up for the coming financial year.

A basic budget plan shows the amount of funds to be raised and the shares that are expected to be spent on each of the individual budget heads. Some institutions are now keeping a certain proportion, 5-10 per cent, at the centre for strategic use, such as incentives, innovations and information system development. Also, some institutions are separating teaching and research funds.

The following are other measures that have been adopted:

- developing the concept of an internal resource allocation authority (often a planning and resources committee) serving as an investor, to whom proposers of activities must present commercial and financial, as well as academic, justification;
- structuring the institution's activities and financial accounting records around cost/profit centres so that the entire university community is made aware of the cost of each activity and the sources of income which fund it;
- devolving financial responsibility and accountability closer to the operating units, as far as expertise and the information system permit but not at the expense or abdication of all central control;
- adopting formula funding, often based on enrol-

ments, output of graduates and other performance indicators – where governments use formulae for funding purposes, institutions often follow the same procedure for internal allocation and it may be necessary, when instituting formulae funding, to put aside some resources to assist certain faculties in the transition phase.

5.5 Production of financial indicators

As indicated before, generation of useful performance indicators is becoming of growing importance. Modern management systems depend upon comprehensive information, and a large proportion of the information needed concerns the direct or indirect use of financial resources.

Any new financial management system must take on the routine production of financial effectiveness and efficiency indicators. A more detailed list is given later.

5.6 The utilization of resources

Resource utilization is the phase where the budget plan is put into operation. Broadly interpreted, this task encompasses all the management activities of staffing, running the premises, ordering supplies and so on, which incur expenditures. Other activities, such as running a bookshop, hiring school premises or selling courses for a fee, which bring in additional income, may also be included.

The specific task for financial managers is monitoring the budget regularly throughout the year in order to compare actual income and expenditures under various budget heads with planned expenditures. If there are differences between the real income and expenditure, as is likely, it is the job of management to correct them. This may involve adjusting certain expenditure plans or exerting better financial control over internal budget holders, such as the heads of departments, in order to either curtail or stimulate spending. It is here that an efficient management information system is important in keeping university leaders and administrators up to date on the academic

and financial performance of the various segments of the institution.

Some special training in budgetary competence for all administrators and heads of units can prove extremely useful. Most higher education staff have very little background in financial management, as may be indicated by the following:

- patterns of tardiness in meeting deadlines;
- mistakes in completing forms or in computation;
- failure to prioritize the uses of discretionary monies;
- failure to communicate appropriate budgetary information to those concerned.

It has been found that a series of short workshops or courses held internally can much increase cost consciousness and financial competence generally.

5.7 Evaluation and auditing

Evaluation and auditing are currently the least developed aspects of financial management. With increased autonomy, higher education institutions have to be accountable for their academic and financial performance. While considerable educational evaluation is undertaken, very little of it relates the value of resources used to the resulting educational outcomes.

Though educational outcomes are not easily measured, nevertheless decisions have to be made, so there is certainly merit in quantifying where possible. There is no one absolute and correct way of costing, but if there are several ways to achieve an objective, then if the same costing principles are adopted, relative costs can be measured. Cost analysis should aim at summarizing net resource implications of an educational activity over a period of time, particularly if a change is involved. Cost per student per annum is a common measure utilized, as is cost per student hour.

At present, educational evaluation is usually undertaken by government advisers and inspectors. Quite separately, auditing is normally restricted to checking the probity of transactions undertaken by educational administrators. Ideally, the auditors should assess the

efficiency and effectiveness of resource utilization by relating service outcomes to policy objectives (effectiveness) and resource utilization (efficiency). Since in education the major operating cost is teaching staff, cost effectiveness is usually related to staff hours used and number of students benefiting.

In addition to the above, it is becoming more general for institutions to conduct their own self-evaluation, comparing performance both within the institution and with set strategic targets. It is advantageous to involve staff in setting targets and measuring actual performance.

Accountability exercises may be carried out by staff assessing work in other parts of the institution to their own, so as to engender a sense of corporate responsibility. The objectives of each course have to be clearly defined and the percentage set of students expected to succeed, as well as optimum teaching hour investment in each course, and the education processes to be used (e.g., audio-visual and practical aids increase cost effectiveness). Once this task is completed, the information provides a stable data base for the future which may be reviewed each year.

In the framework of accountability procedures, it is becoming common practice for institutions to publish an annual report which includes comparative data to show present and past results and budgets. Such reports are circulated not only to government departments but also to local authorities, industry and students.

Performance indicators can serve a useful role in the evaluation of the financial management of an institution, although it is clear that they do not tell the whole story.

A list of specific performance indicators related to financial management is given below for different tasks. These are intended only as examples. Nonetheless, they can be reviewed for their potential utility in the user's specific situation.

(i) Indicators relating to the sources of income of the institution

- percentage ratio of government grants to total income;
- percentage ratio of tuition fees to total income;
- percentage ratio of foreign student tuition fees to total income;
- percentage ratio of income from research grants and contracts to total income;
- percentage ratio of income from other services to total income;
- percentage ratio of income from residences and catering to total income;
- percentage ratio of miscellaneous income to total income;
- percentage ratio of surplus (deficit) to total income.

(ii) Indicators relating to the financial strength of the institution

- day's ratio of total general funds to total expenditure;
- percentage ratio of long-term liabilities to total general funds.

(iii) Indicators relating to short-term liquidity and solvency

- ratio of liquid assets to current liabilities;
- ratio of net liquid assets to total expenditure;
- ratio of current assets to current liabilities;
- percentage movement in net liquid assets in a year to net liquid assets at the commencement of a year;
- days of total income represented by debtors.

5.8 Protection of finance

Of all the functions, this is the basic control function; it is the most traditional and by far the most widespread role of university financial managers. All the other activities are, at least to some extent, dependent on this task being satisfactorily performed. As management information systems and auditing procedures improve, financial irregularities will be

detected more easily and the regulations can be made less onerous.(8)

6. CHANGES IN PRACTICES OF MANAGEMENT OF HIGHER EDUCATION WITH SPECIAL REFERENCE TO FINANCIAL MANAGEMENT IN AFRICAN UNIVERSITIES

Although our primary concern is Africa, we shall provide some examples of managerial changes at the institutional level as well as in the area of finance from those industrialized countries which at one time or other colonized a number of African countries and thus left significant marks on the institutions of higher education in Africa. These are: the United Kingdom, France, and the Netherlands. We shall also give the example of Australia because this country has introduced significant changes in the management system to 'do more with less'. We shall cite examples from Africa, both Anglophone and Francophone, where changes in management have resulted in better utilization of resources. Management for us is an art of practice, and there is a lot to learn from good practices. In spite of the crisis faced by the institutions of higher education in Africa, some of them are rising to the challenge. We provide only a few of these cases below in this section. We feel strongly that 'examples are better than precepts'.

6.1 Examples from the industrialized countries

The United Kingdom

In the United Kingdom, the initial impetus to change was given by the 1985 Jarratt Committee to investigate university efficiency, which made the following recommendations:

- more business-like structures;
- a strong central executive authority responsible for strategic planning;
- a Vice-Chancellor acting as a chief executive and having received management training;
- small high-level planning and resource committees;
- the use of performance indicators;

- staff appraisal and development;
- greater devolution of financial management to departments.

Subsequently in 1988, a nationwide project funded by the government to computerize key areas of management information was begun. Institutions were required to collect core statistics which included data on students, staff, capital assets, equipment, financial resources, and management information so as to give proper support to academic departments in devolved budgeting.

Since the early 1980s' government policy has been dominated by a number of factors, including the following:

- the concern to reduce public expenditure per higher education student;
- the need to increase efficiency by encouraging universities to earn income and also to be much more strictly accountable for grants received, a requirement which has become much more important in the 1990s.

The first round of cuts in the early 1980s ranged from 6 to 30 per cent, according to the institution. Some special arrangements mitigated the worst effects, such as early retirement compensation and the protection of priority engineering and technical programmes. Subsequently, strategies focused on separating resources for teaching and research, and making funding conditional on delivery.

The 1988 Education Reform Act gave greater autonomy for resource management of institutions, but set stricter accountability measures. It was expected that resources would likely be used more effectively if those responsible for educational services were given maximum discretion to deploy them in response to local needs.

The Universities Funding Council (UFC) implemented a system of funding whereby institutions put in bids for certain numbers of student places by

broad bands of disciplines. In practice, universities were reluctant to bid too low and thereby force down the unit of funding even more. As a result, in 1991 the UFC abandoned the system and set only provisional targets. As of 1992, it was decided that for the next two years universities would be guaranteed only the number of funded student places allocated for 1991-1992. Any decisions on increases were to be based on the proportion of students at a university above the funded number.

In short, the government had found a way of securing expansion at low marginal cost and higher education institutions were obliged to accede in order to obtain their funds. Public spending per graduate in the United Kingdom is now lower than in most other European countries.

The UFC has published a code of practice for university internal and external audit, and supervises the financial health of institutions.

This restructuring of the mechanisms for funding the universities imposed great strains on the management of institutions with a number of results:

- many of them devolved budgets to the departmental level, either including or excluding staff salaries;
- most institutions also appointed or increased the number of senior officers concerned with fund raising, industrial liaison and overseas students;
- more information was made available within the institution for accountability and decision-making purposes;
- the quantity and quality of comparative information was improved, particularly with the annual publication, *University management statistics and performance indicators*, which obliges institutions to ask questions and seek reasons for variance, thereby making it possible to compare expenditure on central administration, libraries, computers and premises;
- programme budgeting has been generally adopted and the cost per student per annum by discipline is now compared amongst universities.

Most universities have adopted some type of formula funding in allocating resources internally by using weightings (for example, 1 Ph.D = 3 undergraduates for the purpose of staff, library and laboratory allocations), as well as norms and ratios. Some maintain central control over the establishment of staff positions. Others allocate all funds, after taking off the resources necessary for central administration, to faculties to be shared by consensus among the departments.

Thus there is a new emphasis on the department as a performer and the pressure of competition between departments. Management of finance is considered to be one of the critical tasks for the next decade. The role of finance officers in the United Kingdom universities is becoming increasingly important. There has been a rise in the need for professional administrators with the skills necessary for effective management within a rapidly changing higher education system, with new funding structures and new penalties.

In 1995 the government contribution has decreased further. The funding these days is based on a set of parameters: percentage of academic staff, number of students, number of graduates, percentage of students on continuing education, quality of training and research. These measures have reduced expenditure by 15 per cent and are expected to reduce it further. (7 *ibid*).

The Netherlands

After the introduction of the 1985 law on university biennial policy-making and planning, each university had to publish a planning document which served as the basis for discussions with the Ministry of Education. It was proposed that there be a three-year cycle of policy/budget/evaluation reports. Reports can lead to changes in policy, and policy or evaluation can change the budget.

The cycle proceeds as follows:

- each faculty prepares a strategic plan based on an analysis of its strengths and weaknesses in teaching

- and research from which it formulates goals;
- the university plan for the next four years is then drawn up at the central administrative level;
- the plan is subsequently converted to budget decisions which specify the allocation of resources to achieve specific goals: approximately 90-95 per cent is allocated to recurrent expenditure on teaching, education-related research, administration and maintenance;
- evaluation is carried out according to indicators such as the number of graduates by subject and level, supplemented by external visiting committees.

In the Netherlands institutions receive a lump-sum budget to cover staff and maintenance based on the number of first-year students minus drop-outs, which they are free to spend according to their own preferences. However, salaries are limited by legislation and government approval is required for the highest posts. Investment is covered by project funds, and research funds are allocated on Full Time Equivalent (FTE) academic staff and according to past levels. Ex-post evaluation has been introduced to aid quality control. As in the United Kingdom, student numbers increased and the unit cost per student decreased.

This funding system has meant the following:

- institutions must adapt their capacity to changing demands and the job market;
- they must assess their output in terms of quality with the aid of Ministry inspectors;
- programmes of study are to be more flexible, i.e., modular;
- each student will have vouchers for a given number of modules at different times in his or her career;
- each institution will also be given a mission budget to finance innovative projects and centres of excellence.

The reaction of the universities to the new funding system seemed to depend on how insecure they felt. The University of Amsterdam experimented with Zero-based

Budgeting, which requires the justification of every proposed expenditure, beginning theoretically from a base of zero, as defined earlier.

On the other hand, the small and new University of Twente decided it would have to make some very radical changes if it was to survive. It divided its annual government funding into 85 per cent for distribution to the faculties and 15 per cent for incentives and new strategic areas. Faculties were pressured to seek income and rationalize their programmes by making them cost centres, to which all costs were charged (even overheads), and budgets (in line with the national funding system) were output based. A new accounting system was introduced and a separate business organization established. The system has been working for several years now and is acknowledged to be the most advanced in the Netherlands. The University no longer has financial problems, self-generation of income is increasing rapidly and so are student numbers. However, this entrepreneurial style of financial management brings other problems: faculty staff have to be given a great deal of training and explanation. Also, in order to be able to establish output-related costs, there must be an efficient management information system which can give precise results. However, system wide, the results have been as follows:

- between 1975-1990 student numbers increased 40 per cent;
- the unit cost per student decreased although the total budget remained unchanged;
- teacher salaries have declined in real terms, and staff in economics, accountancy and information technology are difficult to recruit;
- there is a trend to interdisciplinarity, and due to recent mergers, profiles of institutions are similar instead of being diverse.(7 *ibid*)

Australia

In Australia, the 1987 Dawkins and 1995 Hoare reforms stipulated the following:

- a unified national system;
- amalgamation to form larger units;
- an increase in the provision of student places and improved flow rates;
- an emphasis on science, technology and business administration;
- efficiency and effectiveness.

Through a process of mergers, 17 universities and 36 colleges of advanced education have been reduced to 36 universities with an average enrolment of approximately 20,000. Amalgamation has necessitated new governing bodies and regulations, as well as the combining of administrative units, computer centres and staff policies. Strategic planning is now routine. Vice-chancellors have acquired chief executive status. Departments have been rationalized, sometimes into four or five major groups headed by pro vice-chancellors specifically in charge of management. Compliance with national priorities has been obtained by tying funding to educational profiles negotiated every three years.

It is interesting to note that the results have been mixed:

- in the short term, mergers cost rather than save money; but in the long term economy is achieved, interdisciplinarity is facilitated and quality improves;
- an amalgamation of different cultures, different rules and infrastructure, sensitive policies and administrative systems has been difficult;
- expansion has taken place in the cheaper courses;
- academics complain of overcrowding and heavy teaching loads;
- there is a homogenization taking place, as in the Netherlands, due to competition to produce the stipulated research profiles and graduates.

In respect of finance, the Federal Education Minister introduced some changes in August, 1996. These changes have seen the introduction of 'efficiency dividends', or percentage cuts to operating grants of the order of 5 per cent over three years and which are likely

to be ongoing; and an increased emphasis by the Federal Government on the private benefits of higher education. The practical impact of this new emphasis is that student contributions have been increased, with HECS (the Higher Education Credit System, HECS, is a student charge either paid up front or paid through the taxation system once a student earns a certain amount, initially at a flat rate of 22 per cent of total cost, increased recently and differentiated, based on course costs and potential future earnings of the graduate) charges raised and required to be repaid earlier; and opportunities and incentives have been widened to allow universities to charge some groups of domestic students full fees, while all foreign students are fee-paying.

It is inevitable that the higher education sector in Australia will experience further deregulation and we will see a progressive weaning from government support and influence. Universities will need to turn for survival to a society which is itself undergoing rapid changes. In some respects, governments at the State and Federal level have lessened control over the sector. This is particularly so as the former advanced education sector, which was subject to close involvement by the States, combined with universities to achieve substantial autonomy. There has been a constant testing of the balance between institutional autonomy and government involvement and regulation. Australia's higher education sector had its roots in the British system, and State and Federal governments were well aware of their limitations in direct university management. Nevertheless, over the years they have exercised considerable influence through setting legislative parameters and using financial carrots and sticks. Examples of the former included the establishment of a national climate for industrial relations, restrictions on student intake characteristics through profile negotiations, and legislation on matters such as age and sex discrimination and occupational health and safety. The exercise of financial influence was particularly noticeable in areas such as quality

assurance, where institutions were in effect rewarded for doing what they ought to have been doing in any case.

The introduction of performance-based funding for research has also had powerful repercussions for the way many institutions manage and reward their internal research efforts. The new Federal Government has signalled that it intends to further the trend towards decreasing intervention in university affairs while expecting increased efficiency, quality and accountability from institutions. In line with previous governments, it will expect universities to achieve these results through adoption of modern management practices.(9)

France

In some of the countries of continental Europe (France, Italy, Belgium, Austria, Portugal, Germany and Greece), Ministries of education generally prescribe budgets, student admissions and fees, buildings and size of staff. They also validate courses and set the formal structure of university management. Initiatives to improve efficiently therefore usually come from governments. There are exceptions, and some relatively autonomous institutions do exist. Notable examples are the French *grandes écoles* which are, in some cases, privately funded and are administered by directors and representatives of the funding authority and of the students.

The extent of centralized control in continental Europe is decreasing as, for instance, recent developments in France show.

In 1989, the Ministry of Education initiated new procedures for joint planning by the Ministry and the higher education institutions. They have to prepare and implement an institutional development project for a four year period. This procedure is intended to strengthen the autonomy of the institutions, the consistency of their development policies and the role of the head of institution. Within the framework of

overall national guidelines, the State and the institutions commit themselves to certain objectives and means laid down in a contract to be signed by the State and the institutions. Higher education institutions receive a part of their financial allocation (around 10%) on the basis of their commitments and their intended activities as stipulated in the contract. However, the majority of the resources are still allocated on the basis of criteria linked to the fulfilment of the basic mission of the institution, which is teaching and research (see below).

More recently, within the framework of a national policy towards decentralization, called State-Region Plan, the regional and local authorities also contribute to the financing of higher education institutions, in particular with regard to new infrastructural projects and the rehabilitation of buildings and equipment.

The granting of increased autonomy is linked to a posteriori evaluation. As a consequence, the National Evaluation Committee "CNE", which is independent of political and administrative structures, was created and placed under the authority of the Head of State. Its explicit role is to provide more transparency in French higher education and to issue qualitative information on higher education institutions, including both universities and *grandes écoles*. It appraises the major activities and the functioning of institutions: research, initial and continuing education, management, governance and institutional policy. The CNE also examines the state of the art in a particular discipline. It decided to adopt a pragmatic approach in gathering written information, which is complemented by expert visits. A methodology indicating the basic information to be furnished by the institutions, the Ministry of Education or national research bodies was worked out by the French Conference of University Presidents. External experts - national and foreign academics, researchers and representatives from industry - form the committee for each institution. They study the documentation provided and visit the institution for discussions. Their report is then submitted for

comment to the head of institution and ultimately published. The CNE has accumulated considerable experience in institutional evaluation and is currently reconsidering its methodology before moving on to a second phase of return visits to assess progress.

The Ministry and universities have been co-operating with respect to the computerization of university administration. In 1992, 85 institutions were grouped under "the Group for Computerized Management" to study and develop computerized systems for staff management, etc. It is intended that the new systems of computerized administration contribute to the establishment of a central data base at the institutional level, but that departments will have free access and wide autonomy as regards data managed at the departmental level. These systems cover a student information system (application for organisation and management of programmes and students), management of posts and personnel (harmonisation of the administration of personnel) and financial management (new budgetary and accounting system). This innovation is intended to reinforce institutional autonomy and management capacity.

In France, the State provides the majority of financial resources. Several systems for the allocation of financial means have been used successively. In the past, core funding was allocated by means of the GARACES norms distinguishing between three types of allocation: teaching, recurrent expenditure and investment. The teaching allocation was calculated on the basis of teaching hours not covered by the statutory assignments of the existing academic staff.

Since 1993, the Analytical system of financial allocation has been in operation. Its objective is to take into account the real recurrent costs and differences among groups of disciplines with regard to student costs and to ease out differences in staffing levels existing among institutions. Student/staff ratios differentiated by level of study and group of discipline have been defined. It is intended to redeploy academic staff from those institutions with excessive staffing

levels to those which lack staff.

With regard to the financial difficulties of the State, and in the light of ever growing student numbers, institutions have been trying to increase their private income. In 1994, 44.43% of total income was other than governmental funding: additional revenue may come from sources such as:

- student fees: 9.95%;
- contract research for private and public enterprises: 6.06%;
- subsidies in kind, or in nature, from local or regional authorities: 4.92%;
- training tax (1,5% of the salaries to be paid by the enterprises): 2.34%;
- continuing education: 7.99%;
- studies: 6.41%;
- interest rates: 1.65%;
- commercialization of products and publications: 3.80%;
- others: 4.72%.

The financial autonomy of institutions allows for the establishment of financial reserves from end of the year surpluses. They are also allowed to carry over parts of the core funding and to spend it on investment and equipment items. Within certain limits, institutions may also invest in the public capital markets and gain income from interest.

Student fees and fees for examinations form part of the private income, however, the amount is determined by the national administration. Institutions have the right to set student fees for university diplomas which are not accredited by the Ministry, and all other services they offer within the framework of their basic mission.

6.2 Examples from Africa

As already detailed, the African region has been particularly hard hit by the world economic crisis, the fall in primary commodity prices and the consequences of structural adjustment drastically reducing state

finance of higher education. It is recognized as having serious financial and management problems in higher education. Social demand is high but institutions produce too many graduates of low quality and relevance and generate too little new knowledge and direct development support.

During the 1980s many governments came to recognize that too high an enrolment, combined with an imbalance in disciplines, was causing problems of low quality, unemployment and unrest, in addition to being increasingly difficult to fund.

Generally, higher education management has been occupied with trying to address this situation. Measures tried include the following:

- the reduction of unit costs by encouraging students to live off campus (Ghana, Uganda, Tanzania);
- the establishment of bookshops and cafeterias as self-financing enterprises (Uganda, Zambia, Ivory Coast);
- the creation of student loan schemes (Botswana, Ghana, Kenya, Lesotho, Malawi, Rwanda, Zambia, Zimbabwe);
- the payment of academic staff by lecture output (Uganda).

Such measures, though useful, evidently are not enough to arrest the decline in quality of teachers, buildings, equipment and maintenance. Some universities in the region depend heavily on donor assistance for their very survival.

In a situation where little or no increase in budgets can be expected, a major drive is now being undertaken to improve management efficiency. National governments, universities, the Association of African Universities (AAU) and aid agencies are all concerned with it. Several of the universities in the region have drawn up strategic plans according to which aid from donor agencies can be targeted. The Eduardo Mondlane University (Mozambique), the Universities of Ghana (Legon), Zambia and Tanzania, among others, have prepared strategic plans with different degrees of

success.

The Windhoek declaration of 1992 (August) adopted by high-level policy makers and vice-chancellors of universities of the region had the following principal elements for improving management of the institutions of higher education:

- maintenance of information systems and analysis;
- devolution of financial responsibilities to cost centres;
- diversification of funding sources;
- 'managerialism' in operation of universities;
- rational allocation of resources;
- clear criteria for cost reduction;
- regional cooperation to reduce the costs of some of the more expensive programmes;
- establishment of a fund-raising unit.

We give below the special cases of changing managerial practices in the institutions of higher education.

Nigeria: the case of Obafemi Awolowo University

Government in Nigeria has established criteria and standards for higher education through various Boards and Commissions and particularly for university education through the National Universities Commission. With reference to quality of degrees, the Commission laid down the minimum standard rule; in effect all universities, whether State owned or federal, offering various types of degrees, must maintain a minimum level of course outline, minimum number and categories of lecturers, minimum space and facilities in the lecture room, the laboratory and other teaching needs, a specific academic staff to student ratio, a specific supporting staff to student ratio, a minimum number of volumes of relevant books in the library for the various courses etc., for their programmes to be accredited. Out of 836 undergraduate programmes examined for their quality between March 1990 and June 1991, only 185 qualified fully for

accreditation. Seventy-nine were denied and 572 received interim accreditation only.

The management structure in some of the universities has undergone tremendous changes over the years in response to financial regulations, enlarged size of the university and the need to involve the rank and file in the decision-making process.

At present government allocates funds to the universities based on total student enrolment as well as the distribution of students by discipline. Each science-based student, for example, attracts double the fund an arts student brings to the university. Also the number of postgraduate students enrolled influences total fund allocation. Government sets guidelines for expenditure within the university to ensure funding prioritization.

The library fund is separate and allocated directly and exclusively for library use and it constitutes 10 per cent of total annual recurrent allocation to the university. In general, a proportion, not less than 60 per cent, must be allocated to direct teaching units as compared to central administration; academic units must generally receive a large proportion of supplies and expense fund as compared with non-academic units. Government has set a limit of percentages of staff categories in both academic and non-academic units. The ratio of Professor plus Readers to other distinct categories of academic staff is clearly provided. This should not exceed 20 per cent of the total figure.

Government monitors compliance of expenditure profile through an annual budget estimate hearing, where all the various relationships in spending over the previous year are cross-checked.

In the Obafemi Awolowo University, fund management is co-ordinated by a University Committee, the Finance Sub-Committee of the Development Committee. Each unit prepares its annual estimates, and defends such estimates before this committee that prepares the university-wide estimate. The collated estimate is then processed by the Directorate of Planning, Budgeting and Monitoring unit, which

ensures that the guidelines of NUC are complied with in the presentation of the estimate. The outcome document is first presented before the Development Committee, then Senate, and finally Council, before presentation to government. Funds received from government and other sources are allocated to individual units of the university through the same process, i.e., by the Finance sub-committee, and finally presented for approval of University Council through the channel mentioned above. Monies received through donation, endowment etc., are presented to Council for decision on their use.

In addition to government allocation, the financial situation in the University is affected by fund-raising efforts and endowment activities at the local level; external and international sourcing of funds for research and project development; investment of university funds, management of investment income, management of cost of services and its effectiveness, budgeting methods, budget and expenditure control.

The University has adopted an aggressive approach to fund raising, using people with dependable contacts and a tremendous amount of goodwill, and has been paid off bountifully. A computer engineering complex abandoned 10 years ago when funds dried out, has been reactivated for completion in 1994. A sum of N40 million, part of the fund generated during a special fund-raising activity in 1992, is being used for the completion. Similarly, investment of university funds is a worthwhile venture. The more diversified the investments, the less the risk and the surer the aggregate profit. The University has currently rehabilitated 13 kilometres of campus roads with asphaltic concrete from funds generated from investment. The facilities in the Sports Complex were rehabilitated from interests on investment income in 1993. These and a few more projects are undertaken independently of government grant and to a large extent constitute autonomy for the campus development programmes of the University.(10)

Kenya: The Kenyatta University

In Kenya the financial situation in the universities worsened when the first cohort of the 8:4:4 system entered the University in 1991 academic year. Student population increased four-fold, but financial resources only by 30 per cent at current prices. As a result, in 1991, direct cost recovery from the beneficiary was introduced in Kenya. A tuition fee was introduced, as well as a student loan scheme. Students who are unable to pay are supported by the Government through loans and bursaries. The details of the operation of the student loan scheme are as follows. The unit cost per student per year is based on a weighted average of the different public universities, fixed at Kshs.120,000. The Government provides to the needy students Kshs.42,000 as a means-tested loan. The students in turn pay Kshs.16,000 to the University for tuition. Of this amount, Kshs.8,000 comes from the loan and the balance is paid directly by the students. Those who cannot pay are assisted with a means-tested bursary of the same amount or less. Food and accommodation and books are paid for at market rates, with funds given to the needy through the loans scheme. Those who are able to pay are encouraged to pay the full cost. The higher education loans board administers the loan disbursement. In 1995/96, the loan amount accounted for Kshs.18,000 in food, Kshs.7,000 in accommodation, Kshs.8,000 tuition and Kshs.9,000 for books.

It was observed that a University could generate between 35 to 40 per cent of its operating revenue. Indeed, the Kenyan Universities have reduced burden on the government during the last few years. Revenue income from non-government sources has increased to 31.6 per cent in the University of Nairobi, 30.8 per cent in Egerton University, 25.7 per cent in Kenyatta, 17.5 per cent in Maseno, 17.1 per cent in Jomo Kenyatta, and 16.4 per cent in Moi. The following measures have been adopted for improving financial management: increased revenue from non-government sources, closing of inefficient programmes, improving student/-

staff ratios, improving utilization of facilities, and reducing expenditure on student welfare.

The Kenyatta University, in particular, had set up the following income-generating offices: the Bureau of Training and Consultancy (which provided 30 per cent of its income to the University overheads); the University Press, the Department of Home Economics and the Fine Arts Department had all set up special units for generating income for the University. The University also introduced 'bee-keeping' and 'pig-keeping' programmes. Students have been encouraged to open 'kiosks' in the hostels to earn money for themselves. Individual professors having external research contracts have to surrender 15 per cent of the contract money to the University. The University has introduced student fees and reduced free board and lodging. All these measures contributed to the reduction of the State burden.

Ghana: The University of Science and Technology, Kumasi

Financial management of universities in Ghana is now following the norms and guidelines prepared by the Ministry of Education and the Ministry of Finance and Economic Planning. The University of Science and Technology in Kumasi now prepares budgets indicating the various programmes and expenditures are grouped under appropriate cost centres using the norms for resource allocation. In 1994, the allocations were as follows: direct teaching: 15 per cent; general education: 15 per cent; library: 10 per cent; central administration: 6 per cent; staff and students' facilities: 5 per cent; municipal services: 15 per cent; miscellaneous: 4 per cent (15 per cent of budget allocation is added for research). To arrive at the estimated teaching costs, student/teacher ratios are used following norms which vary from 18:1 in the Faculty of Social Sciences to 5:1 in Medical Sciences. The student numbers are expressed in full-time equivalent (FTE) and teaching hours are computed on the basis of contact hours. The University has also attempted to use norms for staff

mix for teaching, research and non-academic staff. Goods and services costs are provided on the basis of personal emoluments of teaching departments: 30 per cent for science-based and 20 per cent for arts-based departments. The University has a well-organized 'Business operations' programme which earns income through production units, consultancies, guest houses, university schools, university hospital, swimming pool and other various commercialized units.

As was indicated at the beginning of this section, the University of Ghana, Legon, has prepared a strategic plan to improve upon its management, especially the financial management of the University. However, the plan met difficulties in its implementation because of student strikes in 1994. However, in 1995 the programme was revitalized with the document 'Vision 2000 Plus', and hopefully will be the guideline for improving efficiency in the University's management.

Zambia: the University of Zambia

Concern for improving managerial effectiveness in the University of Zambia started in 1989 with a review of the University's functions prepared by the UK Overseas Development Administration (ODA). By 1992 an exercise in strategic planning began. A Strategic Planning Working Group was set up to examine, among other items, the utilization of existing resources and means of income generation. In 1993 the Plan was proposed. This included such objectives and targets as reduction of student intake, raising fees, reorientation of academic activities, including closure of some unpopular and unnecessary courses, reduction of non-academic staff, and development of alternative sources of income. Staff and student disturbances interrupted the implementation of the Plan in 1994. However, the University has been successful to a certain degree in reducing student intake and staff numbers. It has also been able to generate additional income. The assistance from the Dutch Government in the form of a substantial grant to set up a computerized manage-

ment information system is directed towards improving managerial effectiveness of the University, especially the management of finance.

The above conceptual analysis and the examples of practices allow us to draw up a set of lessons for the higher education systems of Africa. These are given below.

Senegal : The University Cheik Anta Diop

In the light of ever increasing student numbers, and a diminishing overall quality of instruction, a national conference on the improvement of higher education was organized in 1992. This national concerted mechanism has led to a number of measures being implemented at the University Cheik Anta Diop.

First, the objective of a better control of student flows was established. As a consequence, students have to complete the first cycle diploma (two years of study: DEUG) within 4 years, otherwise they have to quit the university. Student numbers have been reduced already from 25,000 to 20,000 in 1996, and the objective is to bring down numbers to 15,000 by the year 2000.

Second, the system of student support has been completely revised. Before 1994, any student registered at the University was eligible for student support. Since then, only certain categories of students benefit from it: those who are eligible for receiving a national scholarship, those who have paid a contribution of 250.000 FCFA per year, and those who are able to prove their need. As a result, beneficiaries of the support programme have been reduced from 25,000 to 9,755 students in 1996.

With regard to the admission of students to the university residence, students are no longer allowed to share their rooms with other students. First year students older than 23 years are no longer accepted in a residence, and no student is allowed to stay longer than 5 or 6 years. With regard to food services, the University has sub-contracted the preparation of meals for the students to a private firm. Scholarships no longer cover the whole year, but only 10 months.

Third, the University is actively pursuing a policy of generating supplementary income. Student fees for nationals are still relatively low, i.e., 4 640 FCFA in 1996, however, foreign students have to pay 150,000 FCFA for entering the faculties and 300,000 for joining the selective higher schools.

Côte d'Ivoire : Overall systems reform

In Côte d'Ivoire, as in other Francophone African countries, the system is characterized by strong social demand, limited national resources and reduced labour market entry. In 1985, a national conference on education (Etats généraux de l'éducation) was held which established the aim of privatizing student canteens and abolished the rule of free transportation. A higher education reform initiated in 1993 established the objectives of quantitative expansion, qualitative improvement, adjustment and a modification of the legal framework.

The improvement of the management of higher education institutions constitutes a major policy objective of the reform. With this in mind, Côte d'Ivoire intends to implement a contractual policy between the State and the higher education institutions to establish a national system of evaluating the performance of institutions, and to conduct an administrative reform of institutions aimed at a strengthening of the role of administrative heads and the admission offices. Also, the post of a Vice-president in charge of strategic planning was created within the administrative structure.

In 1993, the Ministry prepared a national development plan which laid down the overall objective of system expansion. It was decided to divide the National University of Côte d'Ivoire, which had grown too big and thus become an unmanageable entity, into three separate institutions. It was also decided to create several so-called antennae in the regions, which are supposed to become fully-fledged institutions in the near future.

The Ministry is currently preparing the setting up of an integrated information system linking institutional data bases on personnel, study programmes, research programmes, equipment, students and finances with a national data base located at the Ministry. Such an information system would help to identify institutional needs more easily and in a more reliable manner, and to produce a wide range of statistics and indicators needed for the monitoring of the system.

Concurrently, budgetary and operational audits of some *grandes écoles* have been carried out and this has led to the creation of a rationalization plan for this sub-sector of higher education in Côte d'Ivoire.

In order to create an incentive for the generation of private income, the Ministry has made the provision of a special account, so-called account 44, which allows the institution to account for income from contracts with the private sector.

7. LESSONS LEARNED

(i) The importance of management capacity in the university

One of the major lessons is that governments neglect the importance of management capacity in institutions at their peril. The introduction of necessary reforms and economies may be hindered by a lack of expertise to implement directives, by inertia or even by outright resistance.

(ii) The need for management expertise at the government level

Another major lesson is the importance of institutional management expertise at government level. In those countries with centrally controlled systems, institutions must wait for the government to issue its directives or seek approval. Ministries should ensure their capacity to give adequate support in all domains; this means that they should play a facilitating as well as an interventionary role.

(iii) The need to pool experience at the international or regional level

The amount of support in the form of expertise and funding given in certain Western industrialized countries by governmental agencies for successful management reform has been extremely high. In this respect, groups of countries could profit from the setting up of regional forums to pool their expertise and experience in the field of improving higher education management. The Association of African Universities has such an objective and an impetus needs to be given to their work.

(iv) Internal understanding and acceptance

The proposed changes must be seen to be necessary and should be introduced in a comprehensive and phased package. The integrated nature of institution activities and management should be taken into account, so that funding, structures and external pressures are all taken into consideration. This will ensure the best chance of predisposing the institutions to accept change.

(v) Analysis of management structures and procedures

Institutional management practices have an impact upon all the departments of the institution and can ensure that the appropriate actions are taken. Ideally, reforms should be preceded by an analysis of management structures and procedures in order to ensure that they are adequate. It is essential to have a sufficiently powerful executive level to ensure overall institutional planning, co-ordination, evaluation and accountability.

(vi) Better linkages between the institution and its environment

Another means of opening up the institution and reinforcing the executive level has been the use of Governing Boards containing a majority of external members as steering committees. This allows institu-

tions to have a stronger connection with their environment. Governments can create legislation that will stimulate institutions to form linkages with the external environment.

(vii) The need for accountability measures

As far as strategies to improve institutional management are concerned, it would seem that it has been realized by governments and the public in many countries, that not enough emphasis has been put on accountability measures. Evaluation on its own without follow-up exerts insufficient pressure on the institution to change. Government agencies, buffer organizations and good executive-level management can ensure accountability, providing that the necessary data are available and are reliable. As we have seen, data are very important: relevant, reliable and timely data have been the basis of successful development and change in both self-regulatory and centrally planned systems. Considerable work has been done on indicators from which all countries can benefit.

