

Global Knowledge & Global Health
Building Africa's Capacity

ACADEMIC CHAIRS FOR AFRICA

A PROPOSAL

MARCH 3, 2010

The suggested concept is a timely and very worthy initiative and I would be pleased to lend my support towards strengthening African faculties and reversing the continent's brain drain.

Kofi A. Annan

Through modern science, technology and medicine, hundreds of millions of people are alive today who would previously have died in infancy or childbirth.

Abdus Salam, Nobel Prize Winner, 1985

INTRODUCTION

The haves and the have-nots will be synonymous with the knows and the know-nots.

Dr. Ismail Serageldin

*Director of the Bibliotheca Alexandrina
(The Library of Alexandria, Egypt)*

Africa has the natural resources, from minerals to biodiversity, and the required raw human capital in its youth to be part of the global economy at the end of the next decade. But for this to happen, a massive investment must be made in education, science, technology and innovation.

Romain Murenzi

*former Rwandan minister of Science, Technology
and Scientific Research, 2009*

This is a document that outlines a proposal to create and fund 1,000 chairs to be occupied at universities in Africa. Africa needs to develop its people to meet its development needs. African countries and their universities are struggling to meet the Millennium Development Goals (MDG's) that include a wide array of needs to bring them out of poverty. Many recent reports point out that the current model of development aid has not been effective in building Africa's capacity to improve the welfare of its people. Romain Murenzi formerly Rwandan minister of Science, Technology and Scientific Research points out real life problems that include:

- Health: maternal health, child mortality, and infectious disease
- Water: clean drinking water and sanitation
- Environment
- Information Communication Technologies
- Transportation
- Agriculture and Animal Husbandry
- Energy
- Manufacturing

It is interesting that every item on this list has university teaching and research as a necessary condition for success. Africa must develop its own people to meet these needs. The Academic Chairs for Africa proposal is designed to help African universities build their capacity to deal with these issues and improve both the economy and the quality of life, including health. The concept of Global Knowledge requires Africa to be part of the Global Knowledge action. The Global Health need can only be met by building this capacity in Africa.

The current proposal is modeled on the very successful Canada Research Chairs program that was created in Canada in the year 2000. In this program, 2,000 positions were funded across Canadian universities to meet the need of reinforcing Canada's competitiveness and reducing the brain drain. The creation of a network of chair holders and the presidents of their universities has many benefits. By connecting scholars from all parts of Africa both between countries, and in many cases within countries, there will be a powerful force crossing many of the world's cultural boundaries. These boundaries reflect the cultural divides of today's globe. But this network addressing the MDG's would also of necessity cross discipline boundaries. None of the topics mentioned by Murenzi or the MDG's can be addressed within any one discipline and so teams would have to be brought together within each institution or in consortia of institutions.

This idea has the support of many. Senior officers at the United Nations, UNESCO, the World Bank and the African Development Bank are advisors to the project. The Academy of Sciences for the Developing World (TWAS) is a strong supporter as is the Network of African Science Academies (NASAC) and the

Academy of African Sciences. Many Academies of Science from around the world are also supporters of the concept.(see appendix 1 for a list of organizations contacted) They will discuss this proposal at their forthcoming meeting in Canada on April 7/8, 2010 as part of the lead up to the G8 meeting. A number of the G8 governments have expressed deep interest in this proposal as it creates a platform on which to build excellence. A number of African universities as well as others around the world are strong supporters of the proposal (see Appendix 1). Appendix 3 contains a number of quotes from some of the many correspondents in support of this proposal. And Appendix 4 provides a number of letters received from around the globe in support of the idea.

This proposal calls on the universities to set their own plans and priorities, and goes a long way to empowering them to determine which of the issues they can best address. In particular, it gives them a new form of autonomy and self-determination, as they establish what they can most effectively do to help their countries meet the MDG's. It will help them to develop nodes of excellence. That will prepare the next generation of students to be teachers, professionals and researchers.