(viii) Financial planning and the budget

Financial plans and budgets serve an essential function in the institution as a management tool for co-ordination, control and evaluation. In the context of the current financial crisis within which most institutions find themselves, such tools are extremely important, both to analyse the current situation and to make appropriate plans for the future.

(ix) The evolution of the financial management process

The financial management process, that is the mobilization, allocation and utilization of financial resources, has evolved over time.

First, there has been a shift from the line item budget which steers through the control of the input of resources, to accountability for the output.

Second, formula funding methods are based upon indicators representing a combination of both input

and output factors which can be used for the teaching, research and public service functions of the institution.

Third, incentive budgeting can be used to provide additional funds to achieve specific goals determined and assigned by the State.

(x) Increasing efficiency

It is true that in many countries the financial resources allocated to higher education are deemed insufficient in absolute terms, given the rapid growth of enrolments. However, it is possible that significant improvements could be achieved if existing resources were managed and utilized in a more efficient manner. Very few institutions operate with modern financial management practices.

In most western industrialized countries, it is now accepted that the introduction of flexible budgeting and disbursement procedures is a prerequisite for institutions seeking to increase the cost-effectiveness of their programmes. The modern view of the organization describes individuals as having different goals and proposes that only by harnessing these can the organization increase commitment.

Even within the most well-run institutions there is normally some excess capacity. This means that there is some room to manoeuvre within budgetary constraints, and this knowledge can provide an incentive for staff to attempt to achieve more under an existing budget allocation. Research has shown that better performance can be obtained if employees have a say in the budget which will subsequently be used to evaluate their performance. This is the first major line of current thinking in financial management for institutions under self-regulation and accountability policies.

(xi) Centralization versus decentralization

The centralization of financial planning ensures that the aims and objectives of the institution as an entity are met. This can be achieved by means of the following:

- a strategic plan to provide a framework and an information system designed on programme budgeting lines to relate results to costs;
- consideration of alternative patterns of expenditure (including some zero basing which gives the possibility for cutbacks or growth);
- preparation of a budget that represents the optimal allocation for achieving objectives, expressed in terms of performance indicators - by emphasizing the relation of resources to desired ends and options, a clear framework is provided for systematic thinking on resource management.

Centralized hierarchical control is increasingly being replaced by an arm's-length relationship. For example, the search for additional sources of financing is of marginal utility for institutions which have no control over the number of new students. Also, if income diversification is to be effectively promoted, institutions which are successful in raising additional resources must be allowed to keep them rather than being compelled to transfer them to the Treasury, as is standard practice in some countries.

How much financial devolution there should be to the departments and other basic operating units will be one of the key management issues of the 1990s.

There are some arguments in favour of more departmental autonomy:

- it will encourage a greater sense of responsibility in the use of resources, since opportunity costs are more easily appreciated in small decision-making units;
- departmental loyalty is more likely to encourage individual members to seek outside funds for the benefit of the unit as a whole;
- comparisons of performance indicators between independently managed departments can help central administrators judge the relative efficiency with which different activities are being carried out.

There are also some arguments against departmental financial autonomy:

- the smaller the cost centre, the less likely it is there will be staff with the necessary expertise to take meaningful resource allocation decisions;
- if too much time in academic departments is spent on management issues, this will conflict with the performance of their central academic tasks;
- decisions on academic staff salaries cannot be fully delegated to small departments because they constitute such a large proportion of total costs that relatively minor variations in individual salaries can have a major effect on the finance of a relatively small cost centre. In many countries, the main decisions on the academic staff establishments are still taken outside otherwise autonomous universities for similar reasons;
- departmental financial autonomy also requires an up-to-date computerized management information system to keep all concerned informed and provide the necessary continuous monitoring and control system.

(xii) Maintenance of momentum

Once implementation has begun, measures should be put in place to ensure that momentum is maintained. Deadlines, feedback and targets should be established. It should be noted that the length of the time period for consolidation should not be allowed to be a resistance manoeuvre.

Similarly, governments in their role as client and supervisor should try to establish a policy of continual search for improvement. Systems that have remained unchanged for a long period of time tend to perceive demands for reform as a disruption, rather than as part of the normal pattern of governance to keep the system up to date. Adaptation and acceptance of change will be an increasingly critical factor in institutional efficiency in the coming years.

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CHAPTER 16

Financing Higher Education in Africa

Robert D.D. BLAIR*

1. INTRODUCTION

The UNESCO "Policy Paper for Change and Development in Higher Education" provides the overall context for a discussion on financing higher education in Africa. The paper indicates that UNESCO, whilst taking a very broad and comprehensive view of higher education, is focusing quite strongly on four major themes: relevance, quality, intra-African and international cooperation and management. The UNESCO Introductory Note for the African Regional Consultation Preparatory to the World Conference on Higher Education held in Dakar 1-4 April, reveals that the financing of higher education is to be considered as part of the sub-theme on managing higher education. This document also links the financing of higher education to a partnership with the productive and service sectors of the economy. Much of the Policy Paper is extremely sound, but it is of some concern that, whilst addressing several of the key financing issues, a reform of the way universities are financed is not seen as meriting at least equal status in the deliberations with the four areas focused on. Effectively relegating financing to a part of the management theme tends to down-play the importance of financial reform. This paper builds upon and further develops the themes contained in a paper presented to the Zimbabwe Ministry of Higher Education's Victoria Falls Confe-

*Managing Director, Speciss College, Harare, Zimbabwe.

rence on the Problems of Financing African Universities (Blair 1994) and attempts to provide an overview of various strategies and policies which will be needed to more effectively finance higher education in Africa in the immediate future. In so doing it argues that financial reform is the essential pre-requisite for the achievement of all the other major issues, including the main areas of focus identified in the UNESCO Policy Paper, and that a "Financial compact" will have to precede the "academic covenant" envisaged by UNESCO.

Whilst much of this paper is relevant to all universities in Africa, it should be noted that it is based primarily on experience and information from Anglophone Africa and particularly Southern and Eastern Africa. It is primarily addressed at policy makers at national level (government ministers, senior public servants), because it is at that level that the major reforms are needed to enable more effective financing to develop, but is also directly aimed at the leadership at institutional level (university Vice Chancellors). Hopefully it will be of interest to the productive and service sectors of the economy as well, as the eventual outcome of any reforms of higher education finance will directly affect these sectors.

At the outset it may be worth attempting to summarize the "primary agendas" of each of the major stakeholders in higher education. Unfortunately, they are probably quite different from the laudable objectives of the UNESCO Policy Paper. Crudely stated they are probably as follows:

- **Government:** To off-load a significant proportion of the cost of funding universities and future growth of the university system onto the private sector without giving up too much control or surrendering any tax revenue.
- **Private sector:** To secure more effective, responsive universities producing more immediately useful graduates, and gain better access to useful research and advisory services.
- **Universities:** To obtain a higher level of funding from

anywhere without having to grapple too seriously with sensitive internal inefficiencies.

- Students: To continue to secure increasing access to higher education, with improving quality and relevance in the programmes they study and the environment in which they work but without having to contribute very much financially to the cost of their education.

All of these revolve around the financing of universities and, as that is the overall theme, an opportunity presents itself to explore how solutions to the problems of financing African universities might lead to the attainment of at least some of the "objectives" set out in the UNESCO Policy Paper, and the "private" agendas of each sector.

This paper attempts to provide information on the overall context in which the financing of higher education should take place, and indicates some of the essential prerequisites that have begun to emerge after several years of research and experimentation elsewhere and in Africa.

2. THE ROLE OF UNIVERSITIES IN AFRICA

There is general agreement that there are three major roles for universities in developing countries:

- Producing high level manpower - the personnel for scientific, technical, managerial and teaching jobs and the future leadership of the country.
- Carrying out research to generate knowledge and innovation that is primarily (not solely) relevant to the country's development.
- Providing advisory services to assist national development.

In some countries, particularly where there is only one national university, universities have played a role in the development and strengthening of a national identity and have served as fora for pluralistic debate.

The development of higher education is generally accepted as being closely correlated with economic

development. The proportion of a country's students expected to proceed to higher education averages 51% in the OECD countries, compared with 21% in middle income countries, and only 6% in low income countries. Whilst to some extent there is a cause and effect process in operation, there is no doubt that higher education does lead to economic development.

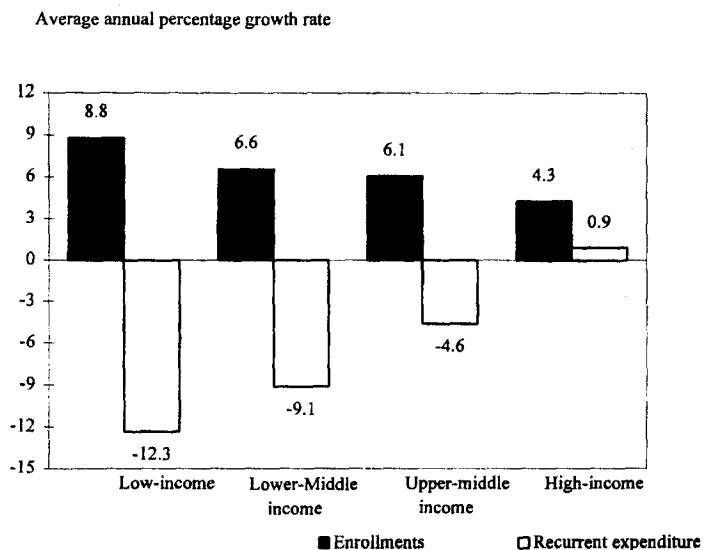
3. THE CURRENT SITUATION

In many countries, including everywhere in Africa, higher education is in a crisis. Higher education is almost universally heavily depended on governments for funding, and costs per student are very high compared to other educational sectors. The 1980s saw many economies operating under severe resource constraints, and grappling with the conundrum (particularly acute in Africa) of how to preserve and improve quality in higher education with diminishing financial resources from traditional sources and rapidly increasing student numbers. The crisis manifests itself in several ways:

- *Resource constraints:* African universities (even in South Africa) are severely underfunded in relation to their student populations and current methods of operation. State expenditure per student is declining, but enrollments are generally increasing rapidly, largely due to the imposition by governments of an agenda for increased student access to higher education without linking it to funding. This trend is shown on a world scale in Figure 1. During the 1980s expenditure on higher education in Africa fell from 0.7% to 0.5% of GNP. Based on forecasts of GDP growth as an optimistic indicator of higher education budget growth, and forecasts of enrollments based on current primary and secondary school enrollments, real public expenditure on higher education in Africa is likely to fall by a further 25.8% by the year 2000 (Ziderman and Albrecht, 1995). Finally, a very high proportion of higher education funding in many African countries is spent not on tuition, but on student welfare,

- housing and food.
- *Inadequate staffing:* In many African universities, academic staffing has been undermined by large outflows of staff to other sectors of the economy (or to other countries or continents), deteriorating salaries in real terms, inadequate housing and transport, and a generally declining standard of living. Most academic staff attempt to carry on two or three jobs at once. However, an Africa-wide study that the author conducted during 1993 indicated that the position at some universities is not as bad as is commonly believed (though there is cause for concern): in several cases staffing numbers increased in absolute terms in the period 1988-1992, and as a ratio of occupied academic posts to budgeted academic posts. Furthermore, staff student ratios “improved” in some institutions and were lower in 1992 than in 1988.

Figure 1: Higher education enrollment and public expenditure on higher education



Source: Higher education: the lessons of experience, p.17.

The survey also indicated that academic staff at the African universities examined had a strong commitment to academia, with priorities being research and publishing, teaching and seeking academic promotion. However, dissatisfaction with remuneration packages and research opportunities was considerable, and a real concern is the loss of and declining proportion of senior staff at the full professorial level.

- *Deteriorating infrastructure:* In most African universities there is considerable evidence of overcrowding, a lack of maintenance, and declining resources available for the acquisition of books, journals and equipment. A survey of 31 African universities revealed that the average number of university library books per student had failed from 49 in 1980 to 7 in 1990.
- *Internal inefficiencies:* Virtually all universities in Africa are characterized by considerable internal inefficiencies manifested in factors such as:
 - very low staff student ratios
 - bloated complements of non-academic staff
 - high student drop-out and repeat rates
 - low graduation rates
 - high non-education expenditure in residences, catering, medical and municipal services
 - involvement in areas unrelated to a university's mission (such as the operation of security services, bookshops, garages, bakeries, etc).

For example, in 1991, across 15 African universities surveyed by the author, the overall ratio of non-academic staff to students was 1 :3.6 and of academic staff to students 1:11.5 (Blair, 1992). Data from one southern African university (University of Zimbabwe) and one east African university (University of Dar es Salaam) are indicative of these inefficiencies, whilst also showing wide variations:

Ratio of	UZ	UDSM
Non-academic staff: students 1:	4.00	1.75
Academic staff: students 1:	10.70	5.23

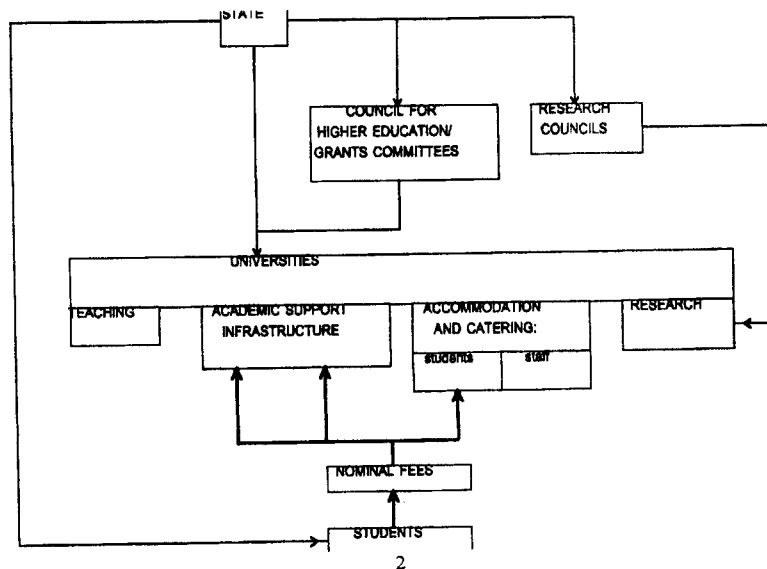
- External inefficiencies:* Most African countries currently experience significant graduate unemployment, largely as a result of economies showing little growth and therefore no increase in the demand for skilled professional labour, and the declining role of the public service as a major employer of university graduates. In addition there are significant distortions in the labour market for university graduates that inflate the private returns from higher education (factors such as high starting salaries largely determined by civil service regulations, and significant subsidising of university studies) and make attending an institution of higher education attractive, particularly when other jobs are not generally available. In most countries there is also a significant imbalance between students undertaking programmes in the humanities and social sciences as opposed to engineering and the hard sciences (largely the result of the school system, but partly because, in the past degrees in the humanities and social sciences led to readier employment by government).
- Declining research output:* Over the past decade research output in most developing countries has declined, as the depressed economic climate meant that national research efforts could no longer be maintained.
- Inequities in student/staff profiles:* There is considerable lack of equity in the profile of both students and academic staff. In most African countries students are predominantly from well-off families, with students from poor sectors of the population being significantly underrepresented. Females are very under-represented, both within the student body and the academic staff.

This situation of crisis has occurred in an environment where, in virtually all countries, the state is overwhelmingly the major, if not the sole, source of university funding. The Financial Diversification Survey (Blair, 1992) indicated that, overall, 84% of the annual recurrent budget of respondent institutions was provided directly by the State. In many countries the government effectively funds the public universities through two means of delivery:

- Direct “block” grant to the institution
- Scholarships, bursaries, grants and loans to students to meet the nominal tuition and residence fees charged by certain institutions, and to provide a “stipend” to cover living costs.

This delivery system is schematically shown in Figure 2.

Figure 2: Traditional method of government funding of universities.



The advantage which charging a fee (even if it is only nominal) has over a straight block grant, is that the universities draw some support from the private sector and families through sponsorship of students'

tuition and residence fees, even in situations where the majority of students are assisted by the state.

Negotiated Funding

In the majority of African countries the “block” grant is negotiated between government and the university. The root of the funding crisis in Africa’s universities are the three major varieties of negotiated state funding:

- incremental budgeting where institutions simply receive a flat percentage increase on the past year’s budget;
- ad hoc negotiations where the political skill and connections of the university representatives is the key factor; and
- fixed agreements where a pre-determined proportion of government revenue is available to universities.

Such funding provides no incentives for efficiency, entrenches conservatism, makes it extremely difficult to rapidly adjust the allocation of resources to meet changing requirements, and positively inhibits universities from adapting to the demand for relevant skills as is shown by the increasing rates of graduate unemployment and under-employment.

From a purely financial point of view the major problems experienced by African universities can be summarized as follows:

- funding has been very unstable and uncertain, often with wild fluctuations from year to year, and frequently bears no relation to enrollment increases; and in many countries there are government restrictions on access to external funding.
- whilst universities are generally genuinely underfunded, they are inefficient in the utilization of what resources they do have (financial, staff and infrastructure). There are insufficient incentives to use scarce resources more efficiently and government restrictions often prevent a more efficient redeployment of resources within the university.
- because state funded universities have relatively

limited autonomy in real terms they are basically unresponsive or slow to respond to changes in the labour market or student demands.

4. STRATEGIES FOR REFORM

As African universities sank deeper and deeper into crisis, a considerable amount of research and experimentation, largely funded by international donors, took place to identify ways of halting the slide and placing universities on a solid base to face the balance of the decade and the 21st Century. Most of the strategies identified are predicated on the view that:

- the bleak economic outlook and other government priorities (such as bloated defense expenditure) are unlikely to allow public financing for higher education to increase significantly in the foreseeable future;
- all governments are committed to expanding access to higher education, but often with little reference to the availability of resources, the need for quality, market demands and, to date at least, at little direct cost to students.

The UNESCO Policy Paper is correct in urging governments to see expenditure on higher education as a long term national investment for economic competitiveness, but it is unrealistic to expect that African governments will in fact improve higher education funding in real terms.

The funding crisis is likely to be exacerbated by the strong evidence that the priority for education expenditure should be at the primary and secondary levels rather than at university level in a developing country, as greater social returns and economic growth accrue from such expenditure. In addition, there is considerable evidence that expenditure at other levels of higher education (e.g. polytechnics and other technical institutions) can pay a bigger dividend nationally than expenditure at university level.

The emerging consensus, both from within Africa and elsewhere in the developing world, seems to be that there are four broad areas of reform that can achieve the desired results without massively increased public funding:

- The development of variety amongst institutions within the higher education sector, including the establishment of private institutions.
- Encouraging public institutions to diversify their sources of funding, including cost recovery or sharing with students.
- Redefining the role of government in higher education, and linking State expenditure to performance measures.
- The establishment of policies that give priority to the creation of quality and greater equity.

This paper briefly reviews the first and fourth of these areas for reform, and concentrates on the second and third. The implementation of these strategies is of course extremely difficult. The entrenched positions of many of the players are strong. Governments see universities as potential sources of dissent and wish to retain firm controls over them. Governments are also aware that the most powerful families/groups tend to benefit disproportionately from the current situation of a highly subsidized university sector. Students are a vocal and important group within most countries, it is difficult to persuade them of the advantages of an alternative method of funding their education, and they appear to wield a disproportionate influence. Universities are conservative in the extreme, with slow decision making processes and an inbuilt resistance to change. They have become used to constantly bemoaning their position and turning to governments and donors with a begging bowl approach.

5. THE DEVELOPMENT OF VARIETY IN HIGHER EDUCATION INSTITUTIONS

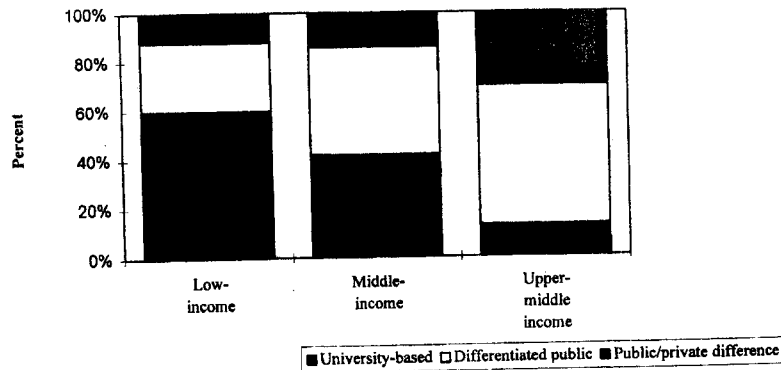
• Types of National Higher Education Systems

National higher education systems have been categorized as follows:

- Undifferentiated public or university-based systems that consist only of State universities.
- Differentiated public systems that consist Only of State institutions, but that have Non-University institutions at tertiary level.
- Differentiated public and private systems that incorporate Both state and private institutions at all levels of tertiary education.

There is strong evidence that the variety of institutions (degree of differentiation) increases with a country's wealth (see Figure 3).

Figure 3: Degree of differentiation of higher education systems by income level



Source: Higher education: the lessons of experience, p.29.

The Development of Non-University Institutions

In East Asia, particularly in the "Four Tigers", student enrollments in non-university institutions (both State and private) have grown faster than

enrollments in universities. The growth in university enrollments was 11% in the period 1975-1980, and 6% in 1980-1988, whereas the growth in non-university institutions in the same periods was 24% and 10% respectively. Non-university institutions in the higher education sector include polytechnics, short course technical institutions, community colleges (American style), distance education colleges and adult education colleges.

The main advantages of such institutions are that:

- they tend to be cheaper to finance, running shorter courses, with lower per student costs and lower dropout rates. (In Ghana, for example, per student cost at non-university institutions such as diploma awarding colleges are only 40% of the average per student cost at the Ghanaian universities.)
- they appear to be able to respond more flexibly to market demands, and to produce graduates who are in greater demand within the economy than university graduates. (In Singapore, the employment prospects for graduates of polytechnics - "applied engineers" who are able to constantly fill jobs in the production processes - are so good that many well-qualified students prefer to attend the vocationally oriented polytechnics rather than the normal academic programmes offered by the university, that produces "engineering scientists" who become involved in more analytical and abstract work.)
- they can help improve the access of minority groups and women to higher education. (All the Indian Industrial Training Institutes enroll women but, in addition, 132 industrial training institutes have been established purely for women to encourage them to obtain vocational training.)

There are, however, a number of risks in the development of such non-university institutions:

- they tend to be seen as second rate, are even more underfunded than universities, and can become "academic parking lots" for excess students
- they can be diverted from their original mission and

be upgraded to fully fledged universities (academic drift).

In many African countries several non-university institutions exist and some of these trends are evident. Polytechnics (in Zimbabwe, for example) have received considerable capital expenditure in recent years, particularly from donors, but are generally seen as being second rate because their staffing, equipment and administration are perceived as being weak. In addition their (effective) status as a department of the Zimbabwean Ministry of Higher Education gives them little autonomy and little room for financial diversification. There is real potential for the private sector in some countries (South Africa and Zimbabwe in particular) to enter the arena of non-university higher education. Already several have done so with professional business training programmes and middle level applied engineering training. With some additional investment many of these existing operations could be upgraded to become clear higher education institutions, although such a development is unlikely whilst universities and polytechnics/-technikons continue to be so highly subsidized by governments. The urgent need for education and training opportunities provided through distance education, which most governments have recognized, could also be taken up by the private sector, perhaps in association with established external distance education providers in several countries. There may be real scope in a number of African countries for the development of institutions which, in a complete campus environment, offer face to face tuition which leads to the award of an external degree (based on the Midrand Campus, Demelin Campus, and Boston City College models in South Africa, which offer UNISA degrees).

Private Universities

On the evidence from elsewhere within both the developed and developing world, private universities

offer a real alternative and form an important component of higher education systems. Figure 4 shows the enrollment in private institutions as a proportion of the total enrollment in higher education in a range of countries. At present private universities are insignificant in Africa - in Kenya, with the most well developed system, only 5% of the total university student population attends private institutions.

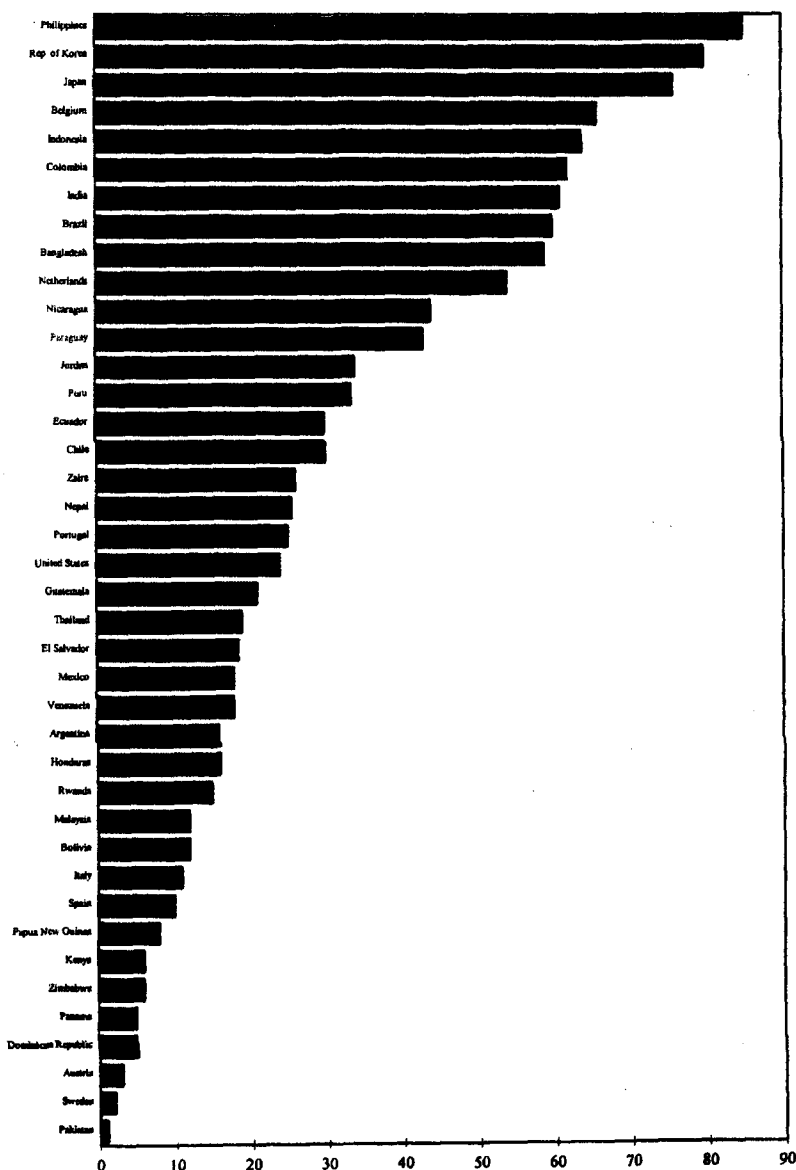
The major advantages of private universities can be summarized as follows:

- They can increase the provision of university education and expand higher education enrollment at no extra public cost, particularly in countries where admission to public universities is extremely competitive.
- They can respond more flexibly to markets and demands for specialist skills, increase the diversity of programmes available, and broaden social participation in them.
- They can complement government institutions so that the overall national higher education system achieves all the objectives required of the university system.

On the negative side, private institutions show far greater variation in quality than the public institutions; their programmes tend to be concentrated in narrow areas (often business and accounting), as the costs of entry into disciplines such as engineering, science and medicine are high. Many private institutions (as is the case in Kenya and Zimbabwe) are closely related to a Church, and perhaps have a narrow focus. While public universities continue to be highly subsidized by the State, private institutions can be seen as expensive but second rate with inferior facilities: a level playing field is essential for private universities to succeed and develop to their full potential in terms of broadening the higher education spectrum. Furthermore, while the public sector remains unreformed, the tendency will be for the more advantaged students (who received their secondary

education in private schools) to move to the effectively free public universities, while the less advantaged, less well qualified students will go to the more expensive private universities.

Figure 4 : Share of enrolment in private higher education (percent)



Source: Higher education: the lessons of experience, p. 35

On the basis of experience elsewhere in the world, there must be a future for private universities in Africa

once a reasonably level playing field, and an encouraging and fair regulatory framework (containing at least the following essentials), exists:

- An avoidance of restrictive regulations and controls, particularly on tuition fees.
- An appropriate accreditation and evaluation mechanism, possibly market based.
- A willingness to allow foreign, established degree programmes to be offered.
- Possibly technical assistance in curriculum development and management.
- The ability for State awarded scholarships and loans to be held at public and private institutions without restriction.
- The absolute minimum of controls so that universities are entirely autonomous to accept their own students, set their fees, determine a programme and recruit staff.
- Speedy consideration of applications for the establishment of new universities, perhaps allowing the market to determine the success or failure of the venture rather than attempting to ensure its success through highly demanding up front requirements.
- Tax exemptions for private institutions so that they are placed on the same footing (income tax free) as State institutions.

If it can be shown that private institutions can expand student enrollment opportunities at a lower per student cost than expanding the State universities, there may be some justification for public subsidies of (or at least financial incentives towards) capital and research programmes at private universities on a competitive basis with public universities.

It is by no means certain that the various pieces of relevant legislation in Africa that govern the establishment of private institutions meet these criteria. Certainly the Zimbabwe National Council for Higher Education Act (with which the author is familiar) does not and would need to be amended to facilitate the establishment of private institutions at

both university and non-university level. Ideally the fundamental criteria would be for existing public universities and polytechnics to be placed on a fair competitive basis with private institutions in respect of fees - public institutions would have to charge full cost economic fees and receive little or no State support that is not available to the private institutions. The State would provide its support through the provision of scholarships, grants and loans tenable at any approved institution (public or private). Indeed, if a conducive environment was created, consortia of business organizations and educational institutions in a number of African countries could be encouraged to develop private universities without the possibly narrow religious focus of the existing, mainly church based institutions.

6. DIVERSIFYING THE FUNDING OF PUBLIC INSTITUTIONS

A second major strategy for the reform of higher education is for public institutions to diversify their sources of funding in order to reduce their total reliance on government. There are several ways in which progress could be achieved:

- Donations and grants
- Income generation
- Cost sharing with students

Donations and Grants

All universities receive a proportion of their funds through donations and grants from business, alumni, and international donors. International donors have played a significant role: in 1991 81% of the budget of the University of Eduardo Mondlane in Maputo was supplied by donors; and over the years most African universities have received very significant funding for staff development programmes. However, reliance on donors is obviously undesirable, and now many donors are quite rightly looking for evidence of self-sustainability for projects that they may provide initial assistance for.

The success of African universities in mobilizing resources from their business communities and alumni is almost non-existent. A study of a number of African universities (Blair, 1992) indicated that only a few South African universities had successfully developed strategies and organizations to secure funding from the private sector and alumni in a significant way. It is certainly worth pursuing such avenues. Progress will require universities to:

- Establish foundations and development offices to raise funding in a professional way
- Develop alumni associations for long term financial benefit to the university
- Provide a tangible service to the givers in order to bolster the "social responsibility" rationale for giving.

The funding received from such sources can be applied in a variety of ways: building construction, endowment of professorial chairs, acquisition of library books and scientific or technical equipment, academic staff travel, staff salary supplementation, scholarships for needy students, an investment endowment for the university.

The development of fund raising as a significant form of income generation will depend on scarce managerial and fund raising skills. Vice Chancellors, following the pattern established by their colleagues in the USA and UK, will have to spend an increasing proportion of their time talking to potential donors and business people in order to secure funding.

The experience of the USA, and increasingly the UK, Australia and South Africa, indicates that alumni (essentially private and public sector representatives with a connection to the university) can become very significant sources of funding. Relative to society as a whole, graduates are well off in African countries, and probably have a strong bond towards their university. The development of a relationship between a university and its alumni is a long term one, but African universities should start establishing the infrastructure and organization to develop this relationship and

ultimately benefit from it. Most institutions in Africa already have organizations that can be described as alumni associations (commonly called graduates associations or convocations), but it is clear that most are inactive, and very few contribute income to the institution. Although the prospects of alumni support becoming a really significant form of income generation for universities are slight and in the future, institutions should start now on the critical period of "friend raising" that is necessary before any significant fund raising can be expected. The success of "old boys" associations at school level in many African countries demonstrates that the culture which allows alumni associations to flourish so successfully in the USA is not absent in Africa

In a reformed higher education environment where the public universities were seen as more independent and less dependent on government for finance, there are prospects for the private sector and alumni to contribute in a reasonable way (though perhaps not significant in overall terms) through donations and the establishment of endowments for the public universities. Unfortunately there is no chance in the foreseeable future that Africa's universities could accrue endowments such as the US\$545 million of the Harvard Business School, or attract donations such as the £20 million from a Saudi Arabian businessman to Oxford University to fund a business school. While success on such a scale cannot be envisaged, Africa's universities are not without hope in attracting donations: the major reason the private sector would contribute to university funding is to try and ensure that the quality of graduates (a firm's future high level employees) is improved. However, in a highly competitive environment many firms may feel that it would be sponsoring the future high level staff of its competitors (the "free-rider" problem) and therefore firms can be encouraged to provide individual, bonded scholarships for students (see Figure 6). Another major incentive to such "income generation" would be a tax regime that encouraged donations. (In Chile, private

companies get a tax exemption on 50% of the value of donations to universities, and in India 15% of contributions are tax deductible.)

Income Generating Activities

Universities can embark on a large range of income generating activities primarily through the use of their facilities and expertise. The list of possibilities includes:

- Continuing professional education/vocational courses
- Contract research
- Consultancy services
- Study abroad programmes
- External hire of university facilities/conference management
- Publishing

Virtually all of these activities are undertaken in some form or other in most African universities. However, they do not take place in an organized, co-ordinated fashion, and their management leaves a lot to be desired. Most institutions cannot even report on the income generated through such activities, let alone whether they make a contribution to university overheads or operate at a profit. Furthermore, there is a major disincentive: in most countries the generation of income through such activity effectively reduces the government's budget allocation. Consequently a primary area for reform in any strategy would be for governments and universities to agree on a fixed government budget allocation for any accounting period, and to allow and encourage universities to generate additional income that they would retain and utilize at their discretion. Indeed, governments could operate a formula whereby a proportion of its funding was tied to the generation of matching funds through income generating activity.

All the potential areas for such activity have benefits in non-financial terms as well, through bringing the university into closer contact with the

business/private sector, through providing services of direct use to the private sector, and through providing additional avenues for staff to secure income. However, as was stated in respect of donations and grants, even in a conducive overall environment, the effective operation of income generating activities is highly dependent on universities having access to effective management skills - presently in extremely short supply in Africa.

Continuing Professional Education/Vocational Courses

There is strong demand from the private sector for courses that update practicing professionals. The expertise available in universities is often ideal for such training, and it is legitimate for universities to meet the demand. Universities have expertise in organizing training programmes and have classrooms and other facilities available (particularly during evenings, weekends and vacation periods), the use of which should be maximized. Such programmes should be offered only on the basis of charging an accurately calculated full-cost fee, plus an overhead (i.e. no State subsidy), and must be effectively and efficiently organized. They are an extremely valuable and effective way for universities to interact and serve their communities whilst also generating income.

Contract Research

Contract research can be defined as research that an outside organization wants carried out and is prepared to pay for. In some African countries universities have a strong comparative advantage in contract research by being relatively well-endowed in terms of equipment and being a unique national reservoir of expertise. However, contract research is relatively underdeveloped in Africa: although half the institutions involved in the author's Financial Diversification Survey (Blair, 1992) claimed to be undertaking such work, only one could give any data on income earned. As national economies are

revitalized there will be the potential for a much wider range of clients for contract research as business expand and new emerging businesses enter the marked place.

An interesting innovation to encourage a demand for university services has been developed in Jordan. Small and medium size firms can receive State subsidies for their purchase of services from higher education institutions - the so called "R&D Voucher" scheme (Eisemon, 1991, cited in Ziderman and Albrecht, 1995).

Consulting

The organization of Consultancy services by universities for the private sector and international organizations is often seen as the quickest and potentially most successful route to the generation of significant funding for universities. This optimism is misplaced: although in most African universities many members of the academic staff are actively engaged in Consultancy, in the main they do so entirely for their own benefit, and often at cost to the university through lost time and free use of university facilities. It will require the provision of an extremely effective and efficient service by universities to both the consumers of such services and to the academic staff providing them for any university organization to be able to effectively break into this market. It is unlikely that in foreseeable future universities will have the necessary management skills to successfully undertake such an operation. Nevertheless the effort is probably worth making (best done through an arms length private company with professional management), as the potential advantages to a university through organized Consultancy are overwhelming:

- The cash flow produced benefits members of staff personally (a positive factor for attracting people to and retaining them in an academic career), as well as departments, faculties and the university as a whole.

- A surplus should result that can be spent as the university determines.
- Improved and closer contact between the university and industry/commerce producing better communication and understanding: the university becomes more relevant and is seen as a positive resource to be tapped.

All the other possibilities mentioned here above warrant attention and implementation. Most universities do rent out their facilities, but not in a businesslike manner. The potential exists to provide a service to the private sector through such activities, whilst generating a positive contribution to overheads. Further thoughts and details on some of the issues involved - particularly from a university perspective - are provided in appendix 1.

The commonly expressed fear about universities pursuing income generation activities in a professional manner is that they may lose sight of their primary objectives of teaching and research, and that the quality of both deteriorates. However, experience in the developed world indicates that the opposite occurs. For example, although Warwick University, which embraced income generation with gusto, was once described as a "business university" that had supplanted the ideals of academic excellence with those of the industrial corporation, in 1994 it was rated by the UK Higher Education Funding Council as Britain's fifth best research university, and given high marks as a teaching institution. At a time when other British universities were struggling to make ends meet, Warwick University was able to spend £10 million on hiring 50 world class research fellows in a range of academic disciplines.

All the income generating activities have potential and should be pursued by African universities interested in diversifying their sources of funding and developing a greater degree of independence from government. However, the bottom line is that they are unlikely, even in the most wildly optimistic scenario, to generate really significant funding for their

institutions. Even in the developed world (with the exception of a few elite private institutions in the USA) it is rare for institutions to generate more than 10% of their revenue through income generation and fund raising activities. In Africa, a target of perhaps 5% is probably the best that can be expected in the medium term future. Unfortunately, they are not a solution to the fundamental financial problems of higher education institutions in Africa.

Cost Sharing with Students

It is submitted that the only long term means of generating significant non-government funding is through cost sharing or cost recovery from students. Cost sharing/cost recovery requires institutions to charge tuition fees and eliminate all subsidies for non-educational costs (such as accommodation and food services). However, many institutions in Africa do not charge even a nominal tuition fee, and although more charge fees for accommodation and catering, very few of these fees even approach the full cost of providing these. For instance, in 1991 at the University of Zimbabwe, tuition fees were 9% of the estimated full cost fee in the humanities, 5% in the sciences, and 3% in medicine; while accommodation and catering fees recovered only 68% of the full cost (in all likelihood understated) of providing such services. In 1994, the proportion of the full cost fee recovered through tuition fees had deteriorated to 5% in the humanities, 3% in the sciences and 2% in medicine, but had improved (on the face of it) to 89% for accommodation and catering (again costs are almost certainly grossly understated).

In many African countries serious consideration is now being given to genuine cost sharing through the levying of tuition and residence fees. Several studies have recommended that African universities should aim to generate income equivalent to 30% of their recurrent expenditure requirements from student fees and other sources. It is therefore of some concern that the UNESCO policy paper appears to stress the possibilities of other forms of financing (relatively limited) over the

introduction of tuition fees, on the grounds that charging fees is too sensitive an issue because of the possible adverse consequences on issues of social justice, mobility and equity.

The rationale for tuition, accommodation and catering fees can be briefly summarized as follows:

- as a result of attending a university, students will benefit through significantly greater lifetime earnings (i.e. high private rates of return from higher education), and therefore should pay at least a reasonable proportion of the cost
- students often come from families with at least a degree of ability to contribute to the cost of higher education.
- they are a means to secure additional funds for the university (in a situation where direct State funding is still in place).
- they must make institutions more responsive to student needs and develop the concept of treating students as clients, with consequent improvements in efficiency, quality and level of service.
- if students have to pay for their education they will value it more, there will be an incentive for them to complete the programmes quickly in order to reduce the costs, and they will be less likely to take action that disrupts their education or reduces the quality of the service they are receiving.
- in a competitive, fee paying environment, universities will be forced to become more efficient and economical (tackling such issues as gross overstaffing) or risk losing students to alternative forms of higher education.
- pressure/incentives will be applied for universities to privatize non-core activities (such as catering, cleaning, security), thus offering further opportunities for dialogue with the private sector.
- universities will have to relate to the market for graduates: they will have to react quickly and adapt to changing markets or lose market share in terms of students; students will be applying pressure as they will see where the market for graduates is and

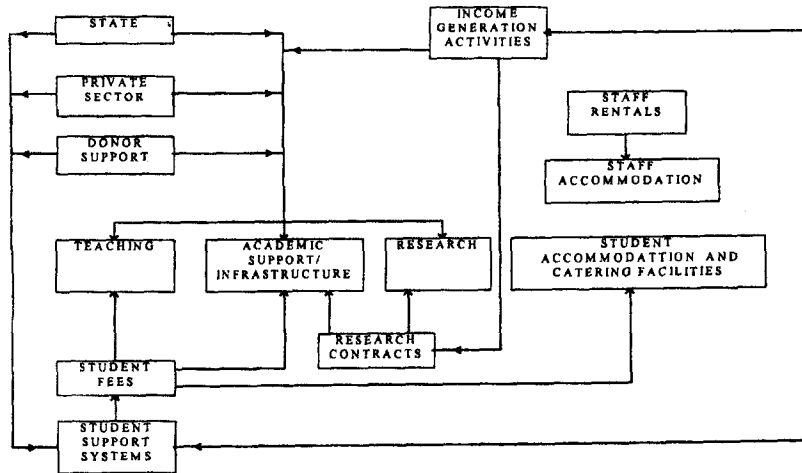
demand appropriate training programmes at the universities.

If realistic student fees were introduced, fee income would become a major source of funding for universities (it already approaches 30% in South Africa) and the possibility of there being multiple sources of funding for universities becomes a reality. Figure 5 is a model of the possible funding of universities through multiple sources.

7. FINANCIAL SUPPORT FOR STUDENTS

For universities, the objective of diversifying their sources of income is primarily to secure a stronger, more stable financial base, a greater degree of independence from government, and (as a by-product) incentives to become more effective and efficient and of greater relevance to their communities. As indicated above, the only way to diversify funding to a significant extent is to charge students a fee for the service they receive. How and who pays that fee is essentially irrelevant to the university. However, it is clearly not practical politics for universities to ignore the problem of how students pay fees, and consequently universities, their governments and the private sector must debate the development of a rational scheme of student support as a vital component of overall financial reform and the greater involvement of the private sector.

Figure 5: Model of the possible funding of universities through multiple sources



There is little information available on the capacity of students to pay full cost fees in situations where tuition fees are absent or set at only nominal levels. In Brazil and the Philippines, where there are large networks of private institutions, there is strong evidence that middle class families can and will pay the full cost of higher education at private universities (including very expensive, high quality institutions). Furthermore, the large number of privately sponsored students from developing countries (particularly from south east Asia) who attend universities in the developed industrial world indicates that there is a willingness and ability to pay full cost fees. In most African countries there is a perception that the majority of potential students or their families would not be able to afford a full cost economic fee, and the major objection towards the charging of such fees is the fear that it will result in reductions in enrollment and further distortions to the profile of students in favour of those from wealthy/middle class families. There are a number of points to be considered:

- an investment in a higher education is probably the single largest investment an individual makes in

his/her life, apart from the acquisition of a home (as the middle class grows this will become increasingly true in Africa).

- even full cost student fees would represent only a relatively small proportion of the total private costs of attending a higher education institution.
- in most higher education systems access is already skewed in favour of students from higher income groups: poorer students have less access to higher education not so much because of high fees but because of disadvantaged access to primary and secondary schooling, social attitudes to higher education (particularly acute for girls) and the overall private costs of attending a university.
- what research has been done on the willingness/ability of students to pay fees has indicated that moderate or graduated price increases do not discourage many students from pursuing a university education.
- extrapolating from the ability of many African students to pay secondary school level fees, it is possible that their perceived inability to make a significant contribution to the cost of university education is exaggerated - if forced to do so, many would find the necessary means, either from their families of communities, or through part time vocational employment.

In any event, those able to pay tuition and residence fees without recourse to support from government should be encouraged to do so, thus relieving the burden on the state and diversifying the sources of funding - benefits in themselves. The Makerere model of regarding government funding as only providing a certain number of student places (currently approximately 2 000) and allowing the balance of the University's capacity (approximately 4 000) to be taken by private fee paying students appears to be a very definite step in the right direction and is also an interesting indicator as to the demand and the ability to pay for higher education in at least one

African country.

Nevertheless, it is clear that a cost sharing/recovery scheme will, on the margin at least, decrease access to higher education for well qualified students from poorer backgrounds, and, therefore, cannot be equitably implemented without an effective student support system whereby government, the private sector and donors, together with families and communities, provide needy students with financial support for their education.

The way forward is to steadily, in a phased manner, introduce full cost recovery fees whilst simultaneously developing targeted student support systems. Figure 6 presents a model of possibilities for multiple sources of support for students. In an environment where universities are seen as more autonomous, effective and responsive, and where genuine cost sharing is in place, there will be a host of opportunities to considerably increase the number of students sponsored by the private sector and other non-government sources.

All systems of student support should be closely targeted so as to provide the support where it is needed by excluding:

- those students and their families who can afford to meet the costs of attending a university
- those students who are less likely to succeed in their studies.

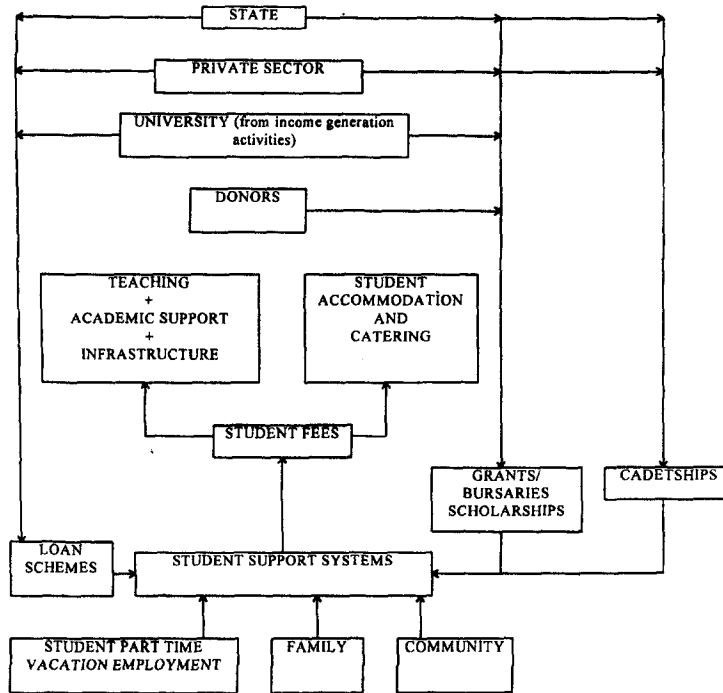
In order to achieve this support mechanisms need to:

- go beyond the traditional, often ineffectively administered means tests to really evaluate need; and
- develop systems for imposing strong penalties on those who cheat.

The assessment of need is not easy in Africa (or anywhere else for that matter), but should take at least the following into account: the occupation, educational background, assets and type of housing of the student's family (including visits and spot checks by assessors).

In order to maximize all the advantages to all parties of having the beneficiary of a university education contribute directly to its cost through fees, it is essential that the bulk of financial support to students is supplied in the form of a loan that has to be repaid. Effectively this is a system of delayed payment for higher education: loans allow students to invest in higher education and overcome any inability to pay up-front, and defer payment until in employment and benefiting from the returns of higher education. However, if loans are not repaid, or support is primarily in the form of grants, then despite all efforts higher education remains essentially free to students.

Figure 6: Model of possible multiple sources of support for students



There is a wealth of literature on student loan and scholarship schemes to provide financial support to poor but academically gifted students. A variety of loan schemes have been developed in both the industrialized and developing world, all of which are dependent on students repaying their loans from earnings after graduation. The experience with fixed repayment loan schemes (mortgage type loans) in developing countries has generally been disappointing, and it appears that loan repayment schemes that are contingent on a graduate's income (income contingent loans) are likely to be more effective, particularly if the loan repayments are recovered through the income tax system (e.g. the HECS scheme in Australia, or the social security system in Ghana). Although the limited experience to date in Africa with full or partial cost recovery and loan

schemes has not been encouraging (e.g. non-repayment as high as 81% in Kenya), the problem has to be tackled as a matter of urgency.

Any state funded loan scheme should be a revolving fund with loan repayments being paid into the fund to assist future students: in the long term it could become self-sustaining. In addition, there is considerable potential for private sector support and advice (e.g. from banks) for the development of loan delivery and collection schemes. Student loan schemes should not be limited to government loans only - the private sector should also construct such schemes.

The establishment of a comprehensive, effective loan system for students in higher education is a complex and somewhat technical issue which cannot be gone into in depth in this paper. The primary issues, which have been succinctly summarized by Ziderman and Albrecht (1995), are:

- the lending mechanism/institution
- the repayment mechanism
- targeting needy and able students
- interest rates and subsidies
- mechanisms for minimizing default.

Their excellent tabulation of the policy options available for each of these primary issues is reproduced as Appendix 2 for the attention of policy makers in this field.

An absolutely crucial factor - apart from the technical aspects of developing a loan system - is to make potential students and society as a whole aware of the rationale for tuition and other fees, and of the advantages to society of loan schemes. This is where governments and politicians should play a responsible, leading role in making the public aware of the true situation of higher education funding in their country, why it is equitable and fair for students and their families (rather than taxpayers) to pay most of the cost, and why the quality of the education and the living environment (accommodation, meals, facilities) should improve as a direct consequence of their fees.

8. A REVISED ROLE FOR GOVERNMENT

At present Government involvement in the financing, management and administration of public universities in all African countries is far too great, and a major disincentive to the reforms that are required. However, irrespective of what reforms and policies along the lines discussed are adopted, government will still have a major role to play in the higher education sector through:

- developing a coherent and logical policy framework
- developing incentives and market oriented systems to implement policy
- ensuring that there is increased management autonomy for public universities
- remaining for the foreseeable future overwhelmingly the largest provider of financial support to students and thereby, through manipulating its support mechanisms and amounts, influencing where growth/cutbacks occur.
- supporting capital development (though this could be on a competitive basis open to private institutions as well)
- funding basic research and technology development and transfer (in many fields these benefits cannot be derived by individuals or private investment alone, and therefore the State is inevitably the major source of funding)
- ensuring that disadvantaged groups are able to secure support to attend higher education institutions, rather than dissipating scarce resources on subsidising the rich.

Development of a Policy Framework: Policies and Structures

In most African countries a national system of higher education, as distinct from one single university, has emerged. Governments must develop policies that provide linkages between universities and the primary and secondary education sectors, avoid fragmentation, provide a well-defined legal/regulatory

framework, and provide linkages to national environments such as civil service procedures and pay scales, labour market policies and policies concerning national science and technology investment. In addition, government requires some structure to develop policy and have an oversight over higher education as a whole. A national council of higher education or similar "buffer" body may be an appropriate vehicle, but to be effective, such a body must have at least the following characteristics:

- It must, in practice, be independent of government - either a quasi-government body or, preferably, fully autonomous
- It must draw representation from all the components of the higher education sector and from government and the private sector
- Its responsibilities must include assessing priorities for both enrollment growth and future investment in the higher education's sector.

Achieving successful financial reforms of the type discussed in this paper requires an improvement in the broad policy environment within which higher education institutions operate. Governments have to enable universities to operate autonomously, with the ability to generate and retain income, co-operate with the private sector, be competitive, efficient, and able to deploy their resources as they deem most effective (including, crucially, the freedom to determine their own remuneration and employment policies and structures). A key feature of such an environment (often overlooked) is a revitalized role for the University Council, with reduced government influence (currently usually overwhelming), and significantly increased private sector influence. Private sector representatives should be appointed directly by the nominating authority, and Government, the University and the private sector should find ways to ensure that private sector representatives on the Council deliver more effective and influential service than is presently the case. In African countries the University Council must

become in effect the University's "Board of Directors", holding management accountable to it and no one else.

Development of Better Funding Formulae

There is a need to look at various aspects of what will inevitably be the continuing and major government role in the funding of universities. In the type of conducive environment envisaged, it becomes imperative that governments use incentives to achieve the implementation of policies. These will primarily relate to ensuring effective and efficient resource allocation and utilization, consequently a number of governments are examining mechanisms for linking the provision of funding to various performance criteria, thereby creating strong incentives for universities to use resources efficiently. There are two basic funding mechanisms available: input based and output based.

Input Based Funding

Input based schemes allocate funding to institutions on the basis of estimates of the cost of educational input. Some countries use a very restrictive form of line item budgeting whereby each category of expenditure is approved individually on the basis of various expenditure criteria which may relate to staff: student ratios, use of space, etc. A system which provides for greater university autonomy allocates block funding to cost centres on the basis of responsibility for specific programmes (*programme budgeting*). However, the most flexible of the input based systems provides for university budgets to be calculated on the basis of a formula that combines enrollment figures and unit costs and uses various weighting systems to provide incentives for the internal distribution of resources. The weighting reflects the different costs of different programmes at different institutions, and by manipulating such weights governments can exercise an indirect influence over the distribution of student intake (South Africa uses such a system). The major disadvantages of input based funding are that they can become complex, and if government does not maintain

an active role in determining the level and distribution of student intake, its budgetary commitment becomes theoretically open ended, and it must either increase its higher education budget or reduce its payment per student when resources are scarce. Although this can be resolved by fixing a price per student that the government will pay for a fixed number of students, input based funding mechanisms tend to fail in terms of providing strong incentives for efficiency and improvement in quality of programmes and cost effectiveness.

Output Based Funding

This system allocates funding to universities in accordance with their productivity. Essentially government provides finance for institutions on the basis of their effectiveness in producing graduates. Output/-productivity based schemes do allow governments to provide incentives for times graduation of students and for institutions to weed out poorly performing students earlier rather than later. Whilst such schemes can help to reduce student failure and repetition (student wastage) they tend to emphasize mere production of graduates rather than the quality of the training provided.

The overall objective of any type of funding formula is that it must be transparent and encourage flexibility in the management/culture changes that universities need to make in order to remain effective, credible institutions, whilst also taking account of the variations in costing that will occur inevitably amongst different institutions.

Student Based Funding

Any system has its deficiencies, and it is submitted that the most effective means of increasing the autonomy of universities and improving their accountability and efficiency is to let market forces operate to the maximum extent possible, by requiring universities to charge full cost fees and allowing students to select their courses of study on the basis of effective student

support systems.

In such an environment, the funding of student support systems, rather than higher education institutions directly, becomes the defining role of government. Government channels its funding to universities through students (possibly via vouchers) thus enabling students to fund the cost of their education at any recognized institution. Such a system would retain all the positive features referred to earlier:

- students would compete for support as funding would be closely targeted at needy and able students, with poorer students receiving more generous vouchers than wealthier students.
- it would allow governments to manipulate their support by several criteria. For example, needy and highly qualified students in key areas for national development (such as engineering, medicine and veterinary science, which tend to be high cost), could be supported through vouchers which provide a greater proportion of the funding as an outright grant, or scholarship or bonded cadetship, and a vastly reduced loan element. Conversely, students with lesser financial need or intending to study in less critical areas could receive vouchers of lesser value and with a much greater loan element. The critical point is that governments do not lose control of how their higher education expenditures are allocated, in fact they have much more effective controls;
- universities are required to charge full cost recovery fees and compete for their students, and therefore have to become more efficient, responsive and cost effective, or risk losing students to competing institutions;
- university management has to become more professional with better and differently trained personnel: universities will be operating much as a business, and will require all the skills which successful businesses use;
- it encourages a multitude of players to enter the field of student support and a wide variety of student

support mechanisms to be developed (as indicated in Figure 6 above), with the ultimate benefit that government's role in the financing of higher education is steadily reduced.

9. MANAGEMENT ISSUES

Implicit in the above scenario is a requirement for higher education to become more businesslike and to operate much more like private sector businesses. At present most universities do not have the required skills, but skilled staff can be hired and trained. High level management and technical skills will be required throughout the organization. Vice chancellors, in particular, will have to become much more management oriented, extricating themselves from much of the minute of university administration beneath which they currently tend to be submerged, in order to provide vision, leadership and more effective interaction with policy makers and potential sources of funding. A further factor which is often overlooked in the debate over higher education financial reform is the need for universities to implement financial systems which are understood in the university environment:

- costing/pricing policies and skills which enable university services to be accurately costed
- systems which enable the university to consider the possibilities of certain courses subsidising others and the role of "niche" courses
- a system to allow the payment of fees to be spread over the duration of a student's study period (payment by installments)
- access control to ensure only students who have paid their fees are in the classroom
- debt collection from defaulting students.

The effective implementation of these systems is depended upon universities having modern computerized, fully integrated management information systems.

10. QUALITY

The overall objective of the current debate throughout Africa on ways of improving the funding of higher education is to achieve a situation whereby the quality of higher education institutions in the broadest sense is improved, their responsiveness to the development needs of their countries heightened, and greater equity in terms of admission and staffing policies achieved. All the reforms will only succeed if they improve the quality of training, research and advisory services to the benefit of national economies. To improve quality, universities need:

- To be able to recruit high quality, well prepared students emerging from the secondary school education system.
- An ability to recruit and retain highly qualified staff who are promoted on merit and reward by effective university determined salaries and remuneration systems.
- Good facilities in terms of buildings, library, equipment, computers and the general campus environment.
- To improve their responsiveness: this can be achieved in part through private sector service on university councils, in curriculum design, the use of private sector expertise as part time lecturers, joint research projects, joint involvement in continuing professional education programmes, and students' industrial attachments/internships etc, but will really come about only through financial involvement of consumers of the university's product - the economy's productive sector.

Finally, in order to measure whether quality is improving, universities need effective evaluation mechanisms (performance indicators, benchmarking), both in terms of internal performance and the quality of output (graduates, research and consultancy services). Some form of independent external evaluation is also required, either through an external

examination system (limited scope) or an overall accreditation/academic audit system that includes a regular evaluation of departments and programmes.

11. CONCLUSION

The basic thesis of this paper is that Africa's universities will only be revitalized by reducing their dependence on state funding, not increasing it. The higher education sector has to be freed up completely, with a level playing field created for all institutions (including existing state universities and polytechnics) whereby all such institutions are required to charge full cost, non-subsidized fees, and government's role is primarily to provide financial support to needy and able students only, so that they can attend any higher education institution, including those developed by the private sector, and to recover most of this support from students once they are in employment. In such an environment, the private sector will almost certainly enter the field and develop institutions that will compete with the existing state institutions. Fair competition will result in all institutions being more efficient, effective and responsive, and opportunities for enrollment in higher education will be expanded at an ultimately reduced cost to the public sector.

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APPENDIX ONE

DETAILED DISCUSSION OF SOME INCOME GENERATION SCHEMES

(Extract from a paper presented by the author to the Kenya Commission for Higher Education Workshop on Cost Reduction and Recovery and Alternative Ways of Financing Universities. Nairobi, December 1992)

Consultancy Units

There are a range of factors to be considered in establishing and operating a consultancy unit:

- Much of the impetus for “income generation”, consultancy and liaison with industry in the UK and Australia was provided by the governments, which devised a range of projects and programmes to encourage universities to undertake such activity. Public expenditure played a major role in the successful flowering of entrepreneurial income generation projects. African governments may not be willing or able to play a similar role. However, if a financial compact emerged between governments and universities with multiple sources of funding developing, the prospects would improve.
- It is clear that for institutionally organized consulting activity to be successful, a national economy must be viable, developing, and capable of producing multiple sources of clients for consulting expertise. Equally important is that there are talented, supportive and motivated individuals in society who would make use of university expertise and facilities. In the UK, Warwick and Salford are excellent examples of how the industrial/business community of their regions came together positively to support the new directions and activities of the universities.
- In the West, the primary effort in terms of major income generation activities is in the area of high technology, which will not be as applicable in Africa, but opportunities for African industry and commerce

to make use of the university expertise and facilities remain, and appropriate areas of activity abound.

- In many Western universities it has been the presence of a group of academics of international standing which has proved the catalyst to a whole range of activities, as such staff attract young researchers and are highly marketable as consultants. In many African universities a number of the staff are young and inexperienced and may not be all that marketable as consultants, and it is vital that senior academics, who are the “natural” consultants, bring young staff into projects to give them exposure/experience.
- Academics cannot operate as consultants in a vacuum. It is important to have “movers” and not “stoppers” in the supporting technical, secretarial and administrative staff areas. It is in this area that several universities will have a major problem in successfully launching more organized, co-ordinated income generation activity.
- Academic staff have to be persuaded to work through the unit: under the present system many academics are busy consulting in a totally uncontrolled environment and may see no reason to submit to the controls of the unit, or to share their fee. Furthermore their fees are less than the real cost (as most use university facilities at no cost), and the proper costing which a unit would require would almost certainly push the overall cost up. The perception which academics have of the company is vital. If they view it as a “rip-off” they will continue to work by avenues other than the company (despite rules the university may have). If, on the other hand, they see the company as providing an excellent service, they will direct their work to the company and be willing to work on the projects it secures.
- The unit will have to persuade potential clients to use it, as donors and other sponsors of consultancy are happy to use their existing contacts with individual academics, and to pay the lower fees which are charged through the institution effectively

- subsidising many of the overheads incurred.
- At a minimum the unit must provide the following services: personal indemnity insurance, secretarial, communications, legal, accounting, contract negotiation and marketing; an efficient commercial interface between academics and the industrial/business client; a contract which ensures due performance by the academic consultant; effective project management.
 - The unit has to be properly funded and operated as a business. Full costs must be recovered and "profit" distributed fairly to the university, the company/unit and the individual. Overheads are crucial.
 - There must be a mix of university and business people involved in the unit's management. It must not be too closely controlled by the university.
 - There are advantages in concentrating on large numbers of small consultancies/testing contracts, at least in the early formative years, in order to bring as large as possible a number of academics into contact with the company or unit and consultancy generally and to generate cash flow. It is always advisable for the activity to stay close to base in the university. The licensing/royalty route to commercialization appears likely to be more successful, at least initially, although in the long term the more risky joint venture/equity route may pay bigger returns.
 - The university's environment must provide sufficient time for academics to do consultancy. The one day a week rule appears to be generally accepted, although flexibly applied.
 - To succeed, the university will have to secure an entrepreneur with drive and initiative and marketing skills to manage the consulting unit.

Study Abroad Programmes

Full fee paying courses (whereby students pay the full economic cost of the course) are a great area of activity in many Western universities. Australian universities have embarked on a massive marketing

drive in south-east Asia in an attempt to recruit foreign students on a full fee paying basis. Africa does not offer similar opportunities as, on the whole, it is not seen by foreign students as an attractive location for study; most universities would not have the resources to offer meaningful programmes, accommodation, facilities etc for foreign students; and the competition from the USA, Canada, the UK and Australia would be intense for students (largely in south-east Asia) capable of affording such training.

However, African universities do have opportunities to tap the "Year Abroad" type market, primarily from the USA. Africa would be an attractive venue for such programmes, and the experience of Zimbabwe indicates that there is considerable demand. These programmes should be entirely self-funding, make a profit for the university and generate hard currency for the benefit of both the country and the university. Also important is the opportunity they provide for local and foreign students to interact and share ideas to their mutual benefit.

External Hire of Facilities/Conference Management

The Financial Diversification Survey showed that most universities make their teaching, accommodation and catering facilities available for hire by the general public, especially for the holding of conferences and exhibitions, but only one claimed to make a profit, and most did not even know how much they earned. Universities are urged to enter this market by making their facilities available, and to manage such use properly so as to generate a genuine profit for the institution.

The next step is to develop a full conference management organization, ideally within the university consulting company, offering a service whereby the entire conference is organized and all details taken care of. These services must be professional, can be highly profitable and are an excellent vehicle for the university to interface with the community, ultimately bringing in

more consulting business. Elsewhere many universities have invested in purpose-built conference facilities offering a full range of conference services together with residential and catering facilities in an upmarket venue. Similar developments are probably beyond the reach of African universities at present, but offer the potential for considerable income generation. However, Copperbelt University in Zambia has been exploring a joint venture prospect for the development of a conference centre with a major investor associated with the copper mines, and at Obafemi Awolowo University in Nigeria, a purpose built conference centre was under construction.

Publishing

Publishing activities represent, at least nationally another area in which universities in Africa have certain comparative advantages: expert authors, access to more sophisticated printing equipment than is often available in the country, and knowledge of the market (students and school children). The shortage of textbooks at school and university level in all African countries provides, at least in theory, a possibility for universities to capitalize on the demand and generate income. Although a number of institutions operate publishing units, their activities are very small scale and contribute inconsequentially to university finance. There is probably little potential in the immediate future for publishing to make any significant impact on university income, but those institutions which have publishing units should review the possibility of developing them and turning them into quasi-commercial operations.

Science/Business Parks

The success of some science/business parks in the USA and the rapid development of similar ventures in the UK in the 1980s indicates another potential means for universities to generate income and develop closer ties with industry and business, whilst capitalizing on the expertise and inventions of academic staff.

However, the relative lack of success of the UK ventures points to the need for caution, and the only institution in the Financial Diversification Survey which had attempted to develop a science/business park reported that it had been a failure. Such ventures in the African context probably belong to the very long term future, although the relative success of at least two such ventures in South Africa (the Stellenbosch Technopark, and the Persequor Technopark in Pretoria) indicate that with the involvement of private high-tech industry and technology based parastatals, Africa can emulate the success of developed countries in this form of income generation. However, national economies would have to be totally reformed before there was any potential for most universities to become meaningfully involved in such ventures as a means of generating income.

APPENDIX TWO

(Reproduced from Adrian Ziderman and Douglas Albrecht, Financing Universities in Developing Countries, p. 164-167).

CHECKLIST OF POLICY OPTIONS FOR DEFERRED PAYMENTS SCHEMES

Structure/ Policy	Options	Description
Lending	(a) Autonomous	The most common Institution Institutional public body institutional structure Institution is to create a publicly administered and financed loan organization to distribute and collect loans.
	(b) Public banks	Another common institutional structure utilizes publicly owned commercial banks to administer loans.
	(c) Private	In countries with more developed commercial banks banking systems private banks may be used to allocate loans (US, Indonesia, Denmark).
	(d) Higher education	Governments may instituon transfer funds to education institutions for the purpose of administering loans (China, Chile).
	(e) Directly from government	Money is disbursed directly from government ministries accounts or trust fund, and collected by treasury (Australia, Ghana).
Repayment Mechanism	(a) Mortgage type loan	The most common approach by which the capitalized loan is broken into equal monthly payments.

	(b) Income contingent loan	Payments are a fixed portion of monthly or annual income, thus putting a limit on the debt burden to a graduate (Sweden).
	(c) Graduated payments	Payments fixed in advance, but increase with time.
	(d) Income contingent loan	Same as "b" except payment may be collected through the taxation system (Australia).
	(e) Deferral of social benefits	Repayment is through an already existing payroll levy in which pension benefits do not begin to accrue until the loan is repaid (Ghana).
	(f) Graduate tax/equity finance	Students contribute through a increase in their tax contribution (offered briefly at Yale University, proposed in US and UK).
	(g) Employer contribution	In countries where graduates are scarce, employers through tax or loan contribute to loan or tax repayments as a form of "scarcity" tax. Loan repayments are shared between employers and employees (Ghana and China).
	(h) National service	Repayment through labour that is socially valuable to and in demand by the society.
Targeting	(a) Means testing	Selection of credit recipients on the basis of family or individual income (Sweden, Norway), or more complex socio-economic status indicators (Chile).
	(b) Ability criteria	Selection of students on the basis of performance at secondary school, on national exams or within universities (Indonesia).

	(c) Priority areas	Priority support for students who study in fields of national manpower priority e.g. engineering, teacher training, health (Colombia, Barbados).
	(d) Restricted length	Limitation on availability of funds to a fixed period of study - as the official duration of a given course (Brazil, Denmark).
Interest Rate	(a) Fixed real or floating and subsidies	Interest rates can be fixed in relation to inflation at either negative, zero or positive real rates, or they can float with an index of commercial rates.
	(b) Differential interest rates	Students charged rates of interest based on their economic situation, thus targeting more subsidized support to needy (US, Japan).
	(c) Repayment length	The length of the repayment period can be varied to achieve a balance between debt burden and financial efficiency.
	(d) Graduated annuities	Payments can be calculated so they are smaller in the first years and larger later on.
	(e) Up-front discount on tuition	Allow students who are eligible or a subsidized loan to have their fees reduced by a fixed percentage if they forgo the loan (Australia, Israel).
Default	(a) Grace period	Allow students a specified time after graduation minimization before repayment begins, with the assumption that they need time to find employment.
	(b) Income	Allow graduates to defer payment if incomes fall below a threshold level (Sweden, Kenya, UK).

(c) Incentives for financial agent	Where the government is the guarantor on the loans, the government discounts the value of that guarantee so that institutions prefer to collect from the student.
(d) Require guarantor	Requiring an income earning cosigner on a loan who agrees to pay in the event that the graduate does not pay (Ghana, Barbados, Brazil).
(e) Payroll deductions	Requiring employees to withhold a portion of salary of graduates for the purpose of paying the loan (Jamaica).
(f) Income tax to locate defaulters	Government to locate individual that might be in default through taxation institutions (Canada)
(g) Moral Pressure	Publish lists of defaulters (Jamaica).
(h) Required insurance	Require student to pay an up front fee to insure against losses that result from death or debilitating illness or accidents (Brazil).
(i) Bar further credit	Bar access to further credit if in default (Brazil).
(j) Collection agencies	Utilize private collection agencies to locate students and secure payment (Honduras).

Academic Freedom and University Autonomy

Ahmadou Lamine NDIAYE*

1. INTRODUCTION

In the information note to the African Regional Consultation Preparatory to the World Conference on Higher Education held on 1 - 4 April 1997, Senegal, UNESCO indicated that the World Conference which will be organized in 1998 in Paris on the theme "Higher Education in the 21st Century" should *"establish the fundamental principles that will serve, at the world level, as a basis for in-depth reforms to be operated in higher educational systems throughout the world with a view to stepping up their contribution to the promotion of peace against the backdrop of a development based on equity, justice, solidarity and freedom. This ideal makes it necessary to grant some autonomy and responsible freedom to the higher educational institutions"*.

Thus, *academic freedom* and *University autonomy* feature prominently among the objectives of the World Conference on higher education.

As Olaf C. Mc Daniel recalled recently, quoting J.W. Poulos and Ambrose C.W, the debate on this issue is quite old.

In Europe, since the papal bull "*Pareus Scientiarum*" of 1231, Universities and their academic staff have been claiming the privilege of *autonomy vis a vis all external influence*, especially of the Government and the *freedom of lecturers to determine their methods and teaching schedule as well as the content of their*

*Rector, Gaston Berger University, Saint Louis, Senegal.

courses. The debate is still going on.

In the USA, in 1940, the American Association of University Professors adopted a declaration on the principle of academic freedom. Moreover, in the USA the *Higher Education Commission*, established at President Truman's initiative in 1947 has published numerous reports and recommendations on the issue and several recent publications have generally been devoted to this same issue in the western countries.

In Africa, in 1990, the delegates of the Associations of the personnel of the institutions of higher learning in Tanzania, assembled in Dar-es-Salam, adopted on 19 April a declaration on *academic freedom and the social responsibility of universities*. In Kampala (Uganda), on 29 November, the participants in a symposium on intellectual freedom and social responsibility of intellectuals and members of the African intelligentsia adopted the Kampala Declaration on intellectual freedom and social responsibility in order to affirm their autonomy and their responsibility to the people of our continent. CODESRIA has, under the leadership of Mamadou Diouf and Ramdani Mahmood, published a book on *Academic freedom in Africa*(2).

UNESCO organized numerous meetings on the issue; the last one was held in Trieste(Italy) in February, 1996.

After the Tenth General Conference of the International Association of Universities, held in New Delhi in February, 1995, the Executive Committee of the I.A.U., in response to a request from UNESCO, set up a working group to deliberate on the issue.

2. DEFINITIONS

The two concepts of "*academic freedom*" and "*University autonomy*" are difficult to define and sometimes even hardly distinguishable ; the two terms are sometimes are interchanged. In the absence of unanimously acceptable definitions of the terms, we can aim at an agreement on their field of application, even though it is not easy. If we look at the African

approach to the issue, it will be realized that the field of application tends to widen, as shown by the *Dar-Es-Salam* and *Kampala* declarations.

On the other hand, sometimes only an aspect of these notions, too narrow in our view and summed up as the application of University franchise is retained.

Generally, it is widely agreed that:

- the concept of "*academic freedom*" refers to a set of rights or prerogatives accorded to the academic staff and researchers in the practice of their profession;
- the concept of *University autonomy* focuses on the mode of administration of a University and the relationships between this administration and the other structures of the State. University administration is basically *self-governing*.

The concepts of *academic freedom* and *University autonomy* which emerged in Europe with the first Universities have been the subject of numerous discussions in America and they presently constitute a real subject of concern in Africa. Consequently, it is possible, in our view to admit their acceptance and subsequently their varying application all over the world. In other words, the meaning and the application of academic freedom and university autonomy should take into account the specific features of the countries which should, in adopting them, adapt them to their stage of development.