There are many efforts by the developed countries to help build partnerships as part of their "aid" (see appendix 2 for a very extensive list of countries contacted and briefed). Partnerships are an important element in strengthening the local capacity. But as a number of our correspondents have pointed out, partnership is a two-sided process. This proposal creates a platform that supports most of the proposed or functioning partnerships. What this proposal will do, is allow the universities to determine their own agenda and to recruit quality faculty to build up their own capacities. These needs range from physical sciences and engineering, to life sciences and health, to social sciences and to humanities. In the Canada Research Chairs program 20% were for social sciences and humanities, 45% for natural sciences and 35% for the health sciences. From this base they can be much more effective at entering into partnerships that will have a sustainable and long- term outcome. In many cases, the faculty would be recruited from the Diaspora. Diarra of the UN estimates that there are about 30,000 PhD's from Sub Saharan countries now located in the developed world.

Many say this is the right idea for the right time. The example of the Canada Research Chairs, as well as a new program in South Africa and a pilot program by the International Development Research Center (IDRC) show that the concept will work and will deliver outstanding results. Brazil is developing a similar program for the Amazonian region.

The proposal is that the G8 create and fund 1,000 chairs at \$100,000 per year for five years. This would be an investment of \$100m per year. The process should most effectively be managed by a new international foundation established for the purpose. This would have senior representatives on it including a significant number from Africa itself and representing some of the interested foundations. There was strong support from our many correspondents for this approach. This proposal has a built in assessment mechanism. The chair holders and their presidents would meet on a regular basis, as well as providing comprehensive annual reports on their progress towards the Millennium Development Goals

A number of correspondents have responded well to the description of this proposal as a "surge." A "surge" that would move Africa to a new place for the 21st century.

THE CORE PROPOSAL

I would like to pass on our strong support for this idea. The critical factor in the reconstruction of higher education in Africa is to make the academic environment more attractive to high quality teachers and researchers. This will be the only effective way to counter the brain drain. This proposal has the right scale to make a real impact and start attracting people back to African universities.

John Tarrant

Association of Commonwealth Universities

This is indeed an innovative and timely proposal that could go a long way in developing the capacity of African education to offer the advanced skills, knowledge and expertise needed for socio-economic transformation of African societies.

Cheik Sidi Diarra

*Under-Secretary-General of the United Nations and
High Representative for the Least Developed Countries,
Landlocked Developing Countries and Small Island Developing States
World Innovation Summit on Education, Doha, 2009*



INTERNATIONAL ASSOCIATION OF UNIVERSITY PRESIDENTS

The Need

African countries have many needs as they strive to move from developing countries to emerging countries and in the longer run to fully developed countries. The United Nations has developed the Millennium Development Goals (MDG) to identify some of the most pressing needs and set a target timetable to meet these goals. Education is central to meeting each of these goals as they all require an educated populace and they require advanced skills to be available in each country. In the past, the focus has been on education at the primary and the secondary level. In more recent years, it has become evident that in this rapidly changing and evolving world, future economic and social development is equally dependent on higher education and on the research associated with higher education. Higher education is the necessary condition for building an innovative economy. The recent United Nations Academic Impact program is a recognition of this fact as the UN is enrolling universities around the world

The World Bank points out that developing higher education is the way to build long term capacity for economic growth. In the past decades these skills have largely been developed by sending young people abroad for their advanced education. Slowly, the universities of the developing countries of Africa are being reinforced so that higher education is indigenous. But it has been very difficult to recruit highly skilled individuals to return to their home countries, or if they do come back they often return to the country of their study or to other countries mostly in the west or to other non-academic/research organizations often outside their country. This is not due to salary alone, but to the working conditions and to the inability to contribute in a significant way to the development of their home country.

The brain drain from the developing countries to the developed nations is severe and must be reversed. To have any chance of meeting the MDG's and building the capacity for innovation, these countries must develop their advanced education systems. Creation and strengthening of the post secondary system must

take place and it must take place soon. It is well understood that building an innovative economy in the knowledge world requires strength in the universities. This is a necessary condition.

The Concept

This proposal is designed to assist these countries to move strongly in creating real academic strength. The proposal is to create and fund 1,000 chairs to be held by outstanding people in institutions across Africa. There are several hundred such universities in Africa at various stages of development (the Association of African Universities reports about 200 members).