3. ACADEMIC FREEDOM

As acknowledged by UNESCO, Academic freedom considered as a set of individual and collective rights and responsibilities plays a central role in the functioning of institutions of higher education. It is a basic component of their specificity in comparison to the other levels of education. The area of application of these rights and responsibilities should cover both the pedagogic and the administrative units of the institution.

The rights and responsibilities apply to a vast area, the extent of which has been the subject of discussion,

not to speak of controversies.

Among the rights in the pedagogic domain, one can mention:

3.1 Admission of students

In principle, as stipulated in the Senegalese Law dealing with university franchise and academic freedom, the universities are open to all students who meet the required conditions. Restrictions to this generally expressed right are admissible. In practice, the determination of the conditions is left to lecturers and differences can arise from there between the University and the Government. Among the criteria are some parameters which make it difficult for some of the candidates to be offered admission. It must be noted here that the "*ingredients*" required for training are related to quality and from this point of view, the lecturers stipulate certain requirements.

The Government, which on the one hand, is not always able to provide sufficient ingredients finds it difficult, on the other hand, to accept the rejection of certain candidates for university admission. This situation is aggravated when, as it is the case in many countries, the university is the sole available structure for post-secondary education. This can lead to the instability of a regime. But, in the University, limitless admission is a factor of degradation of higher education because with the rapid increase in enrolments, the lecturer devotes almost all his time to lectures and neglects research. Besides, the students suffer from other consequences arising from the inadequacy of human, financial and material (infrastructures/equipments) resources.

3.2 Drawing up Programmes and Defining the Course Content

There seems to be no major difficulty regarding the exercise of this right which is generally well accepted and implemented.

3.3 Establishment of Disciplines

This right can be considered as a consequence of the preceding one. What one should bear in mind is that both for the course content and the establishment of new disciplines, the University ought to be in touch with the outside world for the purpose of the relevance of its training and therefore of the efficiency of its graduates.

3.4 Evaluation of Skills and Knowledge

That is also *a right which can be qualified as exclusive. It is therefore a basic component of academic freedom.* However, this evaluation must not be understood as a one-way affair : the lecturer evaluating or examining the student. It also embraces self-evaluation, i.e. the results obtained from the evaluation of the student should, in turn, help to evaluate the lecturer. In evaluating the lecturer, the students point of view should be sought and taken into consideration, according to appropriate modalities.

3.5 Recruitment and Promotion of Academic Staff

The exercise of this right which is still not unanimously acknowledged is based on the appraisal by peers of the candidates worth in the light of his scientific publications. It is conducted in accordance with a classical procedure relying on restricted membership, limited to peers of not less than the grade of the candidate, who sit and participate in judging him or her.

It must be recognized that in some countries the academic staff is governed by the rules of the civil service. This situation poses serious problems for the valorization of skills and staff retention.

In this area, it is worth mentioning as an example of cooperation the system set up within the *African and Malagasy Council for Higher Education (Conseil Africain et Malgache pour l'Enseignement Supérieur)*, which unites about fifteen Francophone States of Black Africa and Madagascar to jointly manage the assessment of academic staff and researchers from member-states.

The same council is also in charge of the recognition and equivalence of degrees.

Generally, the University academic staff is governed by a special regulation, similar to that of judges.

All these rights are more or less recognized. Notwithstanding, the State maintains a right to supervise their implementation, since in the final analysis, after the deliberation of appropriate University organs, the state has to take a final decision on the appointments.

3.6 Freedom of Expression

A successful implementation of academic freedom relies on freedom of expression. The Senegalese law mentioned here above, provides a good definition of this right : *academic staff and researchers enjoy full independence and complete freedom of expression in their teaching and research activities, subject to the limitations imposed on them by the principles of objectivity and tolerance.*

3.7 Obligation of Responsibility

These rights rely, both for their meaning and application on a *great sense of responsibility*. This is because it is the duty of the University community as a whole to ensure the regular functioning of the institution through *respect* by the entire community of the rules based on the rights, which constitute *academic freedom*.

Dumas junior wrote: *What is responsibility? That which is required from others, but for our part, responsibility is first of all, what one demands from oneself. Chateaubriand was quite right: A right is created by a responsibility.*

4. UNIVERSITY AUTONOMY

It is difficult to demarcate the frontier between academic freedom and University autonomy. Indeed, the exercise of academic freedom already involves the autonomy to take decisions on important issues concerning pedagogic management. The concept of

autonomy discussed here refers mainly to administrative management. The format of the organic structures of the University is classical and well known, ; only the nomenclature can change. At the head of the Institution there is a *rectorate, vice-chancellorship* or *presidency* of the University. At the level of educational structures, there are the faculty or *training and research unit* or *school*. The structure outlined is, in turn, subdivided into *departments, sections* or *chairs*.

In a way, when one is dealing with *university autonomy*, it has to do with the mode of designation of those in charge of these different structures and the degree of autonomy granted to them by the State in the management of the institution.

Generally, in this mode of appointment, except in a few countries, the prevailing rule is for those in charge of the departments and faculties or their equivalents to be members of the academic staff chosen by their peers. The choice is then ratified by an administrative act, which reveals the degree of the autonomy : the competence to execute the administrative act can be vested in the head of the university, in the Minister in charge of higher education or in someone at a higher level in the government.

The situation is different when it concerns the appointment of the chief Executive of the university.

In certain cases, the process begins with the nomination by peers; the proposal is then submitted to the Government, which having reserved the power of appointment for itself, can approve or reject the proposal. In this case, a new proposal is made, but *the case of rejection is, it must be stated, rare.*

In other cases, the Government maintains the power to choose and appoint the head of the university. This is the case at present in most of the universities in the francophone countries of Black Africa, while in the Anglophone countries peers have the right to choose and nominate for appointment by the Government.

This aspect of university autonomy is in fact, an integral part of the development of democracy in our countries and the challenges that it raises. The other important aspect of the issue is that, in Africa, universities are, in almost all the countries, public institutions, financed in some cases to the tune of over 95 percent, by the State.

By appointing the Chief Executive of the university, who *in any case is a high level Professor*, the State intends to maintain, or rather to exercise its right of inspection. This is why even for decisions which are consistent with academic freedom for example the administrative act is often signed by the Government.

Another aspect of university autonomy is that of the budget, the preparation of which falls within the competence of university authorities. If in certain cases, there is approval at the governmental level, very often, its management is based on a specific financial regulation, different from the one in force in other administrative services.

However, much remains to be done to modernize the management and to adapt it still better to the autonomy of university institutions.

It must be emphasized that the autonomous budget and the special financial regulation do not yet exist in all countries. In certain countries, the university budget is totally or partially lumped with that of the overseeing Ministry, which manages it.

It is certain that the administrative autonomy of the university in general, its financial autonomy in particular, will closely depend on the increase of its own resources, the proportion of which is still very low in comparison with the subvention of the State. The consequences of the massive admission of students, in particular for the undergraduate programmes limit the possibilities of harnessing the potential of all the expertise within the universities as regards rendering services, capable of generating their own funds in addition to what they receive from the State.

5. CONCLUSION

The scope of this paper on Academic Freedom and University Autonomy is limited. First of all, it concerns the identification of common or the most widely-held views on the fields of application of academic freedom and university autonomy. And here already, the diversity of the situations in Africa appears. It deals next with extending the fields of application, while keeping constantly in view the specific features of the environment in which one is located. It is in this sense that one should understand the declarations of Dar-Es-Salam and Kampala, which on account of the role and the responsibilities of intellectuals in the promotion of democracy in Africa give the field of application a much larger area.

It is equally in the same sense that one should understand the initiative of the International Association of Universities (I.A.U.), which, at its General Conference in February 1995 in New Delhi, in response to a request from UNESCO, set up a working group to deliberate on this important issue of academic freedom and university autonomy. The ultimate aim is to prepare a draft recommendation to be forwarded by the Association to UNESCO, a recommendation similar to the one which has just been prepared by a committee of experts on "*the status of higher education teaching personnel*". Thus the member-states can draw inspiration from this general framework to promote *academic freedom* and *university autonomy* in every part of the world.

Actually, academic freedom and university autonomy go together. The objective to be attained is for both partners, the State on the one hand, and the university community, on the other, to accept and translate into reality what UNESCO has recommended to us : *Academic freedom and university autonomy imply increased responsibility in academic work, including its ethical context, and in matters of funding, self-evaluation of research and teaching, and a constant concern for cost-effectiveness and efficiency.* There lies a

major factor of peace in the university, which is now in a state of crisis.

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**GENDER ISSUES, ACCESS
AND EQUITY IN HIGHER
EDUCATION**

CHAPET 18

Increasing Access and Equity in Higher Education: Gender Issues

Penina M. MLAMA*

1. INTRODUCTION

The paper attempts a review of gender issues in higher education. It starts with an exposition of previous undertakings on gender issues in general in order to contextualise gender equity in higher education within global positions. The next part deals with gender issues in higher education by outlining past and current effort to attain gender equity. Observations on the challenges or future action are advanced and a case for more concerted action made as a conclusion. Experiences used in this paper are drawn mostly from the Tanzanian context.

2. GENDER ISSUES IN GENERAL

A discussion of gender equity in higher education today ought to be contextualised within past and existing global efforts toward creating a more gender balanced world. Education, at any level, cannot be isolated from the socio-economic context that has created the gender imbalances and the consequential underdevelopment in most parts of the world. It is necessary therefore, to pay attention to the global trends and expositions on gender issues in general in order to derive a meaningful perspective of gender equity in education.

*Chief Academic Officer, University of Dar-Es-Salaam, Tanzania.

Recognition is required of the serious and committed efforts by individual, non-governmental and governmental organizations and their success in pushing gender issues closer to the centre of the global development agenda. The United Nations has taken a leading role especially through its four World Conferences on Women (Mexico: 1975, Nairobi: 1985, Copenhagen: 1990 and Beijing: 1995) and the numerous other meetings and programmes through its various agencies. A host of other national, regional and global meetings, studies and programmes have proved beyond any doubt the centrality of gender issues to development. Indeed, by 1990 most major global attempts to address development have had no choice but to also focus on gender issues (Rio:1992,. Vienna:1993,. Cairo:1994, Copenhagen:1995).

The undisputable fact emerging from all these efforts is the fact that the world is characterized by gender imbalances in all facets of life, including education. The United Nations *The Worlds Women: Trends and Statistics* (1991, 1995) provides comprehensive data and analysis of these imbalances in a wide spectrum of life including work, power and influence, education and training, health and population. Numerous other documents and publications have been produced over the last two decades exposing in detail the gender disparities in various aspects. For example, in their annotated bibliographies of gender studies in Tanzania, Mascarenhas and Mbilinyi: 1993 and Mukangara: 1996 list over 1,200 studies, over 100 of which are on education.

3. GENDER ISSUES AND EDUCATION IN GENERAL

Due to its centrality to human development, education has featured significantly in the above mentioned efforts. Not only has education been a major agenda especially in the global conferences, a significant number of major conferences on education have been held nationally, regionally and globally with

a focus on gender. (Jomtien:1990, Ouagadougou:1993, Dakar:1994, Seoul:1995, Kampala:1996). Comprehensive plans of action have emerged out of these conferences outlining what needs to be done to address the gender imbalances in education. These include The Jomtien Framework for Action to meet basic learning needs (1990), The Ougadougou Declaration and Framework for action (1993), The Education of Girls and women - Towards a global platform for Action: 1994, The Beijing Platform for Action (1995) and The Kampala Declaration and Framework for Action (1996). In addition, at the 1995 Beijing UN Fourth world women conference every participating country submitted a country report outlining commitments and actions towards improving the situation of women in all areas, including education.

In brief, commitment from these efforts targets expansion of access to education at all levels, improvement of the quality of education for girls and women, removal of the various obstacles hampering girls and women participation in education, elimination of gender stereotyping in education, improvement of performance levels for girls, retention, improvement of the learning environment, introduction of alternative approaches to education and provision of safety and security of girls in and out of school.

4. GENDER ISSUES IN HIGHER EDUCATION

Similarly, considerable attention has been directed at higher education. Institutions of higher learning, especially Universities, have played a leading role in exposing gender imbalances in general. Most of the research or gender sensitization activities have had large inputs from Universities. Indeed, programmes to correct gender imbalances at primary and secondary levels have often been initiated by higher education institutions. But the studies have also focused on the gender disparities in higher education systems including enrollment, academic performance, recruitment, staff training, promotion and social relations.

(UNESCO: 1993, Moshia: 1990, Mbilinyi et al: 1990, Koda: 1992 Karegero: 1992, UDSM: 1996).

Major findings have shown problems similar to those at the lower levels. Indeed, in areas like access the problem is even bigger in higher education where the percentages are much lower than at primary or secondary levels. In Tanzania for example enrollment of girls compared to boys is almost 50% at standard one and 17% at higher education. (Ministry of Education:1996). In Sub-Saharan Africa the average female enrollment in higher education is only 30% as compared to 68% at secondary school (UN 1995). Poor academic performance, concentration in non-science and technological disciplines, sexual harassment, discrimination in staff recruitment, training and promotion, gender-blind curricula, gender unfriendly environment are some of the issues that have been raised in most gender studies on higher education institutions.

It is clear from the above information that a lot of work has already gone into exposing gender disparities in education, including higher education, as well as into analysis and formulation of plans of action. It is not the intention of this paper to re-invent the wheel. Instead, we wish to echo the sentiments of many recent meetings and the spirit of the Beijing Fourth UN women Conference on the need to move beyond theoretical discussions and complaints to more concrete action. Concern has been raised that the commendable work of the past two decades at exposing gender imbalances has not been matched by adequate action. The entry into the 21st century should, therefore, see more action than words. This explains the action plans that have emerged out of the more recent conferences, as mentioned earlier.

Considerable action towards gender equity is discernible at higher education. Examples abound of various programmes towards expansion of access to higher education, improving performance, gender sensitization and elimination of various forms of gender discrimination.

For example, in order to increase access to higher education the Universities of Makerere in Uganda and Dar-es-Salaam in Tanzania adopted affirmative action. At the University of Dar-es-Salaam, female candidates are admitted at up to 1.5 points lower than male candidates but not lower than the University entry points. As a result the enrollment percentage rose from 17% in 1995/96 to 29% in 1996/97. Makerere's girls enrollment percentage is now about 30% after several years of similar admission approach.

Gender studies have also been introduced in such forms as the Women Studies Centre at Makerere University or the Gender studies Institute at the Cape Town University in South Africa. In other cases specific courses on gender have been introduced or a gender perspective adopted in the mainstream curricula. At the University of Dar-es-Salaam for example gender studies courses have been introduced in the Institute of Development Studies and Sociology while a gender perspective has been adopted from some courses in the Faculties of Arts and Social Sciences, Law and Education, and the college of Lands and Architectural Studies. The Institute of Finance Management and the Sokoine University of Agriculture also have a few courses with a gender perspective (UDSM:1996).

Such studies have assisted the articulation of gender issues and the raising of awareness on gender for both staff and students.

To increase access and encourage excellent performance, scholarships awards and prizes have been introduced through various schemes. The Directorate of post graduate studies of the University of Dar-es-Salaam offers graduate scholarships for female candidates which has benefited over fifty women in the last four years. Similarly the Gender Management Committee of the same University has sponsored female academic staff for Ph.D. training.

Activists groups on higher education institution campuses have played an active role to keep gender on the academic and social agenda. They have organized seminars, workshops, support groups to sensitize the

communities and often to combat gender related problems like sexual harassment. The University of Dar-es-Salaam has quite a number of such groups including the Institute of Development Studies Women Studies Group (IDSWSG), Women Research and Documenta-tion Project (WRDP), Women in Education (WED), Tanzania Women in Science and Technology (TAWOSTE) and The Gender Management Committee (GMC). In 1994 the University of Dar-es-Salaam formally established The Gender Dimension Task Force to operationalise the gender balance articulated in its Corporate Strategic Plan (1994).

The Association of African Universities (AAU) and the Forum for African Women Educationalists (FAWE) both of which involve University Vice Chancellors, have adopted strategies and recommendations for addressing gender issues in African Universities. The AAU has even adopted a system of gender studies chairs.

The list of pro gender-balance activities may not be exhausted here. The point for noting is the fact that more attention is now directed at addressing gender issues in higher education than twenty years ago. Credit goes to local, regional and international activists and pressure groups as well as the realization that higher education must not miss the gender equity boat if it has to effectively fulfill its mission. We realize however, that at times pressure had to come from donors of higher education who put gender as a string to funding. It is also no secret that a lot of the research on gender was done because that is where the donor funds were.

5. CHALLENGES INTO THE 21ST CENTURY

All these activities, however, are just a scratch on the surface of what needs to be done to attain gender equity. A review of the existing resolutions, frameworks and plans of action show that a lot more action is required. There is no debate that gender imbalances are still very much in place. Africa will enter the 21st century with gender inequity still on the top of the

agenda. In some cases, the gender gaps are widening and discrimination or intimidation gaining more ground. Despite the two decade long gender sensitization efforts, for example, sexual harassment on University campuses seem to be on the increase. Concern is also raised as to why adequate and appropriate action is not taken to eradicate gender imbalances inspite of the awareness on what the problems are and what action is required.

Different explanations have been advanced to explain this inaction including gender insensitivity, especially among the male dominated leadership, lack of commitment or interest, unavailability of funds, among others. Again numerous studies exist to explain this factor. We however, wish to contribute to this area by advancing some observations on what other factors impede action or are likely to impede or frustrate action towards gender equity in the future. The reference for the observations will, however, be restricted to the Tanzania experience even though we believe the situation may be similar to other countries in the region.

Tanzania, like most African countries is experiencing serious socio-economic crisis that have persisted for over a decade. These crises have greatly eroded the fabric of the Tanzanian society and created an environment unconducive to human development. A number of developments have emerged out of these crises which have or will negatively impact on education as a whole and on girls and women education in particular.

The Tanzanian economy has been characterized by falling production, high inflation, unemployment, growing foreign debt, donor dependency and increased control by foreign global forces especially the IMF and World Bank. The majority have been pushed to abject poverty with little hope in sight for better times. This failing economy has created other situations that have and will impact negatively on education.

The near collapse of the economy threw the country into chaos resulting into a loss of direction. A host of

external forces came to salvage the situation but with conditionalities that eventually shifted the control of the Tanzanian economy into the hands of external forces. Meanwhile internal forces created survival mechanisms that replaced national interests with those of the individual. The nation lost its vision and with it the ability to direct its development towards the welfare of the majority of its people. Without a national vision for example it was easy for the country to abandon the Social Sector to its own fate when the external forces declared that education was not important to development.

This process of underdevelopment has led to a near collapse of the education system at all level. The underfunding of education of the 1990's (9.1% of total budget) has seriously affected the quality of education. It is difficult to enhance quality in teaching, research or training without adequate funding. The physical academic environment is not conducive to learning, staff who are poorly remunerated have either left for greener pastures or are committing a large part of their work time to non-academic activities for survival, poorly funded students resort to frequent class boycotts, student academic performance is impaired leading to half cooked graduates.

The challenges in salvaging the education system at all levels are staggering. Yet the economy has not yet improved. Infact, one wonders whether it is not getting worse even though the economic experts continue the praise-singing for the IMF/World Bank determined structural adjustments. The big concern is whether gender issues have any chance of getting attention in the face of all these problems. Will gender issues be accorded a meaningful place in this overcrowded agenda? What chances do activities intended to bring gender equity have to be allocated funds in competition with acquisition of books, laboratory equipment or increase in staff remuneration?

The long battle to gain recognition of the necessity for gender equity and people willingness to take action is and will continue to be frustrated by the lack of

resources. It is necessary to note here also that at the Beijing Conference one of the major battles was on the developed countries reluctance to commit additional funds to gender related activities in the developing countries. So the past generous donor funding for gender programme could see a reduction of funds in the future.

Cost-sharing and community participation in the provision of education at all levels has been adopted as a policy to overcome the government funding shortfalls and to create a new culture of non-dependency on the government. Indeed, examples abound of communities which have successfully run schools. Signs are already there of the ability of individuals, communities, organizations to run private schools, colleges and Universities. In Tanzania, there are three private Universities in the offing for 1997. More than half of the Secondary Schools in the country are privately owned and the last year has seen a mushrooming of private primary and pre-primary schools in urban areas although the issue of quality is yet to be established.

While these are good signs, over enthusiasm on the ability of the community to take over a large part or the full cost of education would be unrealistic. It is already clear that cost sharing is affecting access to education of children from poor families. For Tanzanian rural area there is also considerable apathy towards community projects arising out of past experiences of mismanagement of many such projects by village leadership. For example, there are many cases where people made contribution to build, rehabilitate or expand primary schools but the funds were misappropriated and no action was taken against the culprits. As a result people are not willing to contribute again. This explains the dilapidated school building across the country even in economically capable areas. Time will be required to regain people's trust in self-help community schemes. Within such a context greater mobilization efforts will be required to marshal community participation in activities to correct the gender imbalances in education.

The effect of cost-sharing on gender is that it poses a danger of more girls from poor families not getting access to education, as compared to boys. With the cultural attitudes that put more value on the boy than the girl-child still prevailing, limited resources will lead to the choice of the boy being sent to school rather than the girl (Katunzi & Suleiman: 1991). The successes gained in increasing access of girls to education will be significantly undermined by the cost sharing policy. It is for this reason that a World Bank support programme is financing girls secondary education in some regions. Similarly on introducing the privately sponsored scheme, the University of Dar-es-Salaam adopted a policy of putting all qualifying female applicants on the government sponsorship list. But this matter calls for more than the sporadic actions so far taken to ensure that access of girls to education at all levels is not negatively affected by cost sharing or by the general economic crisis (Brock-Utne: 1991, Mbilinyi et al: 1990).

The near collapse of the education system and the consequential erosion of the quality of education has also had serious effects on academic performance. The efforts to encourage girls to enroll for science subjects at secondary school level have to some extent backfired because performance in the sciences has deteriorated due to inadequate facilities and unmotivated teachers who are not interested in paying special attention to girls' gender related problems. As various studies have indicated girls performance in the sciences has been unsatisfactory (Dambali: 1983, Semesi and Urassa: 1990, Masanja and Katunzi: 1990, Lynch: 1990, Lugwisha: 1990, Kagaruki: 1990, Kagaruki and Sekwao: 1990). This has unfortunately resulted in the inability of many girls taking sciences to qualify to enter the University thus reinforcing the myth that girls are not capable of handling the sciences. Indeed, girls in secondary schools are opting more and more for Arts or Business studies rather than face the risk of failure in the sciences.

Cognizant of the fact that lack of appropriate knowledge, skills and grades in Science and Mathematics from secondary school, girls cannot be admitted to scientific courses at the University or pursue highly valued and remunerated careers, the Faculty of Education of the University of Dar-es-Salaam embarked on the Project to strengthen girls education in Science and Mathematics (Galabawa: 1996). The Mathematics Department in collaboration with the Mathematics Association of Tanzania and FAWE also have several projects to promote mathematics for girls. The Department also has two scholarships for female University applicants with the best performance in Mathematics. The Faculty of Science is introducing in 1997 a crush programme for form VI leavers to upgrade their A-level science grades in order to qualify for University entry.

These efforts, however, will not achieve much if they are not matched with serious action to improve the teaching of the sciences at the lower levels. The sciences should not be handled in isolation to the overall condition of the education system. In fact not only has the neglect of the education system affected all the academic disciplines at primary and secondary levels, it has also eroded the self confidence and creativity of the students and is now producing rote-learners whose academic outlook is not anchored on the search for knowledge critical thinking or creativity. Students, both male and female enter the University not only with marginal grades but with little skills or motivation for critical thinking or the search for knowledge and truth.

This situation deals a double blow to girls who are normally raised in an environment that deliberately suppresses their self-confidence and for whom education is supposed to be a process of empowerment. The poor academic environment, the apathetic teachers, the financial deprivation have significantly disempowered the girls. Informal observations have been made to the effect that contrary to expectations, and inspite of all the past efforts on gender issues

many girls today seem to have become more docile showing less interest and aggression in facing both academic and social challenges. It is argued that many girls today are not sufficiently empowered to fight back gender oppression and that instead they tend to subordinate themselves to men for material gains consideration. Scientific studies are yet to be conducted to substantiate these observations.

This points to yet another factor which, though linked to the economic crisis is often ignored, namely, the social and cultural degeneracy whereby traditional ethics and values have been greatly eroded and community values increasingly replaced by individualistic tendencies. This degeneracy has ushered in an environment where human behaviour is not necessarily directed towards the common good. Tanzania is witnessing increased occurrences of unacceptable behaviour. This includes violence, corruption, intimidation including sexual harassment. Tanzania has in the recent past witnessed an alarming increase of incidents of sexual molestation especially of small children. The education system has not been spared by these changes. The last five years have seen increased violence in schools and colleges, corruption and sexual harassment. Not only have student crises become more frequent, they have also increasingly adopted strong-arm and intimidating tactics.

Girls at all levels of the education system have become victims of these tendencies. In a study by the Gender Dimension Task force of The University of Dar-es-Salaam, an exposition of unfavourable male-female students relationships is presented. The female student harassment includes character assassination literature (Mzee Punch) intimidation which includes preventing female students from wearing short pants, having non-University students boyfriends, entering male teachers offices, taking four o'clock tea from the University Cafeteria, or watching TV in the students common room. Girls who defy these are threatened with Mzee Punch. If girls perform well they are accused of having sexual relations with the male staff. The sexual

harassment has unfortunately also included rape. Male staff are also reported to victimize female students when sexual favours are denied.

Such intimidation and harassment has created an atmosphere where girls are scared to seek academic guidance from male teachers outside the classroom, and the psychological effect of *Mzee Punch* literature or threats has led to poor academic performance by some female students (UDSM: 1996). Indeed, this could be one factor towards the finding of a Senate study of 1994 which showed that the performance of female students at the University is on the average poorer than that of male students (UDSM: 1996).

The sad part of the situation is the inability of the girls to combat this harassment. Linked to the point raised earlier, the girls silently suffer this harassment. The Gender Dimension Task force Report for example cites six cases of rape on campus between 1994 and 1996 that have gone unreported. Also many girls are so scared of the *Mzee Punch* group that they abide by his rules and dare not disobey or report the perpetrators for appropriate disciplinary action. This is in spite of the existence of University By-laws that provides for disciplinary measures for such perpetrators. The Gender Dimension Task force has embarked on various activities to empower the girls, including sensitization, networking and counseling. Even then a more concerted effort is required to set systems of preventing and handling the cases of sexual harassment and other forms of cultural degeneracy which are negatively affecting the academic performance of girls in higher education. The matter gains more significance considering that the numbers of girls in higher education are already very low.

Institutions of higher education should be interested in addressing issues of sexual harassment not only to improve the performance of girls but also the institutions' own image locally and internationally. The University of Dar-es-Salaam has, for example, gone through several crises where international student exchange programme have threatened to withdraw their

students fearing for the safety of their female students. Similarly the image of the University's Engineering Faculty which is said to be academically the best in the region, is threatened by the behaviour of its students who have taken a leading role in sexual harassment. Indeed, the assessment of the academic excellency of a faculty cannot ignore the social environment for both its students and staff.

CONCLUSION

In conclusion, we wish to state that it is clear that gender equity, in all its facets, has not yet been attained in the education sector at all levels. The problems have been adequately articulated over two decades of serious studies and discussion. Plans of action have been advanced charting out clearly what needs to be done. Action taken so far is far from adequate. It is undisputable that concerted action is required but unless that action is contextualised within the forces of the socio-economic crises Africa is facing, gender equity in higher education may be a long way off. But it is our belief that it can be done and it should be done. And in the words of the Secretary General of the 4th UN Conference on Women, Beijing 1995, Ambassador Getrude Mongela, "*The Revolution has began, there is no going back*". As far as gender equity in higher education is concerned, there will be no sitting down during the 21st century.

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CHAPTER 19

The Right to Higher Education and Equal Opportunity Particularly for Women: The Major Challenge of Our Time

Lydia P. MAKHUBU*

“Education is a human right and an essential tool for achieving the goals of equality, development and peace. Non-discriminatory education ... ultimately contributes to more equal relationships between women and men. Equality of educational qualifications is necessary if more women are to become agents of change.... Investing in ... education and training for girls and women... has proved to be one of the best means of achieving sustainable development and economic growth that is both sustained and sustainable”

- Platform of Action and Beijing Declaration

1. INTRODUCTION

The origin of African universities as well as the issues which have confronted them over the past 50 years are well documented in a book entitled “The African Experience with Higher Education”, commissioned by the Association of African Universities on the occasion of its 25th anniversary, and written by three eminent scholars and former Vice Chancellors of some African Universities. A very appropriate observation by the authors recalls that “the roots of the African University as a community of scholars with an international outlook but with responsibilities within particular cultures can be traced back to

*Vice Chancellor of the University of Swaziland.

institutions that developed in Egypt in the last two or three centuries BC and AD” This observation underscores the fact that, the “ivory tower” perception of universities notwithstanding, these ancient institutions interacted with societies around them and were influenced by contemporary socio-cultural norms, values and dominant thought which prevailed at the time, including that of religion. The philosophy, *raison d’etre*, and mission of ancient universities have undoubtedly had a tremendous influence on contemporary universities in Sub-Saharan Africa. There is ample scope to believe that education in sub-Saharan Africa has been shaped largely by influences which include local cultures, religion (both Christianity and Islam), as well as Western approaches which were introduced during the colonial era. These observations are very relevant in considering the issue of women’s access to higher education in Africa, particularly in a contextual framework where traditional beliefs regarding the position and role of women in society are still very strong and hold sway even among those who one would consider to be sufficiently enlightened to be concerned about the optimum and efficient use of human resources in order to ensure competitiveness in the global economy.

Even though the link between the modern African university and ancient institutions of higher learning has, over the years, been blurred by the interventions of history, there are still some great similarities between them in terms of the purpose, activities and requirements for upward mobility within the system. Just as it is the case in present-day universities, ancient universities were anchored on three basic functions, namely; teaching, the discovery of new information through research, and dissemination of such knowledge. Members of scholarly communities were able to rise to fame and prominence as renowned and respected teachers, thinkers and philosophers on the basis of proven excellence in the performance of these functions. The link between modern and ancient universities is underlined by Borrero when he points

out that "the very idea of the university as an institution is essentially medieval and it is curious to observe how largely that idea still dominates our modern schemes of education". This clearly establishes the traditional character of universities and is dramatized by their tendency to cling steadfastly to norms and practices which have ancient antecedents and to take pride and succour in the maintenance of some of the 'pomp and circumstance' which used to characterize or mark ancient university ceremonies, e.g., graduation ceremonies in some Anglophone Institutions.

It is interesting to note that all historical accounts of ancient universities in Africa, make no reference whatsoever to the involvement and contribution of women (either as students, teachers or great thinkers) to the generation and development of knowledge in those times. In all historical accounts there is almost a tacit supposition that all the intellectual leaders of that time were men. A gigantic mental exclamation mark is almost felt when one dares to contemplate that some of the ancient sages could have been women. Integration of women into the mainstream of university life is a process that has been imbued with extreme lethargy and has taken us an interminably long time to become an integral part of our university's *modus vivendi*. It is noteworthy, for instance, that ancient and renowned universities, such as Oxford and Cambridge, only started admitting women to full degree programmes about 75 years ago and expressions made on women's admission were astoundingly reflective of the gender prejudices and patronizing attitudes of the time, e.g., "books destroy women's brains when they have little enough to begin with". It is further reported that as recently as the 1920's one "Lady Bathurst, found it ridiculous and humiliating that her son was obliged to endure the lectures of three lady dons"!

The mind set of African societies, like those of many others, tends to confine the definition of the role of women to the basically non-scholarly status of mother, wife and provider of basic necessities for the family and

community. The importance of these roles for social survival, cohesion and stability cannot be over-emphasized and there is general consensus that they are crucial and fundamental to human development. They place women in a strategic position as social educators and transmitters of values and norms from generation to generation, a tremendous responsibility in societies in transition where new ideas have to be introduced and sustained. There are now numerous socio-economic indicators which demonstrate that the education of women is critical in empowering them to effectively perform even these responsibilities in a modern setting. However societies, including African societies, take women's role so much for granted that even modern economists who are so adept at devising social and economic indicators for every human activity, have not yet found a more suitable and generally acceptable formula for quantifying the contributions of the so-called housewives to gross domestic product. Could it be that we still have not really captured the full essence and gravity of women's extremely vast and weighty contribution to social and economic welfare? Could it be that our social upbringing has imbued in us the knack to take for granted and to automatically consider as negligible and peripheral the multidimensional roles that women have played, and continue to play, in the upliftment of society? Surely, such a mentality is unsustainable; the sooner we rid ourselves of the negative stereotypes concerning the role of women in economic development, the more likely are our countries going to make a breakthrough in uplifting and restoring the dignity of all our people and in securing economic welfare based on the principle of economic growth with equity.

The history of modern African universities, as they are now known, begins during the independence decade of the 1960s when most nations resolved to build or strengthen their higher education institutions in order to accelerate the production of the much needed high level manpower to run their budding economies. During

this period, governments and international agencies like UNESCO organized important meetings to lay down the framework for future development of education, and higher education in particular, to meet the aspirations of the people of Africa. "The citizens of Africa see in education a means by which their aspirations may be met. They are willing to sacrifice for the attainment of this means for gaining economic and social development and wish to provide for more and more of their people, education suited to their desires" were among the many noble and optimistic statements made during that period. To an even greater extent than the ancient universities, modern African universities were closely aligned to society because they were created by governments to serve the interests of their countries, at a time when national and continental consciousness was heightened following liberation from colonialism. Many mission statements of the newly established universities highlighted the need for upholding and preserving Africa's cultures and working towards the unification of the continent. Without providing an analysis of which cultures of Africa deserved preservation, these mission statements also proclaimed open admission of students regardless of sex. Addressing the question of how African leaders expected to reconcile the implementation of such a lofty goal with the then-widespread socio-cultural perceptions regarding the role of women continues to boggle the mind. What mechanisms did our leaders put in place to encourage women to be as adventurous and as inquisitive as men in aspiring to enter university and to deepen their knowledge and that of others through scholarship? Has this apparent contradiction affected women's access to higher education in Africa over the past decades?

2. PROGRESS IN WOMEN'S ACCESS TO UNIVERSITIES IN THE PAST 40 YEARS

The progress made by sub-Saharan Africa in accelerating enrolment at all levels of the education

system is both remarkable and notable. The World Bank, for instance, reports that while in 1960, the gross primary enrolment ratio in sub-Saharan Africa was 36 percent (half of the levels of Asia and Latin America) and many countries had literacy rates below 10 percent, the enrolment and literacy ratios had risen to 75 per cent and 42 percent, respectively by 1983, with many countries recording literacy rates well above 60 percent. The World Bank further reports that between 1960 and 1983, the number of students enrolled at all levels of education in Africa quintupled to about 63 million with impressive increases in university enrolments and graduate output. Table I shows numbers of students in education per hundred thousand inhabitants between 1980 and 1992. It is important to note that, while a steady rise in female enrolment is observable during this period, there is still a gross under representation of women in most countries - women enrolments are by far not reflective of the percentage of women in the overall population of each country. There are, of course, a very few exceptions - Botswana, Lesotho, Swaziland, Madagascar - whose figures compare well with female enrolments in Latin America and in some industrialized countries. For the first three countries, the favourable enrolment rates of girls at the primary and secondary school levels is explained in terms of migration of young males to seek employment in South Africa, leaving girls behind to pursue education. Migrant labour is also said to result in many female headed households, where mothers are prone to give equal educational opportunities to boys and girls. It is interesting to note, however, that even in Lesotho where numbers of undergraduate women exceed those of men, women still fail to overcome some of the major institutional hurdles and socio-cultural obstacles in order to be able to rise to the highest levels of university leadership and scholarship.

It must also be noted that Table I does not reveal that graduates (male and female) in the science and science-based discipline constitute less than 50% of

the totals. The seriousness of the under-enrolment in the sciences is highlighted when the number of scientists and engineers per million of population in Africa is compared to that of other regions of the world (see Table II). There can be no doubt that sub-Sahara Africa has a long way to go in the production of science and technology specialists - a daunting responsibility and major challenge of the higher education system in our Continent.

While Table I shows encouraging trends with respect to women's access to higher education, Table III(a), III(b) highlight the low proportion of women in the sciences, a problem that translates to the low female science graduate output in universities, as shown on Table IV and subsequently their under representation in academic and scientific leadership of universities as shown on Table V and Figure 1. It is noteworthy however that African women scientists, like others in various parts of the world, tend to select the life sciences as areas of concentration. This is well demonstrated in the specializations of overall membership of the Third World Organization for Women in Science and, particularly, in the areas of choice of the African members (see Figures II and III). African universities should recognize this strength and build it as part of their contribution to strengthening continental scientific capacities. It has been said that by their closeness to family and children, women have a unique approach to science and its applications - an approach which emphasizes the human dimension, and hence their inclination towards the life sciences.

When one takes into account that women constitute nearly 50 percent of Africa's population, the limited access to higher education, science and technology deprives the continent of a valuable human asset which may play a more positive role in tackling the daunting challenges facing the continent. The marginalization of women in this regard is not just morally unacceptable, it is a deplorable waste of resources. What our countries badly need is recognition of the fact that Africa will remain an underdeveloped

and globally-despised Continent as long as it continues to have less-than-lofty ambitions for developing the totality of her people. Intensified involvement and incorporation of African women into the mainstream of economic activity through, *inter alia*, educational empowerment is a necessary, albeit insufficient, condition for the enhancement of livelihoods of all our people and for ensuring equitable and sustainable economic growth of our Continent --- we continue to take this fact for granted at our peril! Africa must aggressively move in the direction of putting in place the necessary policy infrastructure meant to spur the efficient mobilization and utilization of all her human resources, particularly women, in order to add a hitherto unforeseen dimension to the role of higher education in furthering the aspirations of the Continent. This is of particular importance if Africa is to become a key player in a world that is dominated by knowledge-intensity and where science and technology have become the major determinants for global competitiveness and socio-economic prosperity of nations. Women's increased access to and participation in higher education are therefore not a matter of equity only but a critical means of building the diverse capacities necessary to tackle the Continent's multifarious and multi-dimensional problems. This is a strategic objective which Africa must satisfy if her future prosperity is to be both assured and enhanced. The costs of failing to achieve this objective will continue to be monumental for Africa, including an upward poverty spiral, famines and chronic malnourishment, environmental degradation, etc. African governments are faced with startling policy choices if sustained and sustainable economic growth and development are to become a reality in our time. Obviously, increasing access of women to higher education is one of those choices. It is a choice that is inherently consistent with longer-term development goals of our many nations. Taking such a choice is an inordinately important first step in a journey of a thousand miles destined to provide a better life for all

our people and to make Africa competitive in the unavoidable process of globalization. It is in taking such a choice that Africa is likely to gradually restore its credibility in the world as we move into the 21st century.

3. CURRENT TRENDS IN HIGHER EDUCATION

All over the world, universities have entered what has been described as an evolutionary/revolutionary phase following the unprecedented economic, political and technological changes that have characterized the latter part of this century. New pressures are being exerted on the older university systems of the United Kingdom, Australia and Canada as a variety of issues such as mass access to higher education, different modes of university governance, employability of graduates, cost sharing, etc., emerge as topical issues which confront universities and are reflected in the list of concerns to form part of the agenda of the planned World Conference on Higher Education.

African universities are facing similar challenges with greater more intensity due to the socio-economic and political problems that have almost become endemic in many of our countries. These internal challenges arise from the continent's own peculiar situation and demand vibrant institutions which are capable of crafting Africa's specific solutions based on Africa's own history, experience and aspirations. These challenges call for a total mobilization of all human resources (men and women) through education, science and technology to create the critical mass of specialists required to tackle problems of food production, health education, redressing the problems of a degrading environment, all of them burdens which are hampering the Continent's effort to enter the global knowledge revolution and intensify the marginalization of the Africa in the rapid global movement towards the 21st century. It is inconceivable that with the serious problems of providing basic necessities escalating, a sustainable participation in the knowledge, science and

technology revolution can be achieved, unless Africa begins to exorcize itself from the malady of perpetual exclusion of women from the mainstream of the development effort.

External pressures on our universities emanate from several international trends in other regions of the world, especially other Third World regions, which are progressing fast and appear well prepared to face the next century. The tendency towards regionalization has always existed but has gathered momentum in recent years as North America, Latin America, Europe (including the former Eastern bloc countries), and Asia, intensify their establishment of strong regional alignments for enhancing their capability to join the global village. Under such circumstances, definite steps to promote regional cooperation and integration in Africa to enable universities to formulate common strategies on issues of general concern, and to attempt to build a regional consensus on how to operate under existing adverse conditions are extremely urgent. The rapidly changing global environment is not waiting for Africa to shape her future strategies, and the onus is on Africa to take the lead in ensuring urgent mobilization and optimum utilization of all her resources in order to be a serious force to be reckoned with in the fast emerging global village.

The rapid scientific and technological advances in industrialized and newly industrialized countries, especially in information and communications technology, are having the effect of African industrial establishments calling for curricular changes in universities and other institutions of higher learning to accommodate these changes. A recent survey of the extent of technology utilization in Swaziland revealed a definite move towards automation in the agro- and manufacturing industries that implies that technology education must alter to accommodate private sector demands. The same survey showed that information, communication and biotechnology were lead technologies of the future and that local institutions were not moving fast enough to produce graduates

possessing knowledge and skills in these areas. In this context, it has been noted that Africa has gone through a variety of development strategies motivated by both endogenous and exogenous developments; however, these strategies failed to give priority to "the building of African skills, knowledge and institutions". Such a process must involve greater participation of women in university teaching and research, and must lead towards the generation and use of "knowledge as a utility, [and] knowledge as the means to obtain economic and social results".

Several observations may be made from the preceding presentation. Suggestions for promoting women's access to higher education are also made in the belief that women's greater involvement in higher education is a vital ingredient in enhancing the contribution of universities to Africa's advancement, particularly in an age which demands a strong knowledge base, commitment and a daring spirit to craft strategies that target Africa's problems in a specifically unique way. The observations are as follows:

- (a) The poor participation of women in higher education, both as students and academics, may be linked to the traditional social attitudes regarding the role of women. While universities may open their doors to women, the apparent contradictions between those aspects of African culture which designate women as mere tools for homemaking and the aims of a modern university to admit women on an equal footing with men, still impede women's access to both higher education and to playing a meaningful role in the development of our institutions of higher learning. For example, the transition from high school to university is the most difficult stage for women; in addition to a high drop-out rate created by a variety of factors, girls are quite frequently subjected to tremendous social pressures to embark on careers that do not require long years of study so that they may assume their traditional

roles at a socially acceptable age. This view seems to remain both dominant and wide spread in a number of our countries.

- (b) There are countries like Botswana, Lesotho and Swaziland where women's enrolment in universities is relatively high compared to other African institutions due to socio-economic reasons which are specific to these countries. These countries are characterized by high enrolments of girls at both the primary and secondary levels, thus providing a pool from which to draw university entrants. This highlights the importance of basic education for girls as a prerequisite for embarking on university careers, and the need for countries to continue efforts to increase access of girls to education at the lower levels. It is noteworthy, however, that in spite of the relatively favourable situation for women advancement at the undergraduate level in these three countries, female academic staff have not managed to climb the ladder to high academic leadership as fast as men have. This seems to implicate other factors that hinder women's advancement in Universities.
- (c) At the end of the first degree, many girls get married and immediately embark on raising a family, thus limiting their chances for postgraduate training. This situation is exacerbated by the fact that post graduate training is mostly undertaken in universities abroad, making it extremely difficult for many young married women to leave their families behind for up to four years, without causing family dislocations. The development of postgraduate studies in local universities to expand opportunities for women to study at home is of paramount importance in ensuring access of women to higher education. Equally important is finding ways to enable women to re-enter post-

graduate studies after raising their families. Post-graduate distance education programmes as well as special scholarships for the mature women have been cited as ways to promote women access to post-graduate training and university careers.

- (d) The presence of more women on the staff as lecturers and professors is likely to serve as a base for role models for female students and for minimizing the “hostility” of institutions of higher learning to women. There are other phenomena, such as sexual harassment, lack of confidence among women themselves, which are emerging as important issues in the whole debate on how to make university environment less hostile to women. The issue of harassment, in particular, requires careful research and careful articulation if it is to remain alive in university communities which are still bastions of male domination.
- (e) The introduction of Women Studies Departments has also been suggested as a concrete way of bringing gender issues into an institution-wide forum. However it has also been pointed out that these stand the danger of being relegated to a corner as “female ghettos” while at the same time enabling universities to complacently make claims that they have found a solution for taking care of the problem!. It is incumbent upon African universities, to introduce programmes for promoting women’s access to universities and their greater participation within the institutions. The Association of African Universities must take a lead in confronting this challenge.
- (f) For those women who have been recruited to the staff of universities, there are still numerous hurdles to overcome in order to rise to higher academic and administrative echelons. Some of these are occasioned by social and cultural demands on their time, making it extremely

difficult for them to devote the kind of time required for excellence in research and scholarship. For many it becomes a choice between family and career. This, in the main, explains the inability of women to satisfy the promotions criteria of universities, many of which are based on strong research and publication records.

- (g) There are mainstream academic areas in which women excel. These include the humanities, social sciences, and the life sciences. All these areas are of tremendous importance to Africa and women should capitalize on their strength and carve themselves a niche through which they can work towards capturing the academic and managerial leadership of university and perhaps avoid the creation of the "female ghetto" mentioned above. Organizations like the Forum for African Women Educationalists (FAWE) should mount strong advocacy and lobbying infrastructure and suggest ways to promote women's access to higher education. The major role of FAWE must to empower women and to give them a strong voice to argue for the position of women in higher education and for the recognition of the potential contribution that women can provide in making our countries strong.
- (h) The under representation of women in science and technology is a serious bottleneck in endeavours for building scientific capacities in Africa. Organizations such as the Third World Organization for Women in Science and other national women in science organizations should work ceaselessly and collaboratively to encourage girls to study science at school and to support women scientists to rise in their professions. The provision of research grants which encourage university grassroots activities should be a priority

in order to build a society-wide appreciation of the importance of science and technology in Africa.

Finally, it is important to realize that the socio-cultural factors discussed above cannot be wished away --- they will continue to play a role in sapping the energies of women who aspire to attain the loftiest objectives for the good of their societies. It is crucial, therefore, to devise strategies to enhance women's own academic inclinations and through these build a unique ladder for women to rise to the top of university leadership. Women have a unique dimension to lend to the operations of the higher institutions of learning, as both members and advocates for the advancement of women and the rest of our societies.

If society has, throughout the ages, entrusted women with roles that have ensured human survival, social education, and transmission of values from generation to generation, the use and management of the environment, food production and nutrition, it is, thus, incumbent upon African educators to devise ways to translate these traditional roles to a modern and scientific framework in which women can offer unique leadership for the benefit of Africa. Women must be at the vanguard of the process of Africa's realistic self analysis and introspection and in the process of crafting responses which target the continent's problems in a specific manner, by ushering in "homegrown" and adaptable paradigms for Africa's transformation. The African problems of food production, nutrition, education, a degrading environment are all areas in which women, driven by natural inclination and instincts, can make a special contribution and are areas which should form the focus of higher education and research in the next century.

This conclusion evokes questions which have been asked with respect to promoting women in science and these come to mind as we ponder the access of women to higher education(18). Are women's perceptions of the use of knowledge, especially scientific and technological

knowledge, different from those of men? Can these perceptions be captured in African higher education towards devising unique strategies for the advancement of the continent?

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Table 1: Number of Students at Tertiary Level, per 100,000 Inhabitants and percentage Female students, Selected Countries

Country	1980		1985		1990		1992	
	No per 100,000	% female	No per 100,000	% female	No per 100,000	% female	No per 100,000	% female
Benin	139	.....	227	16	235	14	.....	.....
Botswana	120	35	179	.....	290	45	294	49
Burkina Faso	24	22	57	23	60	22	.....	.....
Central. Afr. Rep.	75	8	100	11	122	15	150	.....
Congo	435	15	551	16	478	18	582	.....
Côte d'Ivoire	240	19	200	20	204	19	.....	.....
Ghana	144	20	132	17	127	22	.....	.....
Guinée	409	19	176	14	93	7	.....	.....
Kenya	78	.....	108	26	142	28	.....	.....
Lesotho	141	.....	158	63	.....	49	.....	.....
Madagascar	258	.....	374	38	285	44	196	54
Malawi	56	31	54	29	63	25	318	.....
Mali	41	11	86	13	73	14	78	.....
Niger	26	20	8	18	60	15	81	.....
Nigeria	191	.....	290	26	360	24	.....	.....
Rwanda	24	10	33	14	50	19	.....	.....
Sénégal	246	18	209	21	235	22	298	.....
Soudan	154	27	171	37	266	40	.....	.....
Swaziland	334	39	415	.....	430	43	384	42
Tanzania	23	15	22	14	20	.....	.....	.....
Uganda	45	23	65	23	98	28	112	29
Zambia	131	.....	126	.....	183	28	.....	.....
Zimbabwe	117	.....	372	.....	573	.....	588	27
Algeria	530	26	801	31	1146	.....	1169	.....
Egypte	1751	32	1837	30	1598	35	1560	37
Libye	663	25	792	.....	1150	46	.....	.....
Maroc	580	.....	822	32	1011	36	1044	39
Tunisia	499	30	573	36	848	38	1044	41
Argentina	1741	50	2790	52	.....	52	3323	53
Chile	1305	43	1629	43	1941	.....	2336	.....
Mexico	1387	33	1598	38	1552	43	1477	45
Bangladesh	272	15	454	20	402	17	.....	.....
India	515	26	583	30	755	33	.....	.....
Pakistan	189	27	266	26	258	24	.....	.....
Saoudi Arabia	662	31	917	45	959	43	1145	46
United Arab Emirates	282	49	576	58	610	70	601	.....
Denmark	2074	48	2271	49	2781	52	3045	.....
Italy	1981	43	2074	45	2519	48	.....	.....
Netherlands	2545	39	2795	40	3205	44	.....	.....
Canada	4769	50	6320	45	6897	54	7096	.....

Source : compiled from UNESCO Statistical Yearbook 1991 and 1993.

Table : 1(a) Graduate Production in Selected African Universities (ISCED level 6)

Country	Year	Total No. graduates	number of females	% female
Algérie	1990	22, 529	8, 295	36
Botswana	1990	371	.....	.....
Egypt	1991	94,211	36,141	38
Ethiopia	1990	2,132	171	8
Ghana	1990	1,728	358	21
Liberia	1987	483	128	27
Madagascar	1991	3,092	1,269	41
Malawi	1993	715	131	18
Mozambique	1993	210	70	33
Namibia	1991	236	176	75
Swaziland	1991	251	139	55
Uganda	1993	2,228	621	28

Source : Compiled from UNESCO Statistical Yearbook 1995
ISCED Level 6 denotes programmes leading to a first degree or equivalent

**Table 2 : Scientific and Technical Personnel engaged in
Research and Development: Estimates for
1980, 1985 and 1990**

Continents, major areas and groups of countries YEAR	estimated number of R & D Scientific Personnel	Estimated number per million population	
World total	1980	3.920.754	894
	1985	4.402.267	920
	1990	5.223.614	1.000
Africa	1980	51.324	111
	1985	56.761	106
	1990	73.081	117
America	1980	774.922	1.268
	1985	925	1.390
	1990	1.091.653	1.509
Asia	1980	893.482	1.859
	1985	940.351	1.927
	1990	1.091.003	2.206
Oceania	1980	39.692	1.774
	1985	34.173	1.414
	1990	41.965	1.610
Africa (excluding Arab States)	1980	29.353	84
	1985	29.364	72
	1990	34.963	75
Asia (à l'excluding Arab States)	1980	758.533	304
	1985	920.763	336
	1990	1.190.369	396
Arab States	1980	688.020	2.734
	1985	800.253	3.024
	1990	930.722	3.359

Source : Compiled from UNESCO Statistical Yearbook, 1993.

Tab 3 (a) Enrolments by Field of Study and Gender for Selected Universities in 1989 with female Enrolment shown as a Percentage of the Total

Country	Natural Sc		Computer/ Maths		Medical		Engineering		Agriculture		Home. Econ.		Humanities	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Burundi	291	85 (23%)	-	-	179	54 (23%)	37	1 (3%)	212	30	-	-	x	x
Ethiopia	2145	234 (10%)	784	170 (18%)	1811	237 (12%)	3230	220 (6%)	3262	374 (10%)	21	11 (34%)	849	325 (28%)
Ghana	898	149 (14%)	245	58 (19%)	617	173 (22%)	762	13 (2%)	660	68 (9%)	8	32 (80%)	2095	571 (21%)
Kenya	1845	338 (15%)	19	4 (17%)	1044	289 (22%)	586	34 (5%)	1560	470 (23%)	2	258 (99%)	4049	1566 (28%)
Lesotho*	179	82 (31%)	9	16 (64%)	-	-	-	-	15	11 (42%)	-	-	38	70 (65%)
Madagascar	4429635	(37%)	1062	241 (22%)	2754	2265 (45%)	1824	294 (14%)	195	103 (35%)	-	-	2194	4296 (66%)
Mozambique* *	59	45 (43%)	16	13 (45%) (45%)	99	119 (55%)	620	42 (6%)	264	94 (26%)	-	-	-	-
Swaziland	194	88 (31%)	-	-	-	-	-	-	167	46 (22%)	0	42 (100%)	87	140 (62%)
Zambia	687	107 (13%)	-	-	468	148 (24%)	1505	19 (1%)	218	17 (7%)	-	-	887	339 (28%)
Colombia	118	92 (44%)	5081	3778 (43%)	16071	26610 (62%)	74393	30026 (29%)	10051	4168 (29%)	-	-	1408	1345 (49%)
Bangladesh	63087	12416 (16%)	6148	1375 (18%)	5554	2087 (27%)	5599	231 (4%)	3884	291 (7%)	0	1143 (100%)	92760	18076 (16%)
Sweden	4326	3192 (42%)	7948	2350 (23%)	7155	19590 (73%)	27779	6672 (19%)	1552	1074 (41%)	23	408 (95%)	8422	14515 (63%)

Source: Compiled from UNESCO Statistical Yearbook 1991

* Lesotho data for 1988

** Mozambique data for 1987

(%) females as percentage of total enrolment

Tab 3 (b) Enrolment for Selected Faculties in Selected Universities, showing Total Member of Students and the Percentage Representation of Females

Country Date & Data	Humanities		Law		Social Sciences		Natural Sciences		Mathematics/ Computer Sc.		Medical courses		Engineering		Agriculture	
	Total	%F	Total	%F	Total	%F	Total	%F	Total	%F	Total	%F	Total	%F	Total	%F
Angola 1990	...	...	860	...	...	...	609	40	#	#	834	42	779	21	379	32
Burkina F 1990	936	39	493	27	1203	23	563	12	433	5	414	18	-	-	11-	8
Burundi 1991	628	30	292	31	431	28	421	29	77	34	283	26	330	9	440	18
Ethiopia 1991	704	28	222	10	2391	22	1700	6	468	9	929	6	2070	5	1387	9
Ghana 1990	2339	31	39	50	804	27	955	15	206	11	824	23	635	3	479	11
Kenya 1989	5448	28	632	32	#	#	1966	15	#	#	1106	22	834	4	1808	23
Lesotho 1991	459	65	132	43	69	58	312	36	#	#	-	-	-	-	19	84
Niger 1989	709	14	851	3	636	21	280	6	#	#	432	26	98	4	164	6
Swaziland 1991	287	63	205	40	233	51	341	33	#	#	-	-	-	-	90	28
Ouganda 1990	636	33	169	34	1166	26	880	15	155	10	561	22	207	8	598	18
Zambia 1989	1161	28	145	23	#	#	757	14	#	#	3349	28	551	1	228	7
Zimbabwe 1991	1321	38	345	32	1885	29	1031	19	#	#	866	27	725	30	357	16
Kuwait 1991	2257	66	602	50	1580	74	1593	65	1636	72	791	63	1342	39	-	-
Brazil 1991	140566	74	159390	44	161214	57	41158	49	70898	38	137602	64	150015	17	38700	30
Mexico 1990	15003	57	121621	40	80792	59	39541	54	51751	41	94622	54	279989	16	24620	21
Italy 1991	207046	80	244446	53	375341	47	97945	51	49910	42	110644	50	165480	11	32097	34
Sierra Leone 1991	2763	64	5174	54	5686	74	3425	53	6504	19	8994	62	20124	21	1205	45

Source: Compiled from data in the UNESCO Yearbook, 1993
 (a) Figures given represent enrolment at ISCED Level 6, i.e. in courses leading to a first degree.
 # Suspected under another faculty.

Table 4: Graduate Production by Field of Study and Gender for Selected African Universities

University/ Country	*Science Graduates			All other graduates		
	Male	Female		Male	Female	
Burundi 1988	61	8	(12%)	214	62	(22%)
Ethiopia 1989	1,164	89	(7%)	884	160	(15%)
Ghana, UST 1987	140	20	(13%)	474	95	(17%)
Ghana Cape Coast 1987	49	3	(6%)	183	56	(22%)
Madagascar 1989	539	315	(37%)	1,025	772	(43%)
Soudan	798	345	(30%)	2,456	1878	(43%)
Swaziland 1992	55	23	(30%)	121	101	(46%)
Tanzania 1989	317	28	(8%)	488	115	(19%)
Zambia 1989	276			330	103	(24%)

Source: Compiled from various publications and records

*Science comprises the Natural Sciences, Medicine, Agriculture, Mathematics and engineering

% Indicates females as percentages of total number of graduates

Table 4 (a): Staff by Rank and Gender in the Faculties of Science and Science-Based Disciplines in Selected Universities in Southern Africa

Name of Institution	Lecturer Senior Lecturer		Assistant Professor Reader/Professor			
	M	F	M	F	M	F
Medical University of Souther	9	7	3	2	2	0
Natiuonal University of Lesotho	28	11	11	1	3	0
National University of Science	38	5	5	1	7	1
Rhodes University	15	7	2	30	1	1
University of Botswana	58	18	21	4	4	0
Universiyr of Natal	66	23	86	15	133	9
University of Orange Free State	2	3	3	2	2	1
University of Pretoria	24	20	95	18	138	4
University of Stellenbosch	30	20	111	4	81	3
University of Swaziland	28	18	21	2	14	0
University of the North	26	10	13	1	15	0
University of Witwatersand	51	7	34	3	28	1
University of Venda	25	6	9	1	15	1
University of Western Cape	1	0	0		0	1

Source: Compiled from data received from various universities in Southern Africa d'Afrique du Sud

Tableau 4 (b): Academic Staff in Science Department* of Ten African Universities, by Rank and Gender

Country	Professors		Senior lecturers		Lecturers	
	M	F	M	F	M	F
Botswana	7	0	15	1	47	1
Ghana**	73	1	136	17	294	40
Kenya/Nairobi	111	3	139	15	289	40
Lesotho	9	0	15	1	22	2
Malawi	24	1	45	7	64	13
Nigeria/Ibadan	134	6	169	25	174	38
Swaziland	6	1	18	0	42	11
Tanzania	56	2	101	3	137	10
Zambia	26	3	36	0	178	21
Zimbabwe	35	2	70	10	181	38

Source: compiled from Commonwealth universities Yearbook, 1993

**conflated data from Legon, Cape Coast and UST Kumasi

Science = Natural Sciences, Agriculture, Engineering, Earth & Environmental Sciences,

Mathematics and Computer Science, Medicine and Veterinary Science

(%) indicates females as percentage of total number of graduates

Figure 1 (a)

Staff by Rank and Gender at selected Southern African universities

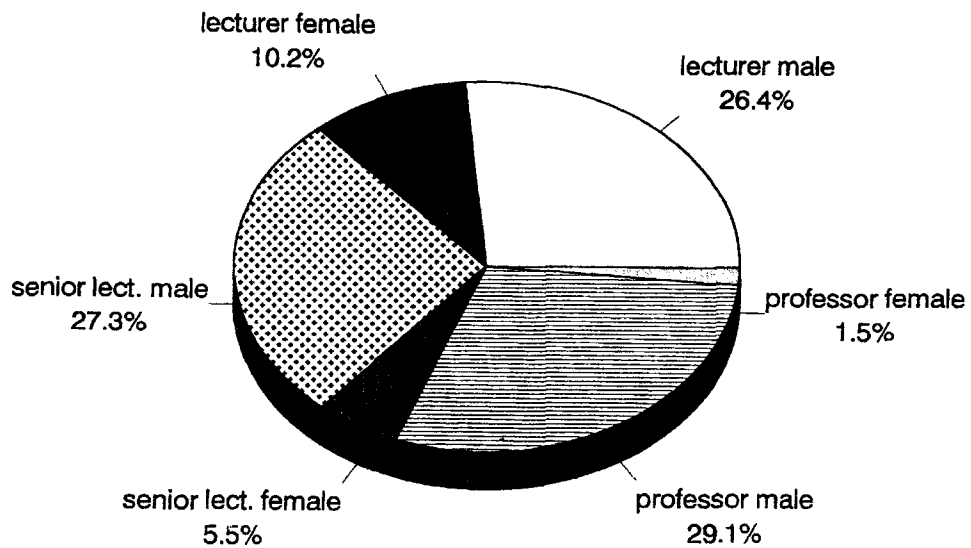


Fig. 1 (a)

Science staff by rank and gender in ten African universities (1992)

Fig. 1 (b)

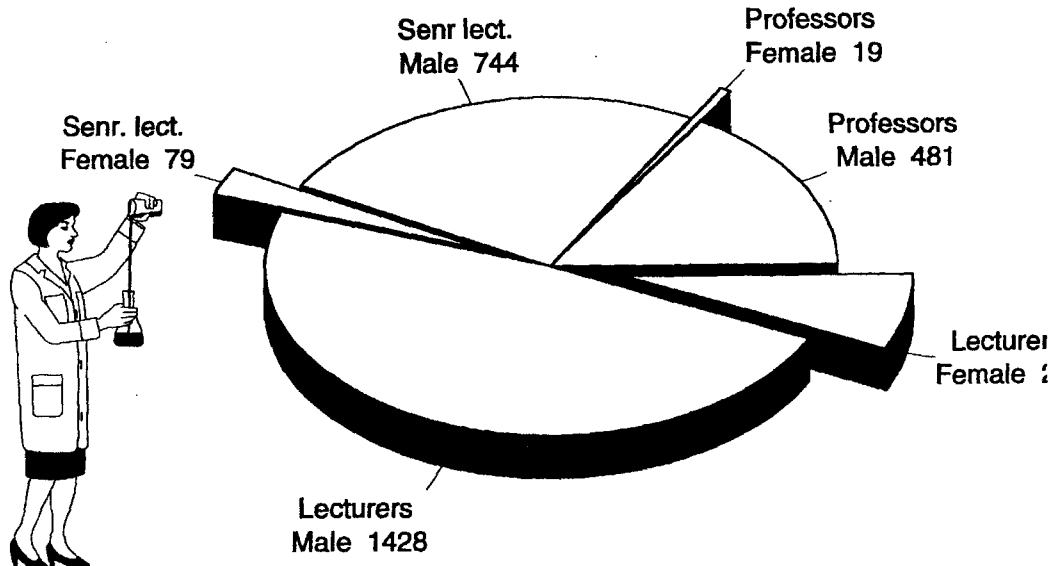


Fig. 2

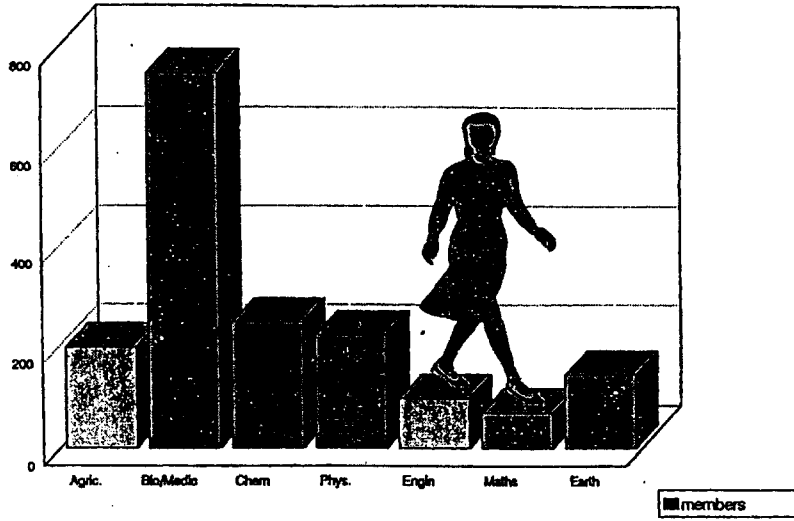
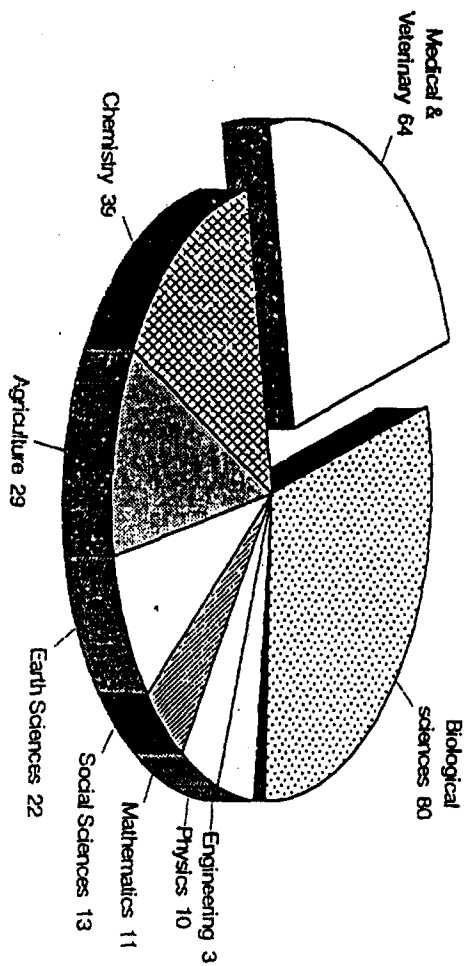


Fig. 3



TWOWS: African Membership

Increasing Access to Higher Education: The Experience of the Open University of Tanzania

Geoffrey MMARI*

1. INTRODUCTION

Dr. Morrison reminds us that the concept of lifelong learning was injected into public consciousness through a 1972 UNESCO report entitled *Learning to Be*. This concept has permeated all levels of education thus calling for new strategies over and beyond the formal and conventional institutions used hitherto. And this is where distance education and open universities come in.

Mr. Monks summarizing discussions of Commonwealth educators reports states:

Distance education is a term used to describe the means of bringing learning to students in their homes or localities, which can overcome problems of geography and time. It allows the student greater independence as a learner. It was not synonymous with continuing education but in the view of several speakers distance education provided the best means of making lifelong continuing education available. Distance education had at its core specially prepared printed materials, the marking of written assignments during the course and, when an award is to be made at end of course, examination taken under secure conditions. Personal contact with a tutor was usually a feature of distance education either face to face at a local centre (or by telephone) and/or at a short

*Vice-Chancellor, The Open University of Tanzania.

residential seminar during the course. Video and audio tapes or television and radio broadcasts may be used to reinforce the written word for awareness programmes where the cost and infrastructure make this possible. For practical subjects video or TV can be used for observational experiments but for hands on practical skills the facilities of local centres or existing colleges/universities in the evenings, weekends or vacation periods were necessary. Only in developed countries is the cost of loaning experimental equipment to students seen as being possible financially. Many contributors argued that new communication and computer technologies should be harnessed for distance education but others expressed caution on grounds of cost, appropriateness and robustness.

Other important considerations of distance education include the flexibility in terms of minimum and maximum period of study before a qualification can be obtained as well as modularization of courses.

Distance education institutions of higher learning fall into three main categories. Category one covers those devoted 100% to teaching by this method. These are called single mode institutions which cover open universities. Category two covers those using both approaches i.e. conventional and distance. These are called dual mode institutions. Category three covers those which allow students to do some of their courses by distance and others by conventional methods. These could be called the mixed mode.

The title of this paper therefore is devoted to higher education by distance methods in institutions that are primarily single mode. Discussion which follows will indicate, however, that all three modes can be considered as part of the strategy of making higher education available to students by the distance approach.

2. BACKGROUND TO THE TANZANIAN EXPERIENCE

Tanzania, like many other countries, was affected by the strong movement in support of UNESCO's Lifelong Learning concept. We therefore see a lot of push for adult education, functional literacy and Universal Primary education in the early and mid-1970s. By 1977, the national leadership was already probing for possibilities of extending the concept to higher education. A delegation was sent to United Kingdom to learn first hand functioning of the UK Open University .

In 1979, an Anglo-Tanzania Media Study group was set up to explore the possibilities of using telecommunications better for educational purposes. It was also asked to explore the possibilities of using them for an Open University type learning. The team recommended the dual mode using the existing national university as a base.

The recommendation does not appear to have been received well since no university studies were introduced by the distance approach although the approach was very much used in the expansion of Primary education.

The recommendation was repeated in a Report by a Presidential Commission on Education in 1982. This time, too, it was the dual mode which was recommended. History shows that no action took place for the next six years until 1988 when a Committee was set up on the Establishment of an Open University in Tanzania.

After a lot of travelling and after synthesizing a lot of ideas from different models and experiences studied, the Committee produced implementable recommendations on the establishment of a single mode University. The main recommendations were:

- a) A single mode university was preferred to a dual one since this was the only way one could guarantee that funds granted for distance education would be used for that purpose.

- b) An open university would increase access and improve equity. In one way, there was social demand for higher education which was not being met by existing institutions. Certain courses were not available and of those on offer, there was restricted number allowed each year. It was felt that more women could be persuaded to apply for higher education and change the status quo.

The Committee observed that unit cost would go down since students would be non-residential and would not require certain structures like cafeteria, halls of residence etc.

- c) The University should:
- offer course with immediate demand and later expand to offer as many as there is a demand for. This expansion should also include courses leading to diplomas and certificates.
 - employ a small but effective and efficient academic staff.
 - have an open admission policy. i.e. it should depend on successful completion of foundation courses prepared for each area of study exempting those who had obtained adequate qualifications recently for admission into conventional universities.
 - fix the lower age limit should be 20 years for admission to the Open University.
 - fix a minimum of 4 years and a maximum of 8 years within which a student should complete his/her degree courses.
 - adopt the team approach in the production of course materials to ensure the production of high quality course materials.
 - study the course materials produced by other universities with a view to adapting them for use in a Tanzanian situation.
 - place due emphasis on both fundamental and applied research activities right from the beginning .

- build into its programmes formative and summative evaluation so that the performance of the institution itself, its working tools and its products (students) is systematically determined.
 - find a criterion which considers the production of learning materials as part of one's academic achievement.
- d) The Open University should cooperate with other institutions by:
- establishing cooperation with all tertiary institutions in the country in order to benefit from their human and material resources;
 - establishing a close working relationship with local financial, business and service organizations with a view to soliciting their support for its activities;
 - forming co-operative links with universities and other higher education institutions abroad, both distance teaching and conventional institutions.
 - establishing working relationship with the Commonwealth of Learning;
 - joining the Association of Commonwealth Universities;
 - establishing contacts with donor agencies, traditional and non-traditional ones.
- e) The Open University should join both the Inter-University Council for East Africa and the Association of Eastern and Southern African Universities.
- f) The Open University should, soon after take-off explore the possibility of extending its services to the other countries within the region. It should also work toward using subject experts in the universities of the region as a way of getting its courses/degree programmes accepted outside the country.
- g) The University should:
- establish zonal and regional centres to facilitate distribution and storage of course materials and to ensure adequate provision of back-up services to students.

- be located in Dar-es-Salaam with a Sub-office in Zanzibar.
 - adopt a multi-media approach in delivering its courses. The print should be adopted as the "Master Medium" for teaching, supported by radio, audio cassettes, video cassettes, face-to-face sessions and television when a national network is established in the country.
 - set up its own Multi-Media Production Centre to handle production, reproduction and distribution of its audio and video instructional material. In the early days, it should make maximum use of the existing electronic and print media production facilities at Radio Tanzania, Audio Visual institute, Tanzania Film Company and Rural Press Centres for production of all its educational materials.
 - be funded through grants from the government and employers, fees from students, and donations. A higher education tax should be introduced.
 - operate from rented premises during the first phase and then construct its own in the next phase.
- h) Staff recruitment should be gradual so that only category of staff that are required in a particular period are employed and that the budget for other items be revised annually so as to establish realistic costs.
- i) The National Correspondence Institution should form the nucleus of the proposed Open University and that its present objectives and functions be reviewed by the Planning Committee in order to streamline and relate them to the wider objectives and functions of the whole University.
- j) A planning Committee be established for the purpose of getting the Open University established by an Act of Parliament in January, 1991 and launching the University on 1st July 1991. Sub-degree courses should be launched in 1992 as a prelude to the launching of degree courses the following year.

3. THE FIRST FOUR YEARS

While there is a record that Government received these recommendations in May 1990, there is no reference to Government's reactions to any. By end of 1990 the former Ministry of Education which had engineered the committees work had been split into two separate Ministries, one for Education and Culture and the other for Science, Technology and Higher Education. This meant that some of the recommendations cut across two separate Ministries leading to conflict of interest.