Canada was faced a few years ago with a severe brain drain problem when we found that many of our best academics were being recruited to the United States and to Europe, leaving Canada struggling in the dramatically evolving global knowledge economy. The solution was the creation of the Canada Foundation for Innovation and the Canada Research Chairs. Key to their success was empowering the universities themselves to set their own priorities. In this empowerment, universities had to develop their own plans. What is unique about this proposal, is that rather than the developed world telling the universities in each country where they need development, the universities will be asked to indicate where their own priorities lie and then given the tools for implementation.

This approach worked exceedingly well in Canada as institutions were empowered, research activity was decentralized to strong nodes and competition was the order of the day. Each person appointed to such a chair would be selected by the institution itself and would fit into the institution according to the institutional priorities and employment policies that they have determined. They will assist their countries to reach the MDG's and the associated innovation needed. The award would be a contribution to the institution.

Management

Management of the program would be under the jurisdiction of a foundation created for this purpose. As in the case of the CFI and the CRC this would ensure that the decisions were arms length from any one contributing government. But of course, it would also ensure that there was a very high level of accountability for the outcomes reporting back to the contributors. Each incumbent and each university would provide regular progress reports to the foundation and these would be published and widely disseminated. Financial accountability would be ensured by the use of a competent accounting firm.

Board members would be selected to represent funders, university associations and experienced managers. There would be regular meetings of the chair holders to report to each other and to the broader public on how they were helping their jurisdictions to meet the millennium goals and building innovative capacity. This would be an important network linking researchers and their institutions across Africa.

The foundation concept removes the political influence of special interests in the process of building local excellence and reinforcing clusters. Only public and not for profit universities would be entitled to be allocated chairs. The board of the foundation would be responsible for setting the criteria for awards. The board would establish the secretariat and appoint the CEO. Institutions and their governments would have to demonstrate that the chairs would be additive to the strength and quality of the institution and would not be offset in any way. The use of a foundation would play a key role in ensuring that the opportunities to leverage successful endeavors would be brought to the attention of potential additional funders among foundations and the private sector. Universities themselves could leverage the positions and the programs with their own local governments and with the local private sector just as they have done in Canada.

Appointments

Each occupant of a chair would also be required to have a cross appointment with a university in a developed country and be expected to spend about one month each year at that institution. It would be expected that most chair holders would be citizens of the country either from people now resident in that

country, but perhaps often from the Diaspora. These chairs would assist in meeting the need for poverty reduction, democratic governance, environment and energy and crisis prevention and recovery through building and reinforcing excellence and innovative capacity.

Cost and Outcomes

The cost of such a chair is estimated to be \$100,000 per chair per year allowing salary and benefits, travel money and some access to facilities (e.g. computing and internet). Each appointment would be for five years. During the period and at the end of the five year period there would be major conferences bringing all the chairs and their presidents together. This would provide a direct measure of the impact of this investment and the contribution of the network.

If the program was delivering high quality results a decision could be made to continue the program as it is or with some modifications. One thousand chairs at \$100,000 per year for five years would require the commitment of \$500 m. This is a significant investment, but there is little doubt that it would have a dramatic impact on Africa and its development toward the MDG's and serve as the focus for training the next generation. Increasingly the holders will need to focus on themes and less on individual academic disciplines. Working on aspects of the MDG's is not a discipline task, but needs the holders to cross boundaries and to bring together teams of problem solvers.

The chair holder will be expected:

1. to train PhD's.
2. to mentor young academics and post doctoral fellows;
3. to produce research results of many kinds including but not limited to publications;
4. to contribute to the innovative capacity of their country;
5. to ensure that the research is put into use in both the national interest and the community interest;
6. to seek funding from other sources both national and international to ensure adequate support for their work as well as building a longer term base beyond the five years of initial support.

Consistent feedback from nearly every contact supports, confirms and urges implementation of this plan.

STRENGTHENING PARTNERSHIPS

After the billions invested in Africa over the past two decades, without discernable results, this is an opportunity to meet the commitment of the developed world to truly influence positive change in the lives of the next generation.