An important step was taken in April 1991 when a full time person was appointed coordinator of the establishment of the Open University of Tanzania. For the rest of 1991 and 1992 the Coordinator working with an ad hoc Committee which met once every month produced a draft of a bill that was eventually passed by the National Assembly in December 1992. It worked out details of admission policies, degree programmes, staffing provision of study materials, establishment of regional and study centres, cooperation with the postal and library services, net-working with institutions of higher education within and outside the country and initial working spaces.

By March 1993 the University had been given legal clearance to commence its activities. The first University Council, provided for in the Act establishing the University met in August 1993 to provide a sense of direction to the University and prepared the way for the first intake, in January, 1994.

3.1. First Academic Year 1994

The first academic year started off in January 1994 by installing the first Chancellor and registration of the first intake of 766 students. Other characteristics of the year were:

- Use of study materials produced by the University of Nairobi's Faculty of Education and External Studies. Study materials brought from Nairobi were in 10 disciplines namely Business Studies, Economics,

English Language and Linguistics, Literature in English, Geography, History, Kiswahili, Mathematics, Philosophy and Religious Studies and Education.

- With these study materials, it was possible to offer registration in four degree programmes: BA, BA with Education, B.com, B.com with Education.
- Because the University did not have its own full time staff, part-time staff were engaged from the national Correspondence Institution and from the university of Dar- es-Salaam. These assisted with Orientation to distance education, face to face sessions, setting and marking of assignments, setting and marking of timed tests, setting, moderating and marking of annual examinations.
- As pointed elsewhere, the University drew from the rich resources available elsewhere and thus reached an agreement with the Tanzania Library Services where the university kept its own books acquired through donations and through direct purchase.
- Preparations were also begun for disciplines with great demand namely LLB, and Bsc degree programmes. Writers from the sister institutions, the University of Dar es Salaam, the Sokoine University of Agriculture and Tanzania Food and Nutrition Centre were given basic orientation how to write for distance learners and later commissioned to write study materials units. They were also commissioned to write study materials to fill gaps in those purchased from the University of Nairobi.
- Nine Regional Centres were established. Their locations were determined by the number of students registered in a particular Region. Where 40 or more students were registered, a Centre was established. Each such centre served adjacent regions. Two of these were established for political reasons since they did not qualify in terms of number of students enrolled.
- External assistance was received from UNESCO which made a grant for a desk top publishing equipment as well as funding for a UNESCO

Consultancy mission to Tanzania. The UNESCO Consultant made recommendations very similar to those by the 1990 Committee report. This coincidence is not accidental since they reflected views predominant in the country at the time: A span of three years between the two is not long enough to cause major shift in public opinion.

- The Australians assisted with funds for staff training workshops while Commonwealth of Learning assisted with ideas and funding for purchase of study materials.
- The private sector was very useful since it made it possible for availability of volumes of books from Britain and the USA through Book Aid International and the International Book Bank respectively. These were a morale booster since the University could show that it was possible to reach the students were they are through the national library network and with access to fairly new and good books.

3.2. Second Academic year, 1995

The year started with a new intake of 738 students who registered for the four degree programmes already established and for three new ones, namely the LLB, the Bsc, and the Bsc with Education.

The large number of students applying for the law degree was a true reflection of the demand in this area. For over 30 years, the University of Dar es Salaam admitted only 60 students each year due to capacity. And yet, the market demand was much bigger with needs in the Police force, immigration services, the armed forces, general administration, Primary Courts, business and those interested in law as a discipline.

Because Nairobi did not have any materials in this area and because all attempts to get distance study materials elsewhere failed, the University had to operate on the basis of hand to mouth. Students got each part of a Unit as it became available.

For the Sciences, the University had to operate the same way. It received a lot of cooperation from the University of Dar es Salaam which made its Physics

laboratories available to Open University students during the long vacation, for a fee. Sokoine university of Agriculture made its laboratories for life Sciences and chemistry available to students of the Open University during vacations.

Three more Regional Centres were established to make a total of 12.

Study Centres sprung up especially through the enthusiasm of law students. The number reached 36 countrywide by end of 1996.

Surveys showed that female students were finding it difficult to pay for their studies. A proposal to launch a Women Education Assistance Fund was formulated. The University itself established its own Students Assistance Fund while it encouraged all students to apply for Government Loans.

International contacts and networking continued through UNESCO's UNITWIN which "twinned" the Open University of Tanzania and the Spanish Open University (UNED). The contact period is now over and renewal is contemplated. One of the problems here has been language since UNED's working language is Spanish including practically all their study materials. The other problem was associated with the fact that UNED was extremely busy with its own programmes as well as external ones already in place.

UNESCO's Chair programme made it possible for the appointment of a UNESCO Professor of Distance Education who reported early in 1996 on a 4-month assignment. His report on the Institute of Continuing Education is a valuable contribution to the University's plans for short, non-degree programmes.

3.3. Third Academic Year, 1996

The year started with 1,221 new students registered in the 7 degree programmes with the LLB and Education based disciplines attracting most students.

This expansion made it possible to open 5 more Regional Centres making it a total of 17 such Centres. 10 of these had full-time Directors who facilitated contact with and service to students more effectively.

Production of study materials increased and by the end of the year, 37 units had been published in the various disciplines.

A bridging Course, a 5-Unit Foundation Course was taught during the year for the first time. These covered Humanities and Social Sciences; Science and Technology; English Language; Basic Mathematics and Kiswahili. Those who completed the course and sat for their annual examinations were eligible for admission to First year of the degree programme. At the time of writing this report some had already cleared the hurdle and selected for degree work.

To increase access to higher education for the handicapped and in view of the national policy on equity in matters of higher education, serious plans were started to transcribe into Braille and into audio cassettes available study materials. This initiative came from an international donor agency interested in providing education to women, the handicapped and other disadvantaged groups. This same agency had previously committed funds to pay fees for 10 female students for all the six years required for graduation.

The Commonwealth of Learning approached the University with a view to starting a pilot project on the upgrading of skills of teachers of mathematics and the sciences at the junior secondary level.

Working with the Thames Valley University and funded by the British ODA through the British Council, Workshops have been planned for writers of study materials for a degree in Information Management. The first Workshop took place in December, 1996 and the second one in March 1997.

Due to economic problems the nation is going through, the pace of equipping Regional Centres was slowed down. Similarly, the staffing situation was not yet satisfactory since there were no full time staff engaged to cover some of the disciplines. This remained a challenge.

3.4. Fourth Academic year, 1997

The year started with 961 new students making it possible to establish Regional Centres in the remaining regions. This was one indicator that in terms of geographical spread, access to higher education through the Open University of Tanzania had improved considerably. The leading Region was Dar es Salaam with a cumulative total of 1,500 students and least being Lindi with 31 students.

There were at least 23 foreign students from 8 African countries - Namibia, Burundi, Kenya, Lesotho, Palestine, Zambia, Mozambique and Nigeria.

The Regional spread also removed complaints raised in the past that certain regions were favoured in terms of geography, history, political affiliation. No one who met the minimum conditions was left out. Where, for financial reasons, students were finding it difficult to pay, local authorities have stepped in as is the case in Mtwara, Lindi, Zanzibar.

4. FUTURE PLANS

- Given the first four years of practical experience, the University plans to take services closer to the students and thus cut down on costs borne by them. This will be achieved by increasing and equipping adequately Regional and Study Centres.
- Assistance to libraries will be stepped up and turn them into resource centres with audio and video cassettes, books, journals and when resources allow, computer terminals. Already CD-ROMs are available from the International Centre for Distance Learning (ICDL).
- Production of study materials will be stepped up in new disciplines and to update the old ones. Materials for the handicapped will also be emphasized.
- Short courses, tailor made for special groups will be mounted through the newly established Institute of Continuing Education. Some of these will be for the University staff itself while others for other parties.

- Postgraduate studies are on demand and the University will have to address itself to this need very soon.
- There are plans to use Satellite and modern technologies to reach distance learners more efficiently. Efforts will be made in this direction together with others.

5. CONCLUSIONS AND RECOMMENDATIONS

- Using the Tanzanian experience, it can be said that distance education is a viable alternative to access to higher education. Existing universities should be used on the dual mode pattern as is the case at the University of Nairobi, Makerere University, University of Zimbabwe, University of Zambia etc.
- The single mode distance education is also a viable proposition if a country is ready for it.
- Cooperation with existing institutions is absolutely essential. These include academic, financial, service delivery, communication, publishing etc.
- Quality service is important to attract students and gain public confidence and respect. Open Universities or distance education institutions are not synonymous with sub-standard second or third rate providers of higher education.
- Political will is absolutely essential without which it is either tough going or impossible
- There is need to keep on learning from others, from the environment, from new institutions from international experiences.
- Coordination bodies established already should make their services accessible easily and readily.

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TABLES**1. Admission of students 1994 - 1997
(Country/region)**

	COUNTRY REGION	NUMBER OF STUDENTS
	Arusha	190
	Dar-es-Salaam	1500
	Dodoma	85
	Iringa	160
	Kagera	92
	Kigoma	55
	Kilimanjaro	178
	Lindi	31
	Mara	94
	Mbeya	240
	Morogor	166
	Mtwara	73
	Mwanza	190
	Pwani	77
	Rukwa	40
	Ruvuma	77
	Shinyang	93
	Singida	38
	Tabora	110
	Tanga	89
	Zanzibar	114
	Namibia	1
	Burundi	1
	Kenya	14
	Lesotho	2
	Palestine	1
	Zambia	3
	Mozambique	1

**2. Admission of Students,
1994 - 1997**

DEGREE	NUMBER OF STUDENTS
BA	346
BA (Ed)	803
BCom	550
Bcom (Ed)	99
BSc	175
BSc (Ed)	199
LIB	1151
FOUNDATION	392

**3. Degree Programme and Foundation:
1997 Intake**

	MALE	FEMALE	TOTAL
B.A.	46	4	50
B.A.	114	18	138
B. Com.	91	12	103
B. Com. (Ed)	15	2	17
B.Sc.	62	7	69
B.Sc. (Educ)	34	8	42
LIB	293	30	323
Foundation	182	40	222
TOTAL	837	121	958

CHAPTER 21

The African Virtual University Project: The Case of Kenyatta University

Magdallen N. JUMA*

1. INTRODUCTION

The new global economy is significant because it offers the promise of allowing less developed countries the chance of leap frogging over the traditional development processes in order to improve the quality of life of their citizens. If Sub-Saharan Africa wishes to participate in the knowledge intensive global economy, it must be able to produce large numbers of scientifically and technologically literate, innovative, receptive, highly adaptable, and problem solving minded people with predisposition to life learning.

The African Virtual University (AVU) is a concept of distance education which uses technological mode of instructional delivery. It is the first of its kind, interactive-instructional telecommunications network established to serve countries of Sub-Saharan Africa. It is a concept which was hatched and funded by experts from the World Bank. Currently, it is headquartered in Washington D.C., but since it is an African network, it will eventually be coordinated from one African University.

The mission of AVU is to use the power of modern information technologies to increase access to educational resources throughout Sub-Saharan Africa.

*Director of Distance Education, Kenyatta University, Nairobi, Kenya.

Firstly, the objectives of AVU are to improve the quality and relevance of Science, engineering and business instruction in Sub-Saharan Africa. Secondly, to expand enrolment levels in these areas and support and encourage African Universities in developing on a competitive basis curricula that could be broadcast to other African countries.

The rationale of AVU is based on the following premises:

The essential problem confronted by university managers, academic staff, government policy makers, graduate employers, students and their families is that the quality of university education in Africa has declined significantly. This is true regardless of how quality is defined. The primary cause is well known; declining resources during a period of growing enrollments, without a capacity to keep the two in balance. But other factors also contribute; poor national economic performance, inappropriate governing structures, feeble national policies, political interference in many aspects of university endeavor, weak internal university management, and campus inability (e.g. student unrest, high management turnover).

The declining quality of university education, and the institutional crisis which surrounds it, have been the subject of considerable analysis and debate during the 1990's. Through research, conferences, workshops, and commissioned studies, abundant information and understanding have been generated by many organizations. The present constraint is not lack of knowledge or a sense of what is required, rather, it is the inability due to political sensitivities, financial limitations, or ineffectual management to take the necessary actions.

With the described efforts to establish a full partnership among African governments and the donor community which views university revitalization as an essential ingredient for augmenting capacities for development in Africa, a significant opportunity is created by the African Virtual University project to

catalyze constructive action in this arena. The African Virtual University Model will therefore assist in tapping the potential offered by the new technologies to overcome some of the financial, physical, and information barriers that prevent increased access to high quality education in Sub-Saharan African (SSA).

Furthermore, the emergence of the Virtual University model presents an exciting opportunity. For instance, the growth of new technologies make possible the creation of virtual universities where quality professors, libraries, and laboratories can be shared by people and organization in physically unconnected places. The pedagogical advantages afforded by the model of Virtual Universities are even more significant; - they enable the introduction of more current programmes of Studies and curriculum content to adapt to demand and keep up with latest advances in disciplines of studies. The interactive nature of these new technologies helps to solve one of the biggest problems encountered by distance education programmes to date, that is, the isolation of distance education students because of lack of interaction with professors and other students.

2. IMPLEMENTATION OF THE AFRICAN VIRTUAL UNIVERSITY PROJECT.

The African Virtual University project is being implemented in three phases:-

The First Phase - the prototype/pilot service phase

The World Bank invited several African Universities to participate in the inaugural training workshops. For Anglophone, the inaugural workshop was held in Addis-Ababa, Ethiopia, in February, 1997. For the Francophone, the training workshop was held in Dakar - Senegal, April 1997. Participation in the workshop determined involvement of universities in the project. Each participating university was represented by Campus Co-ordinator, technical coordinator, course

coordinator and library service coordinator. During these workshops the following issues were addressed:

- Technical demonstration of the AVU facility.
- Administrative structure of AVU and management of the project.
- Roles of different coordinators and stakeholders in AVU were identified and discussed.
- Modalities of networking within AVU was analyzed.
- Efforts were made towards harmonization of AVU course syllabus with the syllabi of all participating universities in Physics, Mathematics, Electric circuits, and non-credit courses.
- Modalities of the contract between COMSAT (equipment supplier) and participating institutions were clarified.

The first prototype phase started in June 1997 and will continue up to June 1998. The purpose of this phase is to establish partnerships with institutions of higher education throughout Sub-Saharan Africa for the offering of technology. Six countries in Anglophone Africa are participating in the project. In the AVU project, Francophone countries have not initiated. In Anglophone Africa, there are twelve receiving sites distributed as follows:

COUNTRY	RECEIVING SITES
Ethiopia	Addis Ababa University
Kenya	Kenyatta University
Uganda	Makerere University Uganda Polytechnic Kyambogo (UPK) Martyrs University
Tanzania	The Open University of Tanzania Dar-es-Salaam University
Zimbabwe	University of Zimbabwe National University of Science and Technology in Bulawayo (NUST)

Ghana	Kumasi University University of Cape Coast University of Ghana
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University institutions on board for the AVU first semester were; Kenyatta, Makerere, Kyambogo, Martyrs, Addis Ababa, Bulawayo (NUST) and Zimbabwe. However, for the Open University of Tanzania, Dar-es-Salaam, Kumasi, Cape Coast and the University of Ghana, installation of the Satellite equipment has been completed recently. A successful prototype phase will provide a foundation of the second phase of the African Virtual University project. *The second phase* will include offering of complete undergraduate degree programmes from leading universities worldwide beginning September 1998. *The third phase* of the project will involve development and offering science curricula from one or more institutions in sub-saharan Africa. This phase will also involve resource-sharing of technology-based degree programmes among institutions of higher education through out Sub-Saharan Africa.

3. THE IMPLEMENTATION OF A.V.U. AT KENYATTA UNIVERSITY

Academicians tend to be conservative and any new innovation in education such as the African Virtual University project (A.V.U.) is bound to evoke resistance. This therefore called for serious campaigns and sensitization awareness. There were a series of awareness campaigns through the media, such as national newspapers, television, seminars and workshops to sensitize the public and the business community. The launching of the project in Kenyatta University involved the following procedures:-

3.1. Sensitization and Awareness Campaign

The university senate and students were sensitized on the concept of the African Virtual University (A.V.U.) and its relevancy for university education. There were a

series of seminars to sensitize senate members about the AVU project. Demonstration of the facility was undertaken during sensitization Seminars/workshops and meetings were organized for members of the faculty of Science to synchronise AVU syllabi and Kenyatta University Syllabi in subjects such as Physics, Chemistry, Computer Science, Internet Access, Mathematics – Calculus I, Calculus II and Differential Equations. In all the course content, issues of quality, scope, and relevancy were identified and communicated to course writers in the United States of America. The process is continuous and if there is any new course to be transmitted, members of the Faculty of Science have had to scrutinise its content, relevancy, scope, depth, etc. before it is accepted for students in Kenyatta University. Formative evaluation is continuous throughout the prototype phase and is done on line by students, campus coordinator, technical and course coordinators. The University of new Mexico in America coordinates AVU evaluation.

3.2 Physical Preparation

- Renovation of a Science Complex building had to be made suitable for the installation of the Satellite Receive Equipment.
- Security measures were undertaken in order to accommodate valuable satellite equipment.
- Provision of electricity, telephone and Internet services. The university purchased a generator as a “back up” for electricity.
- Procurement of licenses from Kenya Posts and telecommunications Corporation, Insurance, tax-exemption, inspection licenses, work permits for COMSAT engineers etc.

3.3 Satellite Transmission Equipment

The Satellite receive equipment was installed at Kenyatta University in June 1997. The AVU Satellite receive terminal consists of the following equipment:-

Satellite Dish

This is a saucer like mesh of wire and parabolic in shape used to trap and focus satellite signals to levels which are possible to be detected by the decoding equipment.

Line Amplifiers

These are small amplifiers for increasing the signal strength to a certain level to allow distribution using cables without appreciable signal loss.

MPEG-2IRD Receivers

These are units for decoding scrambled satellite transmissions to their original state for viewing on T.V. monitors.

Television Supercan Interface

This is used for linking the computer to the T.V. monitors as an external interphase to enable students observe lessons on the TV. Screens.

Toner Broadband Distributor Amplifier

This is a signal amplifier used to amplify decoded transmissions from the IRDs before distribution to the monitors.

Back Up (U.P.S.) Uninterrupted Power Supply

This is used to provide power back up for the computer terminal to allow proper and safer system shut down as well as protect the computer from power upsurge and spikes which could short circuit the circuit boards resulting in system failure.

Panasonic Video Recorder/Player

This is used for recording and replaying video tapes to the students.

Gateway 2000 Full Multimedia 200MHZ Computer Terminal with HyperTerminal Interphase Card

It is used as an external control for testing and monitoring the IRD performance as well as resetting

the signal reception parameters. The computer is also used to send and receive e-mails, download softwares and programmes including upgrades.

HP Laser Jet Printers

It is used for printing mails, data, proposals, course materials, surveys and any other material which require printing.

Video Cassettes

This is used for recording lessons and seminars to allow replays for student's convenience.

3.4 The Process of Satellite Transmission

Programmes originating at the participating universities in the US are transmitted via domestic satellite to a gateway earth station located in Washington D.C. area, where the programmes are monitored (and perhaps recorded) by Gateway operations and maintenance (O.M.) personnel.

The signal format are conveyed from the US Standard NTSC format to the international PAL format. One of the signals is transmitted either live or via tape playback to an INTELSAT Satellite located over the Atlantic Ocean, initially at 338.7 degree East Longitude. The Satellite retransmits the signal to the entire African Continent, where it can be received by any station equipped with the proper receive equipment. For European transmissions, the INTELSAT Satellite access may be accomplished directly or via regional Satellite to gateway stations having INTELSAT access.

3.5 Problems and Prospects

Despite achievements made by the African Virtual University Project at Kenyatta University, there were problems which had to be solved.

The following technical problems were experienced:

Electricity Interruptions

There have been constant blackouts especially during rainy seasons. This has sometimes interfered with lessons. This problems has been solved by installation of a back-up generator.

Loss of Signal from COMSAT (The Company which supplied the Satellite Equipment)

After the installations were completed, the IRDs were not 'locking' onto signals from COMSAT due to the Satellite transmission problem from the originating site. COMSAT repaired their satellite and everything was working perfectly well.

Autodialer failure

This software is used to reverse calls to the worldbank. It's failure to operate as required means that the university has to incur international telephone bills. A Company in Canada which supplied this system tried to repair it, but unfortunately it failed completely. However, the technical coordinator at Kenyatta University devised a way to do the work of the dialer by first dialing the dialer's configuration call-back number followed by the destination number. This works without any hitches.

Telephone Calls Transfer failure

This was caused by bad/poor line tone between Kenyatta University and the originating site. After several attempts, the technical coordinator changed lines by using the modem line to dial the originating site. This worked and live sessions progressed without further problems.

Blurred Pictures in the Viewing Room

Initially, this was a serious problem, which resulted from loose connection to the broadband distribution amplifier. After tightening this, the signal was back to normal.

System breakdown

Initially, this was a serious problem as the system would sometimes break down. After thorough checking of the system it was found out that the master switch fuse had blown due to power upsurge during the switching on of the monitors. After replacing this, the technician reversed the order of putting on the monitors to reduce the load on the fuse during powering on. This has been very successful.

Satellite Link breakdown

This happens to the Kenya power and Telecommunications cooperation Satellite station thereby interrupting satellite connectivity to the Internet. This means that students cannot use the Internet and the control room cannot send e-mail to our outside contacts. This is due to the fact that the University uses their satellite as a gateway to the Internet through the telephone lines. This can only be solved if we had our own Internet server.

The Television Supercan Interphase failure

The Supercan interface is used to link the terminal computer to all the television monitors allowing students to be taught from the control room. After testing, it was found out that the DC adapter was faulty, and, so it was tested to see if replacement would work. This was done and the interface was restored. It was later found out that the suppliers had sent the device with an adapter which had a lower power rating than our power transmission line resulting in the breakdown. The technical coordinator therefore ordered for a DC adapter locally and replaced the earlier one. The television supercan has worked very well after the replacement.

Encoded e-mail messages

The problem was that the mail software provided by our service provider does not have mail encoding and decoding facilities. Luckily enough, we had upgraded one of the browsers to the latest. There is one on the

Internet. This browser also had a mail software with very advanced security features as well as mail encoding and decoding facilities. We therefore redirected the mail from our mail folder to the browser and it automatically decoded the documents into legible documents instantly. There is confidence in receiving and sending encoded mail.

Satellite transmission in distance learning is a new innovation in tertiary education and therefore technical problems are bound to occur in the process of using the new technology. Educators are required to solve problems as they experience them.

Although AVU seems to be a promising innovation in distance education, there are pertinent issues of sustainability which require serious consideration. One important aspect of the project is heavy capital investment in the purchase of Satellite Receive Terminal equipment. This type of equipment is expensive to maintain and issues of maintenance and repair of the equipment by host universities after phase out of the World Bank's assistance should be addressed. Moreover, satellite technology for educational purposes is extremely expensive for any one African country to afford. It is hoped that African institutions will create mechanisms of sustainability and sharing unit costs for the use of the satellite.

There are other AVU demands on universities financial resources to meet telephone expenses, running costs and internet connectivity etc. These expenses tend to creating stress on already over stretched financial resources.

The AVU academic workload is also very demanding and if part time staff do not get an incentive immediately, their motivation might be reduced.

The World Bank AVU team and participating institutions need to think seriously about sustainability of these noble project before it is discarded as one of those "White Elephant" projects of the World Bank. Income generation, and capacity building should be key elements in providing quality education. Relevant AVU

programmes which attract the labour market should be designed.

3.6 The Management and Administration of AVU Programmes

Each participating university has a campus coordinator incharge of management and administration of AVU. There is a technical coordinator who is incharge of all technical issues of the project. A course coordinator who is in charge of all academic programmes of AVU. He/she collaborates with course facilitators for each subject. Each subject has a course facilitator who is incharge of the subject, syllabus synchronization, homework, examinations, marking and grading. There is a library coordinator incharge of the library component of AVU. The AVU team works within the entire university administrative structures.

3.7 The AVU Academic Programmes Registration of Students

The AVU registration of students started on 12th July 1997 after prospective students for the summer course had been thoroughly briefed about AVU and what is expected of them. There was a demonstration on how a class could be conducted via the satellite using a pre-recorded cassette. It was made clear to the students that the AVU package contained the following educational inputs:-

- A textbook for every student A set of notes on which live and recorded lectures are based was available for every student.
- Live-recorded lectures
- An Interactive instructional facility, "Talk back system" to enable students ask questions during lectures.
- An e-mail facility which enable students to ask questions during lectures.

3.8 The Transmission of AVU Calculus I Summer Course- (14 July – 28 August 1997)

Kenyatta University was the first University in Sub-Saharan Africa to receive courses via the Satellite. The first AVU lecture was delivered “live” by a Professor from New Jersey Institute of Technology (NJIT). These were a total of 37 students who listened and curiously watched the lesson from (NJIT) with a lot of excitement about the new technology. The students found the live lectures more impressive than the pre-recorded lectures. This was very amazing, given that the pre-recorded lectures were delivered by the same lecturer Prof. Dios. The course continued until 20th August, 1997. During this course, continuous assessments tests (CATS) and examination were set and marked by the course facilitator, while homework was set by Prof. Dios and marked by the course facilitator. All students except one passed the examination and the scores were computed along with other student scores in the Mathematics Department.

3.9 Seminars and Workshops: Seminars for the top executives “purchasing policies and practices”- 14 August and 21 August 1997.

After adequate marketing of AVU seminars among the business community in Nairobi, we were able to get 40 executive managers participants from banks:- Barclays, Standard, Central Bank, Kenya commercial bank, Commercial Bank of Africa, Companies such as Kenya Breweries, Kenya Bureau of Standards, Kenya Broadcasting Corporation, etc. There was an overwhelming response from the business community. During the seminars participants were able to interact with the Professor from Virginia technology USA. It was very interesting for participants in Kenya to network with participants from Uganda, Ethiopia and Zimbabwe. Seminar participants assessed it as being an educative, informative, modern approach to technology and interesting.

3.10 A regional workshop for AVU Library Access (4-5 August 1997)

The AVU Kenyatta University organized a workshop for library access/downloading training workshop. There were participants from Washington, D.C. World Bank, University of Mexico, Addis Ababa University, University of Bulawayo and the University of Zimbabwe. Technical coordinators, Campus Coordinators and course coordinators from participating universities were trained on how to download journals from database. Kenyatta University will be the regional centre for the library downloading services.

3.11 The First AVU Semester (1st October to 23 December, 1997)

The course kicked off very successfully with the following registration of students:

Mathematics, Calculus 1	- 40 students
Calculus II	- 56 students
Physics 1	- 36 students
Internet	- 40 students

For all these courses, students are provided with free textbooks and study notes from the World Bank. All courses except the Internet are free.

For each of the courses we have three sessions per week, each lasting two hours. The origin of transmission is as follows:

Cal 1	- From New Jersey Institute of Technology
Cal 2	- From New Jersey institute of Technology
Physics	- From the University of Dublin
Internet	- From Ireland, University of Dublin

Each transmission session, is video recorded for use later on, either for purposes of revision, or if a student had missed a lesson due to sickness then she/he can view the cassette.

3.12 Internet Access Training

This course has generated a lot of enthusiasm from students. The university has purchased other

computers, projectors and provided Internet network for training. A separate lab for the course has been created for training. 40 students learn Internet course during transmission and later in the day, there are two other sessions for students to learn practically from the pre-recorded cassettes with the assistance of the course facilitator. For Internet course, there are different charges for students, professors, lecturers, staff, and interested people from the public and business institutions. We are in the process of marketing the course to the public and the response is very good.

3.13 AVU Library Access Services

The AVU library is being renovated to accommodate the library facilities. The library component will soon be equipped by computers from the World Bank, Washington D.C. This library facility will enable the university and interested people to access or download up the 600 different journals from Virginia Technology State University's database. This will give students and professors an opportunity to get current publications.

3.14 AVU Student Counseling Services

The AVU Management team, particularly the campus coordinator and course facilitators offer counseling services to students. For instance, the AVU courses emphasize quality, punctuality, attendance, assignment, and six hours per course per week as opposed to regular courses of two sessions per week each lasting one hour. Students have to understand the new culture being advocated for by AVU in imparting quality university education. Since students and members of staff are apprehensive about foreign people delivering lectures from abroad, and more so quality and relevancy of those lectures, these call for counseling and education about change of attitude towards innovations and technology.

3.15 Capacity Building

AVU programmes in Kenyatta University have endeavored to build capacities in our students.

Interested AVU students are trained on how to operate the satellite. One student from the first AVU Calculus I summer cohort can now operate the satellite equipment and has been employed by the university as a Graduate Assistant. Participatory learning is encouraged and students are encouraged to send questions by e-mail to the professor in America. This approach tends to build confidence in the learners and a sense of ownership. Through students own initiative they have formed a club – “An Information Technology Cyber Club”, whose theme is “Marching into the 21st Century with the Street Children of Nairobi”. Among other things, club members intend to give voluntary services to street children by providing them with functional computer literacy skills.

CONCLUSION

The African Virtual University (AVU) network offers a lot of hope for universities in Africa to share resources, expand enrolment levels in sciences and build capacities in technologies which is a prerequisite for economic development.

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**ACHIEVEMENTS AND PROSPECTS
OF SOUTH-SOUTH AND NORTH-
SOUTH COOPERATION AND
PARTNERSHIP**

CHAPTER 22

The African and Malagasy Council on Higher Education (CAMES)

Rambre M. OUMINGA*

1. PRESENTATION OF CAMES

1.1 Historical Background

CAMES is an inter-African institution created on 22 January 1968 in Niamey (Niger) under Resolution No. 23 which was adopted by the Heads of State of the Joint Organization for Africa and Madagascar (OCAM). It was created in conformity with the Organization of African Unity (OAU) provision concerning the coordination and harmonization of policies on cooperation in higher education and research.

On 26 April 1972 i.e. five (5) years after its creation, 17 Heads of State and Government signed the Convention on the Statutes and Organization of CAMES at a meeting in Lome (Togo).

The meeting held in March 1986 in Brazzaville adopted the Internal and Financial Regulations as well as the amendments to the Convention that gave CAMES its current structure. CAMES now comprises 16 member countries (Benin, Burkina Faso, Burundi, Cameroon, Chad, Central African Republic, Congo, Côte d'Ivoire, Gabon, Guinea, Madagascar, Mali, Niger, Rwanda, Senegal and Togo).

The Convention emphasized the urgent need to:

- adapt higher education and research to the realities prevailing in Africa and Madagascar;

*Secretary general of CAMES, Ouagadougou, Burkina Faso.

- ensure an optimal use of institutions which were already functioning and thus promote effective and constant cooperation between universities, higher educational institutions and research centers;
- establish structures, programmes and conditions that call for the training of local teachers and researchers duly prepared to perform their functions; and finally
- ensure that the said programmes serve as the basis of a quality international education that would address the specific needs of the community of Africa and Madagascar.

1.2. Objectives

To meet this requirement, some programmes were drawn up to pursue the following objectives:

- collect and distribute University publications and research papers;
- prepare conventions on higher education and research between member States.
- promote and foster understanding, solidarity and permanent cultural and scientific cooperation between the member States;
- organize careers for lecturers engaged in research activities.

1.3. Programmes

Four (4) programmes were established, namely:

- i) The Programme on the Recognition of degrees and certificates awarded by higher educational institutions and universities which was established in 1972 and implemented annually until 1986 and then bi-annually ever since. It gives official recognition to knowledge acquired in conformity with set standards. To date the CAMES has organized 18 seminars and these enabled Experts of the member States to analyze and compare training programmes of several universities in the member States with a view to establishing their equivalence. Four hundred and

sixty-five (465) certificates have already been recognized.

- ii) The Programme on African Traditional Pharmacopoeia and Medicine. Since 1974, this programme has been organizing seminars and symposia whose proceedings featured in a number of publications. The programme is expected to play a very important role at this time when prices, particularly those of medicines imported from the industrialized countries, are rocketing while Africa's purchasing power is steadily weakening. The said role was once more recognized by the Heads of State who recommended that African Pharmacopoeia and Traditional Medicine be encouraged, developed and promoted among other priorities since they constitute elements that can help improve the health situation in Africa. This recommendation was well received, because, among other things, an increasing number of African researchers are specializing in disciplines related to this programme. Moreover, the current trend seems to assert the need to promote collaboration between modern hospitals and the traditional medical practitioners. Besides, the World Health Organization (W.H.O.) attaches much importance to the African Pharmacopoeia and Traditional Medicine. Nine (9) seminars have so far been organized under this programme.
- iii) The Inter-African Advisory Committees which were set up in 1978 to assess candidates' academic and scientific performance through their educational and research records. Qualified candidates, as the case may be, are upgraded as Assistant Lecturers, Senior Lecturers or Professors among the academic staff and as Research Assistants, Senior Research Fellows or Directors of Research, in the Research sector.

- iv) The University Teachers' Competitive Examination (Agrégation). It concerns two groups of disciplines.
- Human Medicine - Pharmacy, Odontostomatology, Veterinary Medicine and Animal Production.
 - Law, Economics and Management.

The "Agrégation" requires the physical presence of candidates for a number of examinations (3 or 4 depending on the discipline concerned).

These programmes and foster complementarity between Universities and other higher educational institutions of the member States and unquestionably improves the quality of higher education. They constitute a means of encouraging perpetual excellence among lecturers and research fellows.

To give concrete expression to their regional and international dimensions, the CAMES promotion programmes also encourage the participation of lecturers and research fellows from France, Canada, Belgium, Switzerland and America.

To date, 2316 or 58.67% of the 3947 candidates registered for the various Aptitude Tests have been upgraded. Similarly, after fifteen competitive examinations (Agrégation) 463 or 48.38% of the 957 candidates have so far passed the "Agrégation" and are promoted Senior Lecturers.

2. PROGRAMME IMPLEMENTATION MECHANISMS AND CAMES ACHIEVEMENTS BETWEEN 1972 AND 1997

2.1. Recognition and Equivalence of degrees and diplomas

The objectives of this programme are to:

- establish the validity and equivalence of degrees and certificates awarded in the CAMES member countries as well as other academic certificates;
- identify the level of studies;
- maintain standard qualifications for teaching staff and researchers;
- enforce the same conditions of access to higher education and research;

- establish an analogy between course organization and content and between the assessment of aptitudes and knowledge;
- restore or maintain in the universities an instructional organization corresponding to international university standards and the requirements for a harmonious training of professional staff abreast of the realities peculiar to Africa.

The related seminars attract higher education specialists from member countries and international institutions, particularly UNESCO and the Association/Network of Francophone Universities (AUPELF-UREF).

Certain interested non-member countries and inter-State organizations send experts to the seminars as observers. These include Belgium, France, Canada, African Institute of Computer Science and the "Ecole Inter-Etats d'Ingénieurs de l'Équipement Rural" (E.I.E.R.)

The deliberations are organized in the form of symposia which last three to four days on average. Three specialized commissions have been set up as follows:

- Commission I: Science, Medicine and Engineering.
- Commission II: Arts, Social Sciences and Engineering
- Commission III: Law, Economics, Management and Engineering.

The Programme is mainly sustained through financial contributions from member countries and Inter-State Institutions submitting certificates/degrees for recognition.

Its criteria for evaluation (referential bases) include:

- Criteria for admission
- The total number of hours taught
- Course content
- Qualifications of the academic staff

- Mode of examination (continuous assessment or terminal examination)
- Certificate/degree awarded.

By December 1997, CAMES had already organized 18 seminars and recognized 465 certificates out of the 547 certificates/degrees submitted for recognition.

2.2. Inter-African Advisory Committees

The Advisory Committees are consultative bodies empowered to study the suitability of candidates applying for posts in the Higher Education and Research fields.

They comprise two principal organs:

- i) *The General Advisory Committee (C.C.G.)* which supervises and enforces the Agreement establishing the Inter-African Advisory Committees. Its members are generally Vice-Chancellors of Universities and Directors of the National Research Centers.
- ii) *The Specialized Technical Committees (C.T.S.)* which function on an inter-disciplinary basis and has to advise on applications for posts that are submitted to them. Their members are professors of higher educational institutions and research fellows of national institutes or research centers.

The Inter-African Advisory Committees pursue the following objectives:

- Transfer to Africa the power to decide on the ability of Lecturers and Research Fellows;
- Confer on the African academic community the right to co-operate with their counterparts;
- pool resources and skills in order to enhance the credibility of decisions taken in respect of African university lecturers and research fellows of national research institutes and centers;
- Harmonize or at least compare the qualifications of African university lecturers and research fellows by addressing problems concerning their promotion within a joint framework.

Candidates for the posts of Assistant Lecturers, Senior Lecturers and Professors as well as Research Assistants, Senior Research Fellows and Directors of Research shall be lecturers or research fellows who meet the internal criteria set by their native countries and also fulfill the following conditions:

- Candidates should have worked for at least two (2) years in a higher educational institution;
- Candidates should possess the requisite certificates and/or should have published works related to the post for which an application is submitted;
- Candidates should have good references in research and teaching skills (in the case of lecturers).

Since their establishment, the Inter-African Advisory Committees have contributed towards the promotion of 2316 lecturers out of the 3947 presented.

2.3. The Competitive Examinations (Agrégations)

The "Agrégations" are organized in order to:

- recruit higher education staff while guaranteeing the international standards of the lecturers;
- adjust the mode of recruitment in the higher education sector to the realities peculiar to Africa;
- assess the suitability of candidates for teaching positions in the higher education sector;
- facilitate the promotion of teaching staff.

j) Competitive Examination in Human Medicine, Pharmacy, Odontostomatology, Veterinary Medicine and Animal Production

The registration conditions governing the "Agrégations" are as follows:

- 10 copies of the candidate's curriculum vitae;
- 10 well-bound copies of qualifications and scientific publications;
- 10 copies of academic certificates from Secondary School to the Ph.D level;
- 1 attestation of 5-year Assistantship issued by competent authorities.

The examination for Human Medicine, Pharmacy and Odontostomatology comprise:

- a) a 30-minute paper on the candidate's qualifications and scientific publications, which consists of a presentation by the candidate followed by discussions with members of the Examining Board (Coefficient 1.5 for qualifications and 1.5 for scientific publications).
- b) a 45-minute lecture after 5 hours of preparation in library with documents authorized by the Examining Board (Coefficient 3).
- c) a practical examination related to the discipline (examination of patients, practical laboratory work). The duration of the examination is determined by the Examining Board (Coefficient 3).

Three (3) examinations are organized for the "Agrégation" in Veterinary Medicine and Animal Production:

- a) a 1-hour paper on qualifications and scientific publications (Coefficient 3) consisting of a discussion on works presented by each candidate. It is preceded by the candidate's brief presentation of his/her qualifications and publications.
- b) The theoretic examinations consist of two (2) parts:
 - a one-hour lecture after 5 hours of preparation with notes and documents authorized by the Examining Board (Coefficient 1.5);
 - a one-hour lecture after 48 hours of preparation (Coefficient 1.5);
- c) There shall be at least 3 practical examinations with a general coefficient 3.

After 8 sessions, this examination allowed for the promotion of 387 lecturers out of the 636 candidates for senior lecturers, the number of promoted staff representing 60.8%.

ii) Competitive Examination in Law, Economics and Management

To be authorized to register for the "Agrégation" in Law, Economics and Management, the candidate should absolutely possess a Ph.D or an equivalent degree recognized by CAMES at the time of registration.

The competitive examination is organized in the following 5 areas and the candidate is obliged to specify the selected area at the time of registration;

- History of the Institutions
- Private Law
- Public Law and Political Science
- Economics
- Management

Whatever the section, the papers of the Examination are organized as follows:

1st paper: Discussion of publications (duration: 1.5 hours of which 15 minutes are devoted to a presentation by the candidate);

2nd paper: Textual commentary or documentary analysis (30 minutes) after 8 hours of preparation in an individual examination room (for Economics) and a lecture on Business Theory (30 minutes) after 8 hours of preparation in an individual examination room (for Management Sciences).

Announcement of results

3rd paper: A 30-minute applied lecture after 8 hours of preparation in an individual examination room.

In all cases, the papers are awarded marks ranging from 0 to 20. Candidates who score marks below 8 are eliminated.

Ever since the Competitive Examination was introduced, 76 lecturers have been promoted Senior Lecturers out of 321 candidates presented.

CAMES has achieved generally satisfactory results, thanks to the efficient mechanisms used in implementing programmes mainly based on the use of highly qualified regional and international experts.

However, CAMES is now likely to face at least three difficulties that might compromise its efforts:

- the high level of contribution arrears of member countries;
- the systems of internal promotion introduced in certain member countries;
- difficult conditions encountered by member countries to host CAMES programmes.

3. PROSPECTS

For some years, CAMES has increasingly been requested to assist in providing appropriate solutions to the crisis besetting higher education in the member countries. In this regard, it suffices to quote the statement made by the Burkina Minister of Secondary and Higher Education and Scientific Research: "At a time when almost all the African educational systems are in decline, CAMES should no longer content itself with orienting its traditional programmes towards promoting careers for lecturers and research fellows, establishing the equivalence of certificates, organizing competitive examinations ("Agrégation") or research on African pharmacopoeia. *CAMES is now expected not only to address all the problems of Higher Education but also to establish an Inter-State Research Center to provide appropriate solutions to the most crucial problems of higher education*".

Under the circumstances, CAMES intends to undertake the following measures:

- introduce new programmes into the organic structure of the institution (CAMES), particularly those concerning distance education and teacher training;
- create a scientific journal to be published under the aegis of CAMES;

- produce a documentary film on CAMES to raise awareness among a target audience comprising political authorities, academics, lecturers and research fellows;
- Publish a unique comprehensive document on CAMES.

4. CONCLUSION

Through its activities, the African and Malagasy Council on Higher Education (CAMES) has demonstrated a long-standing experience and an unquestionable expertise in programme implementation. This institution remains the hallmark of the member countries' maturity and independence.

CAMES is expected to play an important role in the development of Higher Education in Africa. It is an indisputable instrument of evaluation that has stood the test of time and remains reliable. It constitutes an element of pride for the member countries and a successful model of regional and international cooperation.

CHAPTER 23

The Association of Francophone Universities and the Francophone Universities Networks (AUPELF-UREF)

Bonaventure MVE-ONDO*

1. INTRODUCTION

The challenge of international exposure

African Universities have long been contending with a major challenge which consists in their international exposure. Such exposure is theoretically linked to the vicissitudes of the countries' historical evolution and geopolitical context. Certainly, ever since the independence era, academic associations and university authorities have been making efforts to develop an African University environment.

A typical example can be found in the Conference of Francophone African University Rectors (CRUFA) which has set itself extremely ambitious objectives including inter-university co-operation in a context of the communication difficulties whereas, at that time, the States were increasingly obsessed with *nationalism at the university level*.

In fact, if this recommendation by African University authorities has materialized, it was more because of the efforts made by AUPELF-UREF, the African and Malagasy Council for Higher Education (CAMES) and UNESCO or other multilateral or bilateral donors than the concrete actions taken by

*Director of the African Regional Office of AUPELF-UREF, Dakar, Senegal.

CRUFA. This situation is hardly surprising because, whereas the CRUFA project was ambitious and laudable, the Conference had no structure, personnel or even resources to accomplish its project. In other words, CRUFA *lacked the means of implementing its policy.*

Moreover, the two Charters adopted at the Kinshasa I and II meetings explicitly expressed a desire for generosity and openness but they did not define the role and status of public authorities and African universities in the implementation of inter-university co-operation. The main reason for such a situation rather consisted in the historical transition from a higher education system centred around regional structures, to a national framework in which each State wanted to establish its own university structures. From that time onwards, inter-university co-operation could only be established in the North-South direction to make up for shortage of experienced teaching staff and in the South-South direction between the first generation and second generation universities.

Towards a genuine inter-university co-operation

In short, it is the geopolitical and historical context that has made Francophone Africa the main sphere of activity of AUPELF-UREF instead of an endogenous approach adopted by the

African universities themselves towards a genuine inter-university co-operation. This means that the concerns of our universities do not always correspond with the changes taking place in the world as reflected in the regionalization and African integration movements on the one hand, and, on the other hand, in the persistent crisis in our countries as a result of globalization.

The challenge consists in the contemporary African universities' ability to develop a well-defined environment for co-operation. In this regard, they have to meet a number of requirements in order to be integrated into co-operative mechanisms that almost systematically entail:

- competitive bidding procedures requiring quick response that consequently necessitate a capacity for vigilance and anticipation;
- joint-funding arrangements involving diverse and heterogeneous institutions particularly the criteria for selecting projects and their implementation procedures.
- institutional project design and implementation arrangements supported by increasingly formalized networks and associating several partners generally located in various countries and continents.

In this regard, the central issue is to know whether our universities have potentials for project formulation in addition to their international exposure. Are our universities well informed about the reality and the nature of the aid and support mechanisms proposed by AUPELF-UREF and about their operational conditions? This question raises another related key issue: have we African Universities given up our fears, our anguish, our problems of identity, our inferiority and superiority complex? What actually does co-operation mean today?

The concept of co-operation is quite vague. In fact, the term co-operate has three (3) meanings. First, to co-operate means to work together with somebody. It presupposes relations based on equality, reciprocity and mutual recognition of either partner. Added to this first meaning is the second one whereby co-operation refers to establishing an aid policy in favour of developing countries. At this level, a distinction should be made between aid in the sense of assistance and aid in the context of supplementing efforts made by the countries themselves.

The third meaning of "co-operate" is to join other entities in carrying out activities of mutual interest on equal terms, and this refers to partnership. These three meanings reflect the problematic nature of the concept and its inherent complexities. For its part, AUPELF-UREF resolutely pursues a twofold objective of aid and partnership to avert marginalization and assist in

resolving common problems facing the universities with particular reference to the teaching of science.

2. THE CRISIS BESETTING AFRICAN UNIVERSITIES

For more than twenty years, African universities have been one of the main areas of AUPELF-UREF intervention. In fact, the Francophone Agency for Higher Education and Research has undertaken activities that reflect training and research - the fundamental missions of our universities. In other words, they have been implementing co-operative activities by networking African universities with other Francophone universities. *However, to understand the present scope and logic of such co-operation, it is important to take a quick look at the crisis plaguing the universities.*

The stark truth is that if African universities themselves have not been able to implement a genuine inter-university co-operation policy, it is mainly because of the crisis facing them. In fact, for more than a decade, African universities have been contending with a formidable crisis. The persistent crisis has been of prime concern, at various levels, to all the individual or institutional agents and users, be they political or pedagogic decision-makers, educationalists or communicators, parents, employers or students. They all acknowledge at present the urgent need for comprehensive and thorough reforms in higher education in Francophone Africa.

2.1. Causes of the crisis

Experts of international organizations, such as the World Bank, and the authorities of francophone African universities attribute the crisis to three main factors: drastic cuts in financial resources, the prevailing discrepancy between university training policies and the labour market requirements and lack of genuine regional co-operation between these higher educational institutions. Now since education is a fundamental right and higher education is the weapon

whereby African can utilize the technical and scientific knowledge vital to its development, it is imperative, even in a period of profound crisis, to revitalize African Universities by taking radical measures which take into account the socio-economic and political constraints peculiar to each country while restructuring the communal scientific environment along with the extension of multilateral programmes likely to enhance excellence and help them break with the infernal cycle of marginalization.

Indeed, whether they were created before or after independence and were even defined as national universities, the francophone African universities were established to primarily train administrative, scientific and technical personnel the new African States mostly needed to assert their sovereignty. It will be recalled that, in the 1960s, the African higher education sector produced a little over 1000 graduates a year with an enrolment of 15,000 students.

More than thirty (30) years later, it is generally estimated that some 80,000 graduates are being produced each year. This mission of initial training did not pose any problem of absorption so long as the State remained the principal donor and employer of trained graduates. However, ever since the 1980s, the universities' exclusive mission of providing training for civil servants needed by the State has become historically outdated. Indeed, since then, the socio-economic context has changed radically and the personnel requirements of the States have been cut down in relation to the crisis in public finance and the measures advocated through structural adjustment policies. On the other hand, the needs of enterprises were also pruned down as they too were forced to adapt to the new economic situation.

2.2. The need to rehabilitate African universities

In the absence of any definition, co-ordination and consultation on a genuine national and regional policy on higher education, many universities have crystalized

into enclaves cut off from the public authorities not only through protests by youths deprived of their prospects and the frustrations of lecturers mobilized by trade unions that hardly took account of their country's economic situation but also from their own society whose demands they did not know nor want to listen to. This lack of responsibility was reinforced by a certain form of bilateral technical assistance which could not be called into question.

In spite of the laudable efforts and initiatives undertaken here and there to improve the administrative system and face realities, in spite of the fact that the highest positions of responsibility have been occupied by politicians and academics perfectly aware of the situation and determined to change it, finally in spite of the profound transformation of the dynamics of bilateral co-operation and the establishment of new orientations in multilateral co-operation, francophone African universities continue to be plagued with several lapses of which the most outstanding are:

- heavy cuts in financial resources allocated by the State;
- exceptional increase in student enrolments with some attendant negative effects including the "massification" of the first and second year classes and the students' disenchantment with their career at the university;
- shortage of qualified and experienced lecturers, resulting in unsatisfactory lecturer-student ratios, outdated assessment strategies and vulgarization of the scientific and academic hierarchy;
- lack of motivation on the part of lecturers
- quantitative and qualitative discrepancy between university training and the labour market requirements or rather the lack of genuine integration between educational variables and those of employment, between university training and the specific needs of the working environments;

- lack of global assessment of university institutions and particularly performance indicators of higher education;
- over-politicization of universities.

In general, it can finally be asserted that francophone African universities have only two options present: either they revitalize themselves by undertaking realistic and flexible measures suited to their socio-economic environment or remain adrift and in difficulty, without a future and inevitably prone to marginalization by other universities that opted for thorough reforms. In the first case, they will have to make options towards the future and accept to become real agents of development. In the second case, they will continue to be marginalized and degraded to the advantage of universities that would have opted for reforms by looking further beyond their national boundaries.

3. AUPELF-UREF ACTIVITIES UNDER INTER-UNIVERSITY CO-OPERATION

3.1. General objectives of AUPELF-UREF

With the foregoing general analysis and the related discrepancies that had to be corrected since the particular situation of each country was not taken into account, it became expedient for political decision-makers and academics of the francophone community to assume their responsibility. Thus, they all fought to ensure that AUPELF-UREF organized and supported multilateral inter-university co-operation through specific programmes which were not intended to be substituted for those implemented by the universities but were rather geared towards enhancing excellence, strengthening the networks and promoting scientific and technological progress, as will be seen later in this paper.

In this regard, and as recommended on several occasions by African rectors in the proceedings of the Kinshasa I and II meetings, the activities of AUPELF-

UREF consisted in consolidating the African inter-university and scientific co-operation environment on the one hand, and in establishing a reliable regionalization policy on the other.

In fact, four procedures for inter-university co-operation were defined as follows:

- strengthening university institutions, assisting with the structuring and modernization of university curricula and introduction of post-graduate programmes;
- developing joint research programmes and support to national research capacity buildings;
- aid towards the promotion of students, lecturers and researchers mobility in the form of scholarships and missions of variable duration;
- aid geared towards opening out universities and research centres of the developing countries to similar institutions in the developed countries through the establishment and networking of SYFED-REFER.

The cost of development and implementation of these scenarios in sub-saharan francophone Africa is estimated on average at 4 billion CFAF a year. The funds are mobilized through subscriptions of member universities/institutions and contributions from our States, in accordance with commitments made by the latter at Summits of Francophone heads of State and Government.

3.2. Specific Instruments of inter-university co-operation

To achieve these objectives, AUPELF-UREF has established several operational mechanisms with a view to promoting North-South and South-South inter-university co-operation

3.2.1. FICU (International Fund for University Co-operation)

This fund was set up in 1967 by AUPELF to consolidate the francophone university environment by

supporting exchange programmes between African universities. In this particular context, the Fund was intended to strengthen the potentials of member institutions by providing them with specific resources for their exchange programmes. The FICU budget was estimated at 2,300,000 Canadian dollars in 1996. Nearly 80% of this budget has been implemented for five big programmes in francophone Africa, namely;

i) African Inter-university Exchange Programme (PEIA)

This programme is aimed at promoting co-operation between francophone African universities through teaching and research missions. It is a major programme for co-operation between African universities since it is one of the programmes that organize staff exchange programmes between higher educational institutions in Africa. It is aimed at strengthening the pedagogic potential of African universities.

This programme comprises teaching and research missions. The teaching component is of short duration (75 hours for a maximum of three weeks) while the research missions cover a maximum of 5 weeks. They facilitate the mobility of researchers willing to visit other universities in order to improve their works on specific aspects of their research that necessitate the use of equipment and materials, documentation and scientific supervision.

For the 1995-1996 period, the Award Committee received 229 applications for teaching missions. 180 were shortlisted and 115 were finally approved, i.e. an implementation rate of 70 per cent. Forty-eight (48) missions did not materialize either because they were cancelled or there was no co-ordination between the partners. For the same period, 10 research missions were approved. 9 were carried out i.e. an implementation rate of 90%. It should also be pointed out that 6 additional teaching missions were approved for the School of Mining, Industrial and Geological Research (EMIG) in Niamey, Niger (1), Dakar Teacher Training College, Senegal (2), Inter-State School of

Veterinary Science and medicine, Dakar (1) and the National University of Rwanda (2).

In 1996-1997, 176 teaching and 12 research missions were approved. It is noteworthy that the authorities still support this programme which they consider very useful. However, the future development of this programme calls for an adjustment that takes account of regional training programmes, vocational training programmes and post-graduate programmes.

ii) Training and Research Support Programme (PAS)

This is FICUS's preferential instrument for promoting university co-operation between higher educational institutions of the developed and developing countries. It has two (2) components

Training and Research:

- The Training programme is sustained through funds allocated for the organization of internships, seminars and proficiency courses.
- The Research programme is implemented through support to projects involving seminars, academic meetings as well as joint research activities in priority areas of development.

The objective of this programme is to promote solidarity between researchers in developed countries and those in developing countries and to assist young researchers to secure their first grant. The grant allocated amounts to a maximum of 25,000 Canadian dollars. This is sufficient to give impetus to a co-operative project. It is not used for long-term research. However, the same project may be financed on three occasions by FICU in exceptional cases and on the recommendation of the Management Committee. Eventually, the programme, which is open to all the member institutions of AUPELF-UREF, also supports projects which associate at least three institutions including one from the developing world.

In 1996, 27 projects including 15 from the developing countries, were funded. In 1997, 35 projects

were selected for funding and these included 13 from the developing world.

iii) Special Operations Fund (FSI)

This Fund was set up in 1990 to finance emergency operations for member institutions of AUPELF-UREF. The institutions benefiting from this fund in Africa are those of Rwanda, Burundi and Democratic Republic of Congo. Three missions have been carried out in these countries to identify priorities and explore opportunities for co-operation. In 1996, grants for teaching missions, travel and documentation were approved. In 1997, the situation in these countries deteriorated to such an extent that we are now looking for new priorities and partners.

iv) Common Action Programme (PIC)

The PIC is aimed at providing indispensable information and communication tools to university institutions, particularly in the form of data banks and directories.

v) French Civilization and Language Study Programme (PEF)

This programme offers scholarships for exchanges between Department of French studies and for refresher courses for teachers in French studies programmes. It helps researchers and lecturers at the tertiary level to accelerate their research or improve their knowledge of French by promoting their mobility.

3.2.2. Francophone Research Fund (FFR)

Having at the outset understood the need for the regionalization policy on higher education in Africa and, pursuant to missions assigned to it by the Francophone Conference of Ministers of Higher Education and Research (CONFEMER) and by the Francophone Summits, AUPELF-UREF decided to relaunch and restructure research through a regional approach. It therefore created the Francophone Research Fund at the Summit held in Mauritius in

1993. The Fund covers research in the developing countries and its main objective is to transfer to these countries the know-how acquired in the developed countries in the area of research management. The fund finances six categories of activities;

i) Associated Francophone Laboratories (LAF)

In this sector, the Fund assists the leading laboratories and research centres in developing countries to strengthen their potential, improve their working conditions and optimize their research results. For their part, the Associated Francophone Laboratories are expected to:

- conduct scientific research activities at the international level;
- produce publications in French in internationally recognized scientific journals;
- develop scientific programmes in French for example by participating in and/or organizing seminars and conferences. To be eligible as a LAF, the laboratory shall:
 - be part of a francophone university institution or a research organization of the developing world and be a member of AUPELF-UREF.
 - formulate and implement research projects dealing with priority themes established by AUPELF-UREF;
 - undertake to use the French language in its publications and communications and emphasize the promotion of scientific works in French by disseminating them throughout the world.
 - take active part in the scientific activities organised by AUPELF-UREF

Selected laboratories currently receive a maximum annual grant of 25 million CFAF for four (4) years. At present, 23 LAF are benefiting from a partnership contract with AUPELF-UREF.

ii) Joint Research Activities (ACR)

These activities are aimed at promoting new research dynamics between teams of developed

countries and their counterparts from the developing world through jointly financed quality programmes that help to optimize the use of results obtained from Thematic Research Networks and other activities established by AUPEL-UREF.

The annual package amounts to 50 millions CFAF. It is distributed among the various teams taking part in the same ACR, particularly those from the developing countries.

At present, ninety-two teams (including 78 from the developing countries) selected at the end of the competitive bidding exercise are participating in the Joint Research Activities and are supported by AUPELF-UREF.

A new co-operative biddings has just been launched on the following three (3) themes:

- Therapeutic Essays on AIDS;
- The status of French Language in the Francophone community;
- History of the Francophone World.

(iii) Research Grants

These are meant to promote through research, the training of young researchers from developing countries who are preparing their doctorate and thus guarantee the future of high-quality research in these countries by providing them with financial assistance.

A research grant only covers a monthly allowance for a maximum period of two years. The amount varies between 600 000 CFA F and 1 200 000 CFA F per year. A new competitive bidding has just been launched for research papers in the following thematic fields: tropical diseases, bio-technologies, chemistry, natural substances, remote sensing, development economics, entrepreneurship, demography, fundamental rights, environmental law, French in the Francophone community and linguistics.

(iv) Teams of young Researchers (JER)

This research component is intended to encourage new dynamics for collective research by helping young

researchers to form teams or strengthening and already existing research team.

v) Research bonus

This funding mechanism helps to establish researchers in developing countries and enhance the quality, impact and modernity of scientific projects, by providing to research fellows and universities/institutions a financial assistance in the form of bonus. The bonus consists of a monthly allowance added to the researcher follow's salary for a period of two (2) years. The annual package is estimated between 1.8 million and 3.6 million CFA F.

At the end of the first competition bidding for research papers, 20 francophone researchers were selected. A new competitive bidding has just been launched for research papers in the following fields:

- Agro-based process engineering;
- Molecular Biology applied to parasitoses;
- Therapeutic Essays on AIDS;
- History of the Francophone World;
- Lexicology and Lexical varieties of the French Language;
- Status of French in the Francophone community.

vi) Support to scientific structures

This fund is granted to institutions of developing countries that are members of AUPELF-UREF to encourage them to formulate pluri-annual scientific policies with the help of a Scientific Board assigned to draw up selective and priority scientific programmes for the institutions concerned.

The exercise is aimed at developing specific activities. The grant covers four years and the annual package is estimated at 50 million CFA F.

Cheikh Anta Diop University in Dakar, Senegal was selected during the first competitive bidding. A new competitive bidding for research activities has just been launched.

3.2.3. Networks

The (FRF) AUPELF-UREF has created and established its related programmes through the Francophone Research Fund. However, all these actions cannot really be accomplished unless a genuine regionalization policy is adopted by the African countries themselves. To this effect, the institutions have to be networked in addition to the establishment of:

- concrete mechanisms to facilitate the mobility of lecturers and researchers;
- quantitative and qualitative measures binding on both human resources and the institutions;

This strategy of networking fields such as research, training and information, is implemented in a multi-dimensional framework. AUPELF-UREF has two types of networks;

(i) institutional networks

There are currently 11 institutional networks and these are grouped into broad disciplines with more than 700 Deans and Heads of Training Departments. The networks are established to:

- develop the production and dissemination of Scientific and Technological Information (STI) in French;
- improve training in their respective disciplines
- promote scientific and technological research; and
- strengthen inter-university co-operation.

The institutional networks participate in the implementation of AUPELF-UREF programmes on a contract basis. They are represented on the AUPELF-UREF Administrative Council and also participate in the Sectoral Scientific Steering Committees as experts in charge of directing and monitoring programmes. They are headed by a chairman and are statutorily autonomous.

(ii) Joint Thematic Research Networks (RTR)

These networks are established in fields related to the priorities defined by the Francophone summits of Heads of State and Government. These networks are aimed at strengthening co-operation among all French-speaking researchers regardless of their geographic zone. The networks concentrate their activities on programmes for the production of tools for scientific information, in addition to organizing scientific days and exchanges on research themes defined during their constituent meeting. They are organized by a coordinator and a network Committee representing all the zones of the francophone world.

At present, there are 18 Thematic Research Networks of which the leading components deal with Animal Bio-technologies, Plant Bio-technologies, Malaria, AIDS, Entrepreneurship, Demography, Fundamental Rights and Environmental Law.

3.2.4. Francophone University Information Fund

In 1988 AUPELF-UREF established the Francophone Publishing and Distribution System (SYFED) which covers in the francophone world a set of mechanisms and activities likely to strengthen the Francophone scientific Information Network.

(i) Publishing and Distribution

SYFED produces and distributes free of charge or through marketing networks traditional publications (130 titles of books and journals) and new aids (CD-ROMs).

This innovation has enabled nearly 150 African authors to publish their works in the Francophone Universities series:

- Under the free distribution programmes, about 7 000 books and 900 journals have so far been distributed.

(ii) SYFED-REFER Centres

AUPELF-UREF concurrently establishes and manages the network of SYFED-REFER centers in all the universities and research institutions of the

francophone countries whose mission is to disseminate information in the francophone community through the REFER system in addition to training students and researchers to use the new communication tools.

These centers provide information at costs affordable by the students and lecturers concerned.

Finally, there are at present 10 SYFED-REFER centers in Africa. They are located in Abidjan, Antananarivo, Cotonou, Dakar, Libreville, Lome, Rabat, Tunis and Yaoundé.

4. CONCLUSION

The AUPELF-UREF co-operation in the use of inter-university networks is implemented through a range of logistics inputs developed through practical experiences in the field. It is expressed by through the mobilization of human and financial resources, the pooling of talents that must have been neglected until then and by the organization of research programmes and projects on themes selected by virtue of their importance to development; the co-operation is also reflected in the publication and distribution of original works and popularization, through the media, of achievements made in terms of know-how and culture, thanks to an electronic network of Information exchanges and SYFED-REFER data bank systems. All these inputs have contributed to make AUPELF-UREF play its full role as the focal center of the university networks.

This networking strategy is based on a fourfold logic; a francophone logic underscored by French as a common language, a scientific logic expressed through open competitive bidding and the use of international panels for the selection of research teams and laboratories, a modern logic reflected in the acquisition of new technologies and finally a multilateral logic through the assessment of francophone scientists in all phases of the programmes.

An archipelago or a constellation of experts, the metaphor matters little; these networks linking centers

of excellence, are being enriched *from year to year with new components or are being consolidated in situ through a multilateral contracts*. It is obviously necessary to get rid of a paradox which could damage the credibility of the educational model bequeathed by colonization and reinforce its universal value freed from all instances of paternalism or neo-colonialism, through committed co-operation.

The Commonwealth

Cream WRIGHT*

1. THE MODERN COMMONWEALTH

The Commonwealth is a constantly changing organisation which has evolved from a post-colonial empire to a voluntary association of sovereign states with a collaborative relationship rooted in a historical repository of common legacies.

Some of its key characteristics are:

- 53-country membership (and a waiting list)
- Embraces about a quarter of the world's population
- Reflects a diversity of races, cultures, religions and value systems
- Has similar political/legal/administrative structures
- Includes rich-developed countries (4 and growing), as well as poor-developing countries (49 and shrinking)
- Represents a wide geographical spread, with member countries in every hemisphere
- Shared/common language
- 2 Common heritage in education

2. PLATFORM FOR PARTNERSHIP AND COOPERATION

As a voluntary association of sovereign states characterised by a rich diversity as well as shared/-common features, it is often difficult to ascertain what holds the Commonwealth together and accounts for its growth and increasing influence in the affairs of its members. What is evident however is that the

*Assistant-Director and Head of Education Department, Human Resource Development Division, Commonwealth Secretariat, London.

principles of operation of the Commonwealth (through its Secretariat) do provide a platform for partnership and cooperation. In this respect, a few salient points are worth noting:

- The Commonwealth is a demand driven organisation, with the Secretariat's work based on mandates derived from meetings of member countries, at Heads of State level as well as at Ministerial levels. Most divisions in the Secretariat operate in response to requests from member countries.
- The Commonwealth does not rely on "donor power" but on genuine consultation and persuasion, through which the member states influence national and regional affairs.
- Relations amongst member countries is grounded in a culture of mutual respect for each other's sovereign rights and privileges.
- There is a strong focus on addressing special needs arising from the diversity of member states. This is particularly the case with "Small States" which are a significant part of the membership.
- Exchange of ideas, experiences and aspirations takes place routinely in a climate of mutual trust, which ensures that there is nothing to lose and everything to gain through dialogue and consultation.
- Transfer of good practices in various fields takes place across the Commonwealth with minimum suspicion about motives, little aggravation over ownership and few sensitivities about dependency.
- Given the limited resources of many of its members the Commonwealth Secretariat works in close collaboration with major international and bilateral agencies to help maximise the flow of resources into agreed key priority areas for Commonwealth member states.
- Increasingly, the Secretariat has adopted an Advocacy, Brokerage and Catalytic/Facilitating role in many areas of operation. This ensures efficient use of Commonwealth resources; promotes adoption

of good practices; and attracts external resources to finance Commonwealth priorities.

It is these kinds of operating principles which have enabled the Commonwealth in recent times to play a critical role in areas such as Good Governance, Conflict Management, Economic and Social Development, Gender Equality, National Re-construction, etc, in an increasing number of its member countries.

3. INITIATIVES IN HIGHER EDUCATION

Commonwealth cooperation in the field of higher education has a history which pre-dates the establishment of the Secretariat. It is also, without a doubt, one of the strongest areas in which the Commonwealth has a proven advantage relative to other agencies and organisations operating in this field. The major thrusts of cooperation in higher education are on two fronts. These are the promotion of Commonwealth student mobility, and enhancement of the quality of higher education in developing countries of the Commonwealth. To this end, some specific initiatives in higher education cooperation can be described briefly.

3.1 Commonwealth Scholarship and Fellowship Plan (CUSAC)

This well-known scheme initiated as far back as 1959 is designed to promote student mobility and meet high level manpower needs in the developing countries of the Commonwealth. It involves a pool of awards to students of high intellectual promise, who may be expected to contribute to life in their own countries in the future. Typically the scheme entails full-time post-graduate study at an overseas university for one to three years, aimed at reaching the highest standard of intellectual achievement. There are 1700 such awards in place at any one time, with the principal providers being Britain, Canada, Australia, India and New Zealand whilst most developing Commonwealth countries are beneficiaries.

3.2 Commonwealth Universities Study Abroad Consortium

CUSAC is intended to provide a more intensive and flexible form of student mobility, as well as an additional mechanism through which universities in developing countries can be strengthened. There are 44 universities currently in the consortium, and they create opportunities for their students to study for a period of up to a year in another Commonwealth university. This makes it more feasible for developed countries to send their brightest and best students to universities in developing countries, in order to learn directly about other cultures, economies, etc.

3.3 Commonwealth of Learning (COL)

This premier initiative in distance education was started in 1987 and seeks to utilise communication and information technologies to enhance access to quality education and training. In a sense it serves as the "virtual university" of the Commonwealth. COL develops distance education curriculum materials where needed and works out protocols for the transfer, use and adaptation of those materials which already exist.

3.4 Commonwealth Higher Education Support Scheme (CHESS)

Started in 1990 CHESS seeks to provide assistance to developing country institutions in the areas of;

- books, materials and libraries
- strengthened management in institutions and systems of higher education
- staff development programmes.

Implementation of CHESS has given rise to a Commonwealth Higher Education Management Scheme (CHEMS) and a programme to strengthen Women Managers in Higher Education.

4. SOME ISSUES IN PARTNERSHIP AND COOPERATION

In situations of partnership and cooperation a number of basic questions need to be raised. These include the following:

- Who gets what out of the partnership/cooperation?
- Do the various partners make contributions to, and derive benefits from, the co-operative relationship in a fair proportion to their means and needs?
- Is there a genuine sense of symbiosis involved?
- Which agenda is the main driving force within the partnership?
- How effectively does the partnership address major concerns relating to mission and goals of members?
- Does collaboration breed dependency?

Against the background of these types of questions one can begin to outline "ideal-types" in patterns of cooperation.

4.1 Cognoscenti/Intelligentsia Model of Cooperation

As illustrated by the founding formula of the CSFP. The best and brightest were chosen and essentially the scheme did expand and internationalise the intelligentsia.

4.2 Utilitarian/Pragmatic Model of Cooperation

More sensitive to practical requirements and may for instance give more emphasis to middle manpower training rather than just the brightest and best in an intellectual sense.

4.3 Market-Driven Model of Cooperation

You want it, we've got it; if you can pay for it.

This is appropriately illustrated by the trends in CSFP after the rise in overseas students fees introduced by Britain (1980) and Australia and New Zealand (1990).

- Commonwealth host countries are no longer the principal destination of Commonwealth students.

50% are in the USA and about 30% in Commonwealth countries.

- Commonwealth students increasingly constitute a falling proportion of total overseas students admitted to principal host countries.
- Nearly 60% of Commonwealth students in these principal host countries originate from the relatively well-off countries of Malaysia, Singapore and Hong Kong.
- Flows into developing countries is only about 1% of total Commonwealth student mobility.

4.4. The Collaborate-To-Dominate Model of Cooperation

Partnership often provides short-term gains, but weakens the long-term sustainability of the recipient by intensifying their dependency.

5. THE CHOICES FOR HIGHER EDUCATION IN AFRICA

- The need to be aware that there are choices in terms of partnerships and cooperation. There is no need to be tied-down to a particular relationship. It is very much a buyer's market;
- The need to be clear about what one wants out of any partnership or cooperation, as well as a realistic assessment of what one has to offer in return. Africa must not continue to view partnership and cooperation as a one way process in which they are perpetual recipients;
- The new opportunities offered by communication and information technology must be exploited to the advantage of Africa. This implies:
 - Using IT to ensure an increased flow of knowledge and information from Africa to other regions;
 - Deriving maximum access to the best from other regions;
 - Promoting the massification of higher education whilst retaining control of the essential mission and goals of the higher education sector.

- Making higher education the main gateway for the new IT to penetrate African societies in a constructive way.

The International Association of Universities (I.A.U.)

Eva Egron-POLAK*

1. INTRODUCTION

International Cooperation in Higher Education is quite obviously at the heart of the *raison d'être* of an international university association such as IAU. In fact, the constitution of the Association, which is now almost 50 years old, has its clearly stated purpose, to provide a centre of cooperation at the international level among universities and similar institutions of higher education of all countries as well as among organisations in the field of higher education generally. (chapter 2 article 2).

Such cooperation is not, of course, a goal for its own sake, but rather a means towards the achievement of the fundamental objectives of higher education institutions, namely the pursuit and production and dissemination of knowledge. It is also a means to help universities realise their contribution as social and scientific institutions, to the creation of a world in which the principles of freedom, justice, human dignity and solidarity are promoted, protected and cherished.

Through teaching, research and community services, universities all over the world, often evolving in vastly different economic and political contexts and stemming from a variety of historical traditions, share these responsibilities. Unfortunately, they do not share equal access to resources, nor do they exist within the same framework of rules and regulations. So

*Director of Cooperation, International Association of Universities.

international cooperation is also expected to serve an equally important function as a mechanism to establish or re-establish some equity, or at least bridge the gaps, created by huge inequalities in resources among peoples, countries and institutions of higher learning.

2. THE WORLD CONFERENCE; AN OPPORTUNITY AND A CHANGE

Other than sharing fundamental goals, and aiming to fulfil a common purpose, higher education institutions today, almost everywhere in the world, share the dubious pleasure of being challenged to demonstrate their worth, their contribution to prosperity, their utility to society, in short their efficiency and relevance. I say "dubious pleasure", not because I feel that universities do not have the responsibility to demonstrate the role they play in society but because they are called to do so within a context where, rather than being seen as positive actors for change, they are seen as a problem. At times, they are seen as a source of danger, threatening by critical analysis the status quo or potentially bringing unwanted change.

UNESCO's World Conference on higher Education is taking place within this dynamic and offer all of us an opportunity to react in a constructive manner by collectively building a strong case for higher education. This process also challenges us to test and examine, in the light of our collective experience, whether international cooperation, be it on a regional basis such as here in Africa or more globally, has been and continues to be a fruitful means to building better higher education institutions, ones that serve the needs of their society, locally, regionally and globally.

Over time, international cooperation in higher education has taken a variety of forms, some being predominant at different times in history. For example, the one way flow of students who studied abroad disciplines or specialities not offered at home, faculty

members travelling to other parts of the world to teach and develop research capacity, two-way exchanges of students and faculty for cultural enrichment or language learning, joint research projects, sharing of documentation and exchanges of data, joint development of courses, and the development of new curricula which integrate international perspectives not as an exotic add-on but to provide comprehensive coverage of any topic and thus improve knowledge. International cooperation is also a way to express a collective voice in advocacy on behalf of higher education in all parts of the world.