*J. Michael Adams
President-elect*

International Association of University Presidents

The commitment for support to higher education in Africa from so many countries outside now needs to be unpacked. How can it be ensured that the support to Africa is determined by the needs and priorities determined by African higher education, and not by donors?

*G. Mohamedbhai
Secretary General, Association of African Universities
response to the World Conference on Higher Education (WCHE), 2009*

The traditional relief-based model of development assistance no longer works except in emergency situations.

Conway and Waage, 2010

We list here a few projects under development or in progress that would benefit from the proposed program of Africa Research Chairs. These and many others would have significant value-added as a result of building this stable platform.

1. The African Development Bank is developing a strategy for Higher Education, Science and Technology in Africa.
2. I have been told by a number of foundations that this proposal is an excellent fit complementing many of their efforts in supporting students and faculty to get advanced training. There would be a place for the awardees to return to.
3. The University of Witwatersrand is working with the National University of Rwanda and this would give a substantial partnership opportunity to develop further. Undoubtedly there would be many such examples.
4. Brazil is developing many programs with African partners. The research council of Brazil points out that this would make many of their efforts much more effective. And other south to south partnerships would follow.
5. In the United States the Global Knowledge Initiative is located within the National Academy of Science. This proposal would make a great platform for them to create and enhance the proposed partnerships with African universities.
6. The parallel Einstein project will identify and train Mathematics scholars. The graduates of these centers would have a great opportunity to contribute to African development.
7. There is a lot of focus on Global Health Initiatives and the National Institutes of Health are leading the development of Centers for Health Innovation. Again chairs would make such an effort much more effective.
8. The National Academies of the United States are managing a program to help a number of African nations develop effective National Academies. Members of these academies will largely come from the universities. Building on the African chairs will enhance the African Academies significantly.
9. The African Academies have already developed an outstanding report called Science in Action, Saving the Lives of Africa's Mothers, Newborns and Children. Their report articulates the needs well. Again one of the needs is to build the human capacity to deal with these issues.
10. The World Bank recently held a Global Forum on Science, Technology and Innovation. They are now developing a strategy for the developing world as they see that that STI is the key to poverty reduction. Imagine the significance for this strategy of placing a number of chairs in African universities.
11. The Institute of Advanced Studies, at Princeton, has been piloting a program funded by several of the major foundations. This has taken the form of University Leaders' Forums most recently in Ghana. This program Partnership for Higher Education in Africa would benefit significantly from this proposal and of course the chairs program could in turn build on the momentum of this project
12. US AID has been sponsoring a study to develop significant proposals for partnerships between US and African universities. This Africa US Higher Education Initiative is led by the Association of Public and Land Grant Universities. The creation of the chairs would add considerable substance to this effort and of course this effort would in turn be very helpful in the implementation of the Chairs program.
13. The African Union is planning to establish a Pan African university. Again imagine the significance that a program of chairs would have for this initiative.
14. A new university has recently been created in Kenya, the Victoria Institute for Science and Technology. Thrusts such as this would benefit from the proposed chairs program.

15. Conversations with representatives of the Norwegian Programme, Development, Research, and Higher Education (NUFU), suggest that there are many potential synergies between their programs and building a long-term outcome with the chairs program.

STEERING COMMITTEE

But creating health systems that will deliver these interventions, where and when they are needed, is a formidable challenge.

Conway and Waage, 2010

Anyone seeking to tackle the problems facing the developing world must remember two simple facts of life. First, none of these problems — from food shortages and the spread of disease, to achieving sustainable economic growth — can be addressed without the use of science and technology. Second, harnessing science for development depends on the skills of a country's people. And that in turn requires a robust and effective higher education system- the only mechanism that can produce and sustain these skills.

Science and Development Network, Mar 2008

Your proposal is an outstanding contribution to the ongoing discussions on the need to find innovative ways to support higher education in Africa, given the relative failure of the traditional approaches. It is also of great interest to us as we seek partners and ideas to help implement our strategy for Higher Education, Science and Technology (HEST).

Boukary Savadogo

*Division Manager, Education, Science and Technology
African Development Bank*

The following select group of individuals has agreed to serve on a high-level steering committee and all have formally and enthusiastically endorsed the proposal.

- Under-Secretary General, General Cheik Sidi Diarra, United Nations
- Director, Division of Higher Education, Georges Haddad, UNESCO
- Director of Education, Boukary Savadogo, African Development Bank
- Tertiary Education Coordinator, Jamil Salmi, World Bank
- Directorate of Education, Richard Yelland, OECD, and Head of the programme on Institutional Management of Higher Education
- Secretary General, Goolam Mohamedbhai, Association of African Universities
- Secretary General, Heitor Gurgulino da Sousa, International Association of University Presidents (IAUP), former rector of the United Nations University, first rector of the Federal University of San Carlos, Brazil, former director of Higher Education, Ministry of Education, Brazil, former advisor to the Director General of UNESCO and member of the Club of Rome
- President-elect, Michael Adams, IAUP and president Fairleigh Dickenson University
- Recteur, Bernard Cerquiglini, Agence Universitaire de la Francophonie
- Secretary General, John Tarrant, Association of Commonwealth Universities
- Secretary General, Eva Egron-Polak, International Association of Universities
- Secretary General Ronaldo Taedu Pena, Associaçao de Universidades de Lingua Portuguesa and rector Federal Universidade das Minas Gerais
- Minister, Mrs. Naledi Pandor, Ministry of Science and Technology, South Africa
- Director, German Development Institute, Dirk Messner

- Secretary General, Mohamed Hassan, The Academy of Science of the Developing World
- Recteur, Silas Lwakabamba, National University of Rwanda
- Vice Chancellor, Cliff Tagoe, University of Ghana
- Vice Chancellor, Jonathan Jansen, Free State University and vice president of the South African Science Academy
- Rector, Allan Rock, University of Ottawa and former ambassador to the United Nations
- Founding Director, Shuzaburo Takeda, Business University Forum of Japan. And through him key persons and officials in MOFA and major presidents of Japanese universities as well as key business leaders such as Dr. S. Toyoda
- David King, former science adviser to the Prime Minister UK and presently founding director of the Smith School of Enterprise and the Environment, Oxford University and Senior Science Advisor to UBS
- Chief Operating Officer, Sara Farley, Global Knowledge Initiative
- Calestous Juma, Kennedy School of Government, Harvard University
- President, Stephen Toope, University of British Columbia
- Rector, Luc Vinet, Université de Montréal
- Paul Dufour, former Interim Executive Director at the Office of the National Science Advisor and now a consultant in science policy for development

AVAILABLE APPENDICES

There is a well-established relationship between a country's investment in research and its level of development. In both Latin America and South-East Asia, fast developing countries have all rapidly stepped up their expenditures on science and technology. If African countries fail to increase their science spend faster than their economic growth. The continent will remain a developmental backwater.

*"Africa Analysis: Progress on Science Spending?"
in, Science and Development Network, October, 2009*

This is an interesting initiative and one that can make a difference to higher education in Africa. The promoters of this proposal should therefore be commended.

*Goolam Mohamedbhai
Association of African universities*

Prof Mohamedbhai spoke about the enormous challenge facing African universities in the twenty-first century, particularly in light of the advent of the knowledge society that was drawing the best and the brightest to northern universities and to non-academic employment in their own countries.

*University Leaders Forum
Partnership for Higher Education in Africa
Ghana, 2009*

Development policy makers seem to listen to social scientists or natural scientists, but rarely to both.

Conway and Waage, 2010

1. Organizations Contacted

United Nations
African Ministerial Council on Science and Technology (AMCOST)
World Bank
African Development Bank
UNESCO
OECD
Club of Rome
Associations of Universities
Academies of Science

2. Country Contacts

Africa
Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Core d'Ivoire, Gabon,
Ghana, Kenya, Madagascar, Malawi, Mauritius, Morocco, Mozambique, Namibia, Nigeria,
Rwanda, Senegal, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe
United States
France
Germany
United Kingdom
Japan
Canada
Other Countries
Australia, Brazil, Chile, China, Denmark, EU, India, Korea, Italy, Malaysia, Mexico,
Netherlands, Norway, Philippines, Russia, Sweden, Thailand

3. Words of Wisdom and Insight

4. Selected Letters

5. Selected Readings