Cooperation as a means to improve higher education remains necessary and it is necessary for all institutions; This does not mean, however, that it is always equally beneficial for all participants, not are all of the forms it may take equally effective. It is incumbent on all of us - higher education institution representatives, government officials and non-governmental and inter-governmental organisations that are involved in promoting and facilitating international cooperation to think critically about the future and to question the impacts, the cost and benefits equation (in more than just financial terms) and evaluate what may be required in the 21st century.

3. IAU AND INTERNATIONAL COOPERATION

IAU's contribution to or engagement in international cooperation finds its expression primarily in three ways:

- Through the IAU/UNESCO Information Centre, IAU *serves to inform* the higher education community world-wide. By providing and regularly updating the basic information tools such as the *International Handbook of Universities and the World Academic Database CD-Rom* the Association disseminates information on systems of education, institutions of higher education and credentials. Recently, with the help of the Association of African Universities details on African universities have been greatly expanded.

These information tools are unique and act as the foundations for inter-university cooperation. The Information Centre also co-ordinates and maintains an important bibliographical database on higher education policy research, HEDBIB, which is accessible to administrators and researchers alike. More recently, in using the Internet, IAU is also creating links to institutional and organisational Web Sites with the continued goal of increasing access to information.

- IAU serves to stimulate reflection and contributes to research efforts about higher education issues, practices, policy trends, and concerns of higher education leaders. Africa has featured prominently in our research efforts as published either in the journal *Higher Education Policy* or the monograph series *Issues in Higher Education*. When, one reviews the topics covered in these publications over the past few years, it is noteworthy to underline that they cover all of the themes that will be addressed during the World Conference. IAU publications have been on *Government and Higher Education in Developing Nations: Management in African Universities*; a special issue on *The Brain Drain*; *Academic Freedom and University Autonomy*; *The Role of University in Developing Countries*; its responsibility towards the natural and cultural environment; *Differentiation, convergence and diversity in higher education* among other topics. Also within IAU's repertoire are two volumes on University Cooperation, one dating from 1969 and the second from 1974. And in all of these, African scholars have been valuable contributors to a debate that must necessarily reflect their reality if it is to be global and in keeping with IAU's mission.
- IAU is also a meeting place, a unique forum where higher education leaders from all regions of the world can come to exchange views with colleagues and work towards collective expressions of interest or concern. Two particular statements which were issued at such IAU gatherings. The first, in 1987, was written in response to the World Bank

document *Financing of Higher Education in Developing Countries* and became known as the Harare Statement. It spoke against World Bank recommendations to cut public spending for higher education and reduce the involvement of the state. In 1994, in the Buenos Aires Statement, IAU again expressed regret that the Bank's *Higher Education: the Lessons of Experience*, retained essentially the same recommendations with regard to cutting public spending.

As an organisation which continues to question policy, reflect on trends and most importantly, ensure that in all of its work it brings together and gives equal voice to experiences and views from different world regions, IAU has also looked at, and will need to continue to study, international cooperation. As mentioned earlier, some twenty five years ago, IAU published a small volume entitled *A Critical Approach to Inter-University Cooperation* based on a seminar that took place in 1974. In reading this document, it is striking to note the extent to which the concerns and questions raised by various participants in 1974 remain current today. For example, it was recognised that while international cooperation was intrinsically good, it could also be wasteful at times, badly planned, hampered by bureaucratic procedures, negligently administered, unrealistic in its objectives, having potentially detrimental consequences in cultural terms, creating rather than decreasing dependence, etc.

Neither these issues, not the gaps and inequities that separate our access to resources, and even to knowledge, have disappeared. In fact, today, they may appear even more entrenched and certainly more complex with the advent of information technology, growth of regional blocks, increased globalisation in trade, production and services, the end of the Cold War, just to name the most obvious trends. In the higher education sector we have also witnessed a great many changes which add complexity to our discussions of international cooperation; the development of new

forms of cooperation, such as large institutionalised disciplinary networks, exemplified by the UNITWIN/-UNESCO Chairs program; increased franchising of courses and programs; joint degree programs, and large-scale marketing of higher education as a commodity for export in some parts of the world.

Just as international cooperation takes on new forms and continues to expand both as a consequence and a motivating force of globalisation, it is important to continue to examine and be vigilant about questions related to the objectives, purposes and impacts of inter-university cooperation. We also need to ensure that these discussions do not take place within closed circuits such as within the European Union, but rather include several regions and perspectives from outside.

4. WHAT FOCUS FOR AN ACTION PLAN?

The following questions are very important for the development of international cooperation. Searching for and finding solutions to some of them would already provide a full Action Plan.

- Whether we are looking at North-South cooperation or cooperation within a region, what are the lessons learned that could be useful in designing new networks or new linkage projects, more effective exchanges?
- What is the current state of the brain drain, probably the most negative aspect of international cooperation? Is there a brain gain?
- What do we know about Debt Swaps for Education, do they work and can they finance international cooperation?
- In asymmetrical relationships, how can universities successfully make the transition from assistance to cooperation?
- How does international cooperation fit into the strategic plans of universities?
- What are the most useful ways to use new information and communications technologies as a complement to international cooperation?

- Is there a need to develop a code of ethics to guide international cooperation?
- How can benefits and experiences gained through international cooperation be shared intra- and inter-regionally?
- What impact has international cooperation had on curriculum in each partner institution, on relevance of teaching and research?
- How can we increase and improve access to opportunities for international cooperation worldwide and in Africa in particular?
- How can we, as university organisations, work together more effectively to help reduce the resource gaps mentioned above?

IAU has just created a Task Force on Internationalisation of Higher Education, which will, in the next few weeks, determine its focus of work. We believe that this task force will play a crucial role in the future development of international cooperation in higher education.

APPENDICES

**AFRICAN REGIONAL CONSULTATION
PREPARATORY TO THE WORLD CONFERENCE
ON HIGHER EDUCATION**

Dakar, Senegal, 1-4 April 1997

**DECLARATION AND ACTION
PLAN ON HIGHER EDUCATION
IN AFRICA**

We, participants at the **African Regional Consultation** preparatory to the World Conference on Higher Education,

1. **Recalling** the Universal Declaration of Human Rights, article 26 of which affirms that, "Everyone has the right to education"... and that "higher education shall be accessible to all, on the basis of merit", and further recalling the Convention Against Discrimination in the field of Education, adopted by UNESCO in 1960, which calls on Member States to "make higher education accessible to all, based on individual abilities";
2. **Taking into account** UNESCO's Constitution, which encourages interinstitutional exchanges in the field of Education;
3. **Adhering to** the conclusions and recommendations of the policy paper on *Change and Development in Higher Education* published by UNESCO in 1995, as well as the major conclusions of the International Commission on Education for the 21st Century, which stipulate that, "Universities in developing countries have a duty to carry out research that should contribute to solving the most serious problems facing these countries";

4. **Taking into account** the desire of the United Nations to improve coordination of the actions of organisations of the United Nations system in order to reinforce their impact on the development of the Africa region, by mobilising every effort (in the same vein as the creation of an Africa Department by UNESCO) and allocating necessary funds for in-depth reform of higher education in Africa;

5. **Having taken note of** the conclusions of the Priority Africa seminars on Higher Education in Africa (Accra: November 1991; Dakar: November 1992, Alexandria: April 1993) *summary papers* (such as *Higher Education in Africa: Trends and Challenges for the 21st Century*: Dakar 1992 and publications like *Future Directions for Higher Education in Africa* published by BREDA in 1994 and *Audience of Africa. Social Development: Priorities for Africa, Final Report (1995)* and taken further into account the findings of the Second World Congress on Education and Informatics" organised by UNESCO in Moscow in July 1996, and other reports by various international and African institutions which have also carried out diagnosis and and developed guidelines for action;

6. **Observing** that significant but not quite remarkable progress has been made in Africa through the efforts of higher education institutions to wit: progress in implementing democratic structures, improved access to higher education, training of senior management level personnel for the public and the private sectors, development of programmes of African studies, rediscovery and promotion of the historical and cultural heritage, etc.;

7. Recognising at the same time, the persistence of problems needing urgent solutions (e.g. Poverty, hunger, disease, unemployment, illiteracy, the debt, burden, unfavourable trading conditions, inflation, all forms and types of conflicts, environmental degradation, etc.);

8. **Observing** that Africa is more seriously affected than the other regions of the world by the deep-seated societal changes of our time, viz:

- the upsurge of economic liberalism, globalisation, and the prevailing world order which serves the interests of the strongest economic and financial powers, deregulation of the African market, the rise of an uncontrolled and perhaps uncontrollable underground economy;
- outsourcing, which is of little benefit to Africa, in view of the trend for fund managers to associate Africa with political instability and an insufficiency of qualified and skilled persons;
- structural adjustment policies leading to loss of jobs in the public sector, (loses not fully absorbed by the private sector) and which have tended to devalue the degrees awarded by institutions of higher education;
- an upward demographic surge which has tended to increase the demand for education, uncontrolled urban and population growth;
- displaced populations, the result of economic difficulties or the trauma of wars - a situation difficult to manage by the countries receiving such displaced persons;
- exponential growth in knowledge, with very little direct contribution from the Africa region;
- Rapid development of new information and communications technologies, with the risk of widening the gap between Africa and the other regions of the world.

9. **Pointing out** that the **challenges facing the Africa region and the sweeping** challenges in society make the structural problems of higher educational institutions all the more critical.

• **The problems include:**

- coping with urging numbers of students in the face of declining budgets;

- excessively high student/teacher ratios, which make individual attention to learners difficult;
- undue attention to municipal and social services, which reduces funds available for teaching and research;
- deterioration of infrastructure, due to lack of maintenance;
- insufficient remuneration of academics, leading to loss of motivation, moonlighting and brain drain;
- imbalance in students enrolments between science and technology based programmes and the humanities;
- gender inequity at all levels: within the student body, within academic staff, and within the decision-making cadre;
- insufficient attention to, and the insufficient resources for research;
- lack of a long-term vision in the planning and management of teaching and research activities;
- insufficient pedagogical training of teachers in higher education, coupled with a lack of systematic management training for institutional and system-wide managers;
- teaching-learning procedures often in the form of memorisation and to the neglect of inculcating the analytical and problem solving skills needed for tackling societal problems;

10. **What is therefore needed** is the development of new guidelines focusing on the following key issues: relevance, quality, management/finance, and cooperation;

11. **Relevance** is the number one problem, for, should African higher education institutions and the authorities responsible for them interpret their missions wrongly, they will not be able to take up the above challenges: the institutions could in fact become obstacles to development. First of all, it is *imperative that they adapt their missions to the needs and constraints of the local, national, regional, and*

international environments. This is one of those external efficiency indicators by which institutions are judged. This entails links with the "town": promoters of economic activities and all groups and persons working to ensure the reign of equity and better living conditions for Africans, those engaged in promoting responsible citizenship and ensuring a culture of peace and sustainable human development.

Relevant also requires better articulation with the world of work and with other efforts geared towards improving the contribution of higher education to the entire educational system, especially through teacher training and research in education.

12. **Quality** is the second area needing thought and action. It is closely linked to the issue of relevance but entails the operationalisation of the envisaged outcomes (a clear definition of goals and objectives) of the inputs the institutions will work with (thus a review of admissions criteria) and the processes and procedures for working with the inputs (the way the management system coordinates structures, resources and the institutional culture to obtain the required products). *A policy of total quality* can be implemented through comparisons between observed and intellect outcomes (in terms of quantitative and qualitative internal efficiency) and constant analysis of the sources of dysfunction. This will require a culture of *Autonomy* for higher education institutions as well as of their constituent units. It will also require careful attention to the problems of students and teachers and solidarity and responsibility towards the institution as a project for promoting local development and for ensuring a take-off for national and regional development. Thus the need for *accountability*, which is indissociable from the concept of quality.

13. **Management and Funding** constitute the third major concern. An institution could undertake an in-depth analysis on its mission and translate this into product, process and quality indicators. If, however,

the institution fails to build quality into its entire *modus operandi*, and if financial resources are inadequate, it is likely to achieve very little and **so** very unlikely to be able to meet the challenges of Africa's development. We would therefore urge that higher institutions accept the imperative of adopting *forward-looking management* practices which respond to the needs of the environment, as specified in their missions.

14. **Cooperation** at the national, regional and international levels is the fourth key issue. Cooperation projects have often been mere juxtaposition of disparate efforts not sufficiently linked to an *overall strategic plan*, specifying priorities, deadlines and the constraints arising from the relationships between various projects or components of projects. We would expect that the organisation of African institutions into cooperative *networks*, using appropriate products of new technologies, should be a major priority area.

15. **On basis of these observations** we would suggest the following areas of concrete action:

• **To Improve Relevance:**

16. We recommend that Member States *develop educational programmes* capable of meeting the challenges of sweeping societal changes and the principal challenges which Africa is bound to face in the immediate future.

17. We would suggest that *Member States create "observatories" to monitor changes in the employment market*, of imminent social changes, of new approaches to research and development-related activities. Such observatories would help the process of developing national educational plans, as data would be made available to institutions of higher learning, to improve their capacity to align their missions with national priority areas.

18. We would suggest that national education programmes aim at *diversification* with a greater emphasis on a *regionalisation* of specific disciplines. This could be a means of getting institutions to serve the specific needs of disadvantage areas and groups. These programmes should target specific needs that will generate employment or create jobs; training programmes and structures should be flexible in order to adapt rapidly to changing needs. It would also be necessary to develop (in consultation with appropriate stakeholders) a wider variety of short duration programmes.

19. We feel that appropriate steps ought to be taken to convince Member States that investment in institutions of higher education is worthwhile, as long as the institutions are oriented to meet the needs of society. International organisations like UNESCO will have to make strong moves to sensitive top political and financial authorities on this issue.

20. Institutions of higher education should define their mission statements in the form of overall general guidelines. These should be closely linked with the national education programmes and based on a thorough analysis of needs, in cooperation with the institution's internal and external actors. They should be presented in the form of observable outcomes.

21. It would be more profitable to define educational programmes henceforth in terms of expected outcomes, and not simply in terms of facts to be transmitted and reproduced, or in terms of mere course titles. This will contribute to the evolution of genuine education programmes with special emphasis on analysis of complex situations, teamwork, higher cognitive skills, the inculcation of responsible citizenship and the development of a culture of peace.

22. Institutions of higher education should make special efforts to develop *scientific and technological*

programmes to help meet the demands of the accelerated development of new technologies, especially new information and communication technologies. These programmes should be supported by intensive research activities, from which the critical mass of the expertise needed for the region's development as it faces the pressures of globalisation. We suggest that institutions already having expertise in these areas create a network, with the assistance of UNESCO and other organisations.

Existing potentials on information and communications technologies should be boosted to give rise to *virtual universities*, which could considerably improve access, while at the same time providing world-class educational resources.

23. Higher education institutions should also make special efforts to promote integrated programmes aimed at seeking appropriate *solutions to the major problems of the progressive evolution* of a culture of peace and promotion of sustainable development oriented towards reducing hunger and protecting the environment. Such programmes should build on the fruits of social research and designed to the promotion of research, the strengthening of expertise and consultancy services.

24. We recommend that research be made to bear a closer relation to the needs of African societies, *so that basic research can be more closely linked with applied and development-oriented research* stressing genuine partnerships with public and private institutions and the civil society. This would be one way of ensuring the active involvement of higher institutions in societal development efforts.

25. We recommend that *higher degree* programmes be organised around a quantitative and qualitative critical mass of committed academics, working together in a qualitatively conducive environment on subjects relevant to Africa's development. Doctoral training

programmes can be restructured using team work or networking strategies.

26. We would like to stress the importance and urgency of carrying out *as series of case studies on Africa's priorities*, in which higher education institutions should play an important role. These include; the type of leadership to be promoted, strategic management and planning, systemic interactions between primary, secondary, tertiary and continuing education, revision of programmes of education and training, the relative importance and feasibility of face-to-face and distance teaching programmes, strategies for ensuring improved participation of women in education in decision-making bodies, town, and country planning, measures against the security problems of Africa (such as poverty, displaced populations, the trauma of war...). The Association of African Universities could undertake this task, with the assistance support of UNESCO and the possible collaboration of other organisations working in the field of higher education in Africa.

27. To become more responsive to the needs of society, and in order to acquire greater financial autonomy, we recommend that higher education institutions create structures for the development and management of consultancy activities, which are an essential part of their missions. For this to happen, higher institutions should develop an entrepreneurial spirit as a means of strengthening their service functions which are in themselves complementary to their teaching and research functions.

28. We recommend that Member States organise regional conferences of ministers in charge of higher education, heads of institutions, and organisations or associations involved in the development of higher education.

• To Improve the Quality:

29. We recommend that each Member State establish a mechanism for *evaluating the quality* of higher education institutions, building on existing practices in the region. Such a body will be responsible for evaluating training, research and consultancy activities in the light of institutional missions, national education programmes and the needs of changing times. *This should be a control rather than a punitive mechanism*, and should use a combination of internal and external evaluation strategies.

30. In order to ensure the quality of programmes, institutions of higher education will require to *establish minimum teaching-learning guidelines for each course module*. They should explicitly state learners, entry and exit behaviours in terms of skills, values and attitudes, the teaching and evaluation methods, all within a specific time frame. They will constitute a point of reference and a form of moral contract between various internal and external actors.

31. It would be necessary for every institution to develop a *data base on the quantitative and qualitative movement of students*. This data base should include any information that could be used to evaluate internal (and even external) efficiency, as well as trends in progress or non-progress in terms of the equity of the system. The data base should provide decision-makers at various levels with the information needed for the development of *a total quality policy*, or with the involvement of all stakeholders.

32. We expect that, with assistance from UNESCO and other regional or international organisations, every higher education institution will *establish a teaching-learning resource unit* staffed by skilled personnel charged with the task of pedagogical skills development and other forms of teaching-support activities.

33. We also hope that every institution will create appropriate structures for evaluating and controlling the quality of its curricula (including the performance of students), in keeping with agreed guidelines.

34. We recommend that UNESCO call on Member States to improve the living and working conditions and emoluments of academics and more importantly, to guarantee the autonomy of higher education.

35. We declare our support for the project on the conditions and status of higher education personnel, recently approved by an international committee of intergovernmental experts and which will be at the 29th general conference of UNESCO (Paris, November 1997).

36. Having observed the undesirable effects of conflicts and strikes in universities, we suggest that institutions should create an enabling climate for dialogue with a strong emphasis on *prevention rather than repression*.

37. We convinced that research (as a fundamental mission of higher institutions) will need to be reinforced, we call for a substantial increase in the number of *academic journals* and the implementation of a coherent publications policy at sub-regional and regional levels. UNESCO could call on the organisations which took part in the present Consultation to submit concrete proposals on this issue.

38. Efforts to improve quality in each institution will be facilitated if Member States could develop *regional networks* for education and training activities as well as for research and consultancy activities. We call on UNESCO to lend its full weight to such networks.

39. We suggest that, at the regional level, existing institutions and organisations (such as CAMES for example) whose aim is to *harmonise qualifications and*

certification procedures be strengthened, so that the potential for mobility is increased for both students and teachers, in line with the practice in other regions.

• **To Improve Management and Funding**

40. We suggest that Member States guarantee equal rights to higher education based on ability and aptitude (i.e. merit). Member States *should take on principal responsibility for funding for higher education*. However, since it will be difficult for Member States to bear the entire financial burden, additional sources should be sought using the political and administrative mechanism of each State, whose sovereignty should be respected. We strongly advise that the economic conditions of families be taken into consideration, and that the only criteria for access or non-access should be merit.

41. To improve efficiency and strengthen the management of higher education institutions, it would be necessary to develop appropriate mechanism for regular dialogue between the institutions and their partners, particularly State structures, without compromising the autonomy of the institutions.

42. It is important to build the habit of *forward-looking management and planning* into higher education institutions in Africa. This means that appropriate training opportunities should be provided for administrators, whether they occupy a permanent or an elected position. It also means that necessary computer database should be developed as soon as possible to ensure high-quality forward-looking management and planning. The institutions should find either within themselves or through cooperation the necessary skills to create, maintain and develop these data banks. UNESCO should seek support from organisations such as the Association of African Universities, the International Institute of Educational Planning, the Association of Commonwealth

Universities, the Commonwealth Secretariat, etc., in this aspect of its work. The goal is for, African universities could be managed like high-performance service businesses able to play a crucial role in solving the problems besetting the African region.

43. We believe quality management is not the sole responsibility of top academic authorities. Each subsystem (faculty, department or other structures) should also take on responsibility for forward-looking management and planning. This means that each unit must clearly define its missions to bring them in line with the overall mission of the institution, translate them into observable indicators, and allocate the resources available in accordance with the mission and with a clear order of priority. They should also prepare regular activity reports, which should be shared with staff and supervising authorities. This mode of management entails a certain degree of autonomy (thus a margin for manoeuvre) and full commitment to institutional goals. *The culture of evaluation and responsibility* must therefore be strengthened, or establish in those institutions that still practice the rigid centralisation inherited from certain colonial structures.

44. We feel that, despite the prevailing financial crisis, the management of higher education institutions cannot be reduced to financial management based on purely economic criteria. One should take in account some *criterion of equity* (such as women's or underprivileged persons' access to higher education) and *the criterion of social relevance* applied to teaching, research and consultancy activities. We would expect each institution's activity reports to include actions taken towards this end and the results obtained, in order to promote awareness in the appropriate ministerial authorities and obtain recognition and support for relevant actions.

45. Since WOMEN have a major role to play in the development of the Africa region, we request that international organisations, Members States and higher education institutions *develop well-articulated policies*, remove gender inequity in education and more importantly promote the advancement of women in the entire society. This should include measures implemented, by the institutions of higher education themselves. We suggest that meaningful *affirmative action be taken* in all possible directions. Women's associations and networks should be fully supported. A systematic and coherent policy of gender research and case studies should be implemented and their findings widely published and ploughed back into the teaching, management and overall development work of higher education institutions.

46. We recommend that measures be taken to double the number of women (students, teachers and decision-makers) in higher education, within the next ten years *Particular attention should be paid to orienting women towards scientific and technological disciplines.*

47. *We consider that student involvement in decision-making bodies should be given a considerable boost, with greater attention paid to their needs by taking into consideration students' perspectives which are often relevant to the analyses of problems and to the search for viable solutions. Student involvement is also equally a means of inculcating the leadership skills needed in after-school life as workers and as citizens.*

48. *At the regional level, it would be necessary to organise regular meetings under the organs like the Association of African Universities, for exchanges on problems related to the management and funding of institutions of higher education. These meetings should be used to improve the operation of the institutions themselves and to develop the capacity for meaningful pressure on ministerial authorities in charge of higher education. The authorities should themselves be involved in these meetings.*

49. *We would suggest that, at the regional level, a student association forum be organised as a means of mobilising students to contribute to current efforts aimed at making higher education institutions more forceful, more active and more efficient partners, in the promotion of sustainable development in Africa. The conclusions of the forum could form Africa's contribution to the International Students' Forum could form Africa's contribution to the International .Students' Forum to be held in Paris in 1998, as part of the commemoration of the fiftieth anniversary of the Declaration on Human Rights and at the World Conference on Higher Education.*

• **To Reinforce Cooperation:**

50. We invite existing associations of institutions and of subject specialists as well as national, regional and international organisations to *support and* coordinate actions and projects aimed at establishing or strengthening inter-African and intercontinental networks working to reduce the gap between Africa and other regions by solving key regional development problems. Institutions of higher education should adopt a proactive policy in this connection and invest all their energy into fighting poverty, environmental degradation, discrimination of all kinds, and the ravages of conflicts.

51. We recommend that institutions of higher learning *create networks of centres of excellence* responding to the most pressing needs of the African continent, in terms of training research and consultancy. Each institution should focus on an area of expertise in which it is likely to excel, as its contribution to a regional skill-sharing network. Such strategies of solidarity/-complementarity could enable Africa to meet some of its contemporary challenges.

52. It would be necessary for UNESCO to organise in the near future an exchange and evaluation meeting for all existing networks such as the UNITWIN/UNESCO

Chairs programme, UNISPAR, and the Commonwealth Secretariat. The meeting would promote the sharing of experience, reveal the factors responsible to their relative successes or failures, and coordinate and strengthen projects that offer the most viable solution to the problem of the African region.

53. The African Regional Convention and the international recommendation on the recognition of studies and diplomas should be strengthened through the promotion of academic and professional mobility of students, and academics. This would support the ongoing regional integration process by using culture and education as a basis for political and economic unity. It would be desirable to strengthen associations whose aim is to *harmonise the qualification awarded by higher education institutions in Africa* (e.g. CAMES). UNESCO should take the lead in mobilising major regional and international organisations to create a region-wide mobility programme for students and academics. This has been done on other regions, one example being RIMA (Réseau International de Mobilité Académique or the International Network for Academic Mobility) established by MERCOSUR.

54. We would further suggest that UNESCO works in concert with bilateral and multilateral cooperation agencies like the Commonwealth Secretariat and AUPELF-UREF, etc., for the early creation of *priority area networks*. These should include a research network on the use of new information and communications technologies, a network of teaching-learning resource units, a network of research units in education devoted to priority areas for Africa development, which could be grouped under UNESCO Chairs in Education. UNESCO should whenever possible, mobilise resources for cooperation on areas of common concern.

55. To respect the right to cultural diversity, we would urge UNESCO to assist in the creation of a *network of lusophone institutions of higher education* and to intensify

its support to the activities of association of Portuguese and Spanish speaking universities as one other means of reinforcing South-South cooperations. The development of graduate programmes in Portuguese-speaking countries should be supported. Other regional networks could contribute their expertise in this area.

56. It goes without saying that the participation of students, teachers and researchers in the meetings and networks depends on relative ease of procedures for obtaining visas. We urge UNESCO to sensitize its Members States to this particular problem, so that they can *simplify existing administrative procedures for obtaining visas*.

57. Given these challenges and the expected roles of institutions of higher education, it would be necessary *to reinforce the higher education unit of the Regional Office of UNESCO in Dakar (BREDA)*. The unit should play a more active role in the envisaged regionalisation strategies and also be the key actor in the synergy-building missions described in the above proposals. The Regional Advisory Committee on Cooperation in Education in Africa should include representatives of government organisations and NGOs working in the field of higher education.

58. It is further suggested that, as part of the NGO consultation process, UNESCO/Dakar organise a meeting with the participation of AAU, AUPELF-UREF, ACU, AULP and AIUP, as well as sub-regional organisations and bilateral cooperation and inter-governmental organisations such as CAMES, OAU, ECA, the Commonwealth Secretariat, etc., as a means of facilitating coordination into operative action plans as soon as possible.

59. We recommend that, with the assistance of UNESCO, stakeholders and organisations involved in the development of higher education in the region

should translate these proposals into operative action plans as soon as possible.

60. We suggest further that the report of the Regional Consultation in Dakar be tabled at the next MINEDAF and the next summit of the OAU.

61. *Finally, we request UNESCO to convene a meeting of experts at the end of the Year 2001, to evaluate in the implementation of the recommendations of this Regional Consultation.*

**Adopted in Dakar this
4th April 1997**

THE REGIONAL CONSULTATION

**HIGHER EDUCATION FOR A NEW AFRICA:
A STUDENTS' VISION**

**FORUM OF STUDENT ASSOCIATIONS
IN AFRICA ON HIGHER EDUCATION
IN THE 21st CENTURY**

Accra (Ghana) 23 - 25 March, 1998

INTRODUCTION

1. For over two decades, higher education in Africa has been undergoing a deep and complex crisis thus threatening its quality, relevance, effectiveness and efficiency.
2. Africa has implemented various policies and strategies to meet the challenges posed by the crisis facing higher education. Unfortunately, these efforts have not quite succeeded in adequately addressing the needs and expectations of a rapidly changing society.
3. Prevailing socio-economic trends tend to indicate that the early years of the 21st Century will be characterized by the persistence of such phenomena as the globalization of economy and trade, improved democratization of political regimes and rapid development of knowledge and technology. These phenomena will have a direct impact on the labour market and will require appropriate conceptual and institutional reforms in the organization and management of higher education.
4. To foster a better understanding of the nature and scope of the current changes and the challenges they pose to higher education, UNESCO will organize from 5th to 9th October 1998, in Paris, a

World Conference on “Higher Education in the 21st Century : Vision and Action” .

The main objective of this conference is to define the fundamental principles that will serve at the world level, as a basis for in-depth reforms in higher educational systems in order to enhance their contribution to the promotion of sustainable human development and peace.

5. As part of the preparations for the conference, the UNESCO Regional Office in Dakar organized an African Consultation from April 1 to 4, 1997, in Dakar, Senegal.
6. As a follow-up to the African Regional Consultation, the UNESCO Regional Office in Dakar also organized in Accra, Ghana from 23 to 25 March 1998, a Forum of student associations in Africa on “ Higher Education in 21st Century”.

The main objective of the Forum was to provide the student associations an opportunity to contribute to the current reflection on the nature and scope of changes to be made in the higher educational institutions in order to enhance the efficiency of activities undertaken to promote sustainable human development, democracy, peace and human rights in Africa.

MAJOR CHALLENGES AND PROSPECTS OF HIGHER EDUCATION IN AFRICA ON THE THRESHOLD OF THE 21ST CENTURY

The Forum analysed the present state of higher education in Africa, especially the challenges arising from the current crisis facing that sector. It also assessed strategies implemented to meet these challenges and identified prospects for the development of higher education in the 21st Century in Africa. On the basis of these analyses and assessments, the Forum noted the following:

Situation of Higher Education in Africa

7. During the last two decades, higher education in Africa has been characterized by a rapid growth in student enrolments and a decline in public expenditure per student.

In spite of these trends, it is observed that :

- the system of higher education in Africa is one of the least developed in the world;
- Africa's financial spending on education is among the highest in all the developing regions of the world.

This situation poses a major challenge to higher education in Africa, namely, *how to increase student enrolments and improve the quality of higher education while reducing public expenditure per student.*

8. A significant portion of the budget for higher education is often allocated to activities not directly related to the implementation of the institutional missions especially scholarships and the various social services to students.

This raises yet another challenge: *how to reduce the budget for student services without compromising social justice and equity in the field of education.*

9. The rapid increase in student enrolments and the inadequacy of public resources allocated to higher education have posed a big threat to *the relevance and quality of higher education.*

The situation has also led to:

- deteriorating working conditions and quality of academic staff and researchers;
- brain drain;
- dwindling research capacity ;
- lack of teaching and research materials;
- decline in internal and external efficiency;
- graduate unemployment.

In Africa, it is now generally acknowledged that the main problems of higher education centre around the issues of relevance, quality, funding, access and management.

Role of Student Associations

10. In recent times, relations between student associations and higher education management have increasingly been strained and characterized by frequent student strikes which are often countered with violent repressions resulting in serious damage to property and the closure of universities.
11. It is generally acknowledged that one of the necessary conditions for the *smooth functioning and management of higher education* lies in fostering collaboration between student associations, higher education management and the State. This partnership should be based on *academic freedom and institutional autonomy*.

It is therefore necessary to redefine the missions and role of student associations and promote genuine partnership in higher education, to enhance the contribution of higher educational institutions to economic and social development and to the development of a culture of peace and democracy.

Regional co-operation

The current processes of political and economic integration open up new prospects for the development of regional cooperation in Africa. Unfortunately, the problems facing higher education management did not allow the institutions to take advantage of these opportunities. Indeed:

12. The frequent strikes and closure of universities are prejudicial to regional co-operation.

13. Students are not adequately informed about the academic mobility programmes currently implemented in African Universities.
14. In African Universities , there is a great difference between the school fees paid by nationals and foreigners. This situation is not likely to promote academic mobility.

Prospects for the Development of Higher Education

15. The rapid expansion of knowledge and technologies provides new opportunities for the development of higher education in Africa, especially through open education, distance learning and programmes of life-long education for all.

STUDENTS' VISION ON THE FUTURE OF HIGHER EDUCATION IN AFRICA

In the light of the challenges and prospects outlined above, the Forum of student associations in Africa formulated the following proposals for action, which constitute the *students' vision on the role of higher education in the construction of a new society*.

• Improving the Relevance of Education

16. The Forum urged the Member States to establish educational programmes capable not only of responding effectively to the constant changes in the labour market, but also of anticipating rather than enduring them.
17. Taking into account the saturation of employment opportunities in the public service and the worsening of the phenomenon of graduate unemployment, the Forum recommends the establishment of appropriate higher educational systems to train graduates who can constantly

update and improve their knowledge and skills and also create jobs.

18. The Forum also recommends that necessary measures be taken by Member States to enable graduates willing to create jobs to secure funding for their projects.
19. The Forum considers that, in carrying out their mission of providing services to the community, higher educational institutions should give greater importance to civic education so as to promote human rights, tolerance and a culture of peace and democracy.
20. The Forum recommends the establishment of partnership between Faculties/Schools and Enterprises to enable the higher educational institutions to take account of enterprises' needs and provide students opportunities for research, and internships in the enterprises.
21. The Forum recommends that higher educational institutions organize periodic tracer studies and conduct surveys among employers to ensure a regular adaptation of curricula to the expansion of knowledge and the the changes in job market.
22. The Forum stressed the need for higher educational institutions to help students secure funds for research as well as access to the new information and communication technologies.
23. The Forum considers that it is necessary to set up appropriate mechanisms for monitoring and assessing the accomplishment of missions set for higher educational institutions.

• Enhancing the Quality of Education

24. The Forum recommends that each member State set up and/or strengthen structures to monitor and assess the quality of services provided by higher educational institutions as part of their functions.
25. The Forum recommends that higher educational institutions set up mechanisms for the assessment of the academic staff by students.
26. The Forum recommends that member States take necessary measures to ensure that the entire university community, including students, enjoy more conducive living and working conditions.

• Improving Management and Funding

27. The Forum maintains that, in conformity with Article 16 of the Universal Declaration of Human Rights, member States should guarantee the right to higher education to all on the basis of merit.

Consequently, Member States should assume the principal responsibility of funding higher education. They should particularly offer deserving but needy students adequate financial support to enable them to pursue their studies.

28. The higher education sector should be provided with adequate and sustainable funding. In view of the difficulty encountered by member States in financing higher education, the Forum recommends that higher educational institutions mobilize additional resources through income-generating activities and minimal reasonable contributions from students. The forum insists that such contributions should take into account the economic conditions and income of the families.

29. The Forum recommends that member States set up appropriate mechanisms to encourage the private sector to participate in the funding of higher education.
30. To improve efficiency and strengthen the management of higher educational institutions, the Student Associations undertake to foster permanent dialogue with all the stakeholders in higher education. In this regard, the Forum recommends that students be represented in all the management structures of higher education.
31. To improve the quality of the management of student associations, the Forum urges UNESCO to organize regular training workshops on leadership and management of organizations for representatives of student associations.
32. The Forum recommends that higher educational institutions develop data bases to monitor the trend of academic results, unit costs and institutional efficiency.
33. To respond effectively to the increase in the social demand for higher education and to the changes occurring in the labour market, the Forum recommends that member States further diversify their higher educational systems.
34. In view of the rapid expansion of knowledge and technologies and the emergence of new forms of learning, the Forum considers it expedient that the methods currently used in testing knowledge in examinations be reviewed.

• **Improving Regional Co-operation**

35. The languages of instruction used in higher educational institutions in Africa often constitute

serious obstacles to the organization of mobility programmes for academic staff.

The Forum urges UNESCO to establish language proficiency training programmes to enable the academic staff to master at least two of the languages used in higher education in Africa.

36. In view of the persistent social conflicts and civil wars in Africa, the Forum urges the higher educational institutions to set up adequate mechanisms for receiving refugee or displaced students and lecturers/researchers.
37. To promote the academic mobility of students, the Forum recommends that higher educational institutions allow foreign students of African origin to pay the same amount of school fees as the citizens of the countries concerned.

• Strengthening the Role of Students in the Development of Higher Education

38. To maintain social peace and stability in the campuses, the Student Associations undertake to prevent strikes and avert damage to university property, especially by fostering a culture of dialogue and consultation among their members.
39. The Forum urges member States to facilitate the creation of national student associations and provide support to the All African Students' Union.
40. The Forum recommends that the missions and role of student associations should be redefined to facilitate co-operation with other stakeholders to enable the higher educational institutions to perform their functions efficiently.

The Forum also recommends the redefinition of missions set for the All African Students' Union and

the strengthening of its role of co-ordination of student activities.

41. The Forum recommends that consultations be held within the university community so as to generate a consensus on the form of consultation to be established with a view to promoting co-operation and solidarity within the community.

***Adopted in Accra (Ghana),
25 March 1998***