

# UNESCO BAMAKO CLUSTER OFFICE

*in collaboration with*

**The Government of Mali and  
Other Partners**

2009-  
ICBRECA

**TWIN  
EVENTS**

## **First International Conference on Building Research Capacity in Africa (ICBRECA)**

**Theme**

**Promoting Research in African Universities through Regional and  
International Research and Knowledge Networks and the Use of ICTs**

**Bamako, Mali, November, 9-11, 2009**

**and**

## **Training Workshop on Development and Use of Virtual Facilities for Quality Teaching and Research**

**Segou, Mali, November, 13-14, 2009**

### **Background and Context**

One of the conclusions of the 2009 World Conference on Higher Education is the declining attention paid to research in African higher education and the heightened need to adopt new dynamics for reversing the trend. At the special Roundtable for Africa at the conference, capacity building for young and old researchers, collaboration (institutional, national, and regional) for addressing research problems, and improved funding for research through public-private sector support were identified as strategies for enhancing research productivity in Africa. In order to go beyond the rhetoric of the conference and as a response to the call to action, the issue of capacity building of researchers has been identified and adopted by the UNESCO Bamako Cluster Office as one of the follow-up activities of the 2009 World Conference. The approach of the Office is to mount a series of biennial conferences and workshops that will strengthen research capacity at the human and institutional levels in a sustained and sustainable manner.

During the period 2002-2007, the economic growth in Africa has been increasing at an average annual rate of over 6%. It is now generally agreed that in order to sustain this growth in the current competitive globalised society, African countries need to move from commodity-based to knowledge -based economies and therefore to engage in long-term investments in

physical and human capital. Indeed the World Bank Knowledge Economy Index (KEI) that is used to assess the overall preparedness of a country or a region towards the Knowledge economy is defined as a simple average of the following four sub-indexes which represent the four pillars of the knowledge economy: (a) Economic environment that is conducive to market transactions.; (b) Human Capability Index measured by overall literacy rates and secondary and tertiary education enrolments with higher weights assigned to tertiary education; (c) Technology activity index to measure Innovation through researchers in R&D, patents and scientific and technical publications and (d) Information and Communication Technologies (ICTs) Infrastructure measured by telephone, computers and Internet use per thousand populations.

The higher education system especially the universities is positioned to stimulate the growth of the knowledge economy. One of the hallmarks of a university is ability to expand the frontiers of knowledge through research. Many of the inventions which have made the world a better place were initiated in universities. Over 90% of Nobel Prize winners are affiliated with universities.

In a recent World Bank report entitled “*Accelerating Catchup: Tertiary Education for Growth in Sub-Saharan Africa*”, it was noted that the capacity skills Sub-Saharan Africa (SSA) badly needs is “...to build the requisite technological capability for competitiveness and to serve as the basis for innovation in applied research in fields such as engineering, and the biosciences. The latter, for example, hold out the promise of more productive, nutritious and better adapted varieties of crops, new food processing technologies, new medicines, new biofuels, and new materials. Such products and processes will enable SSA to transition into a higher growth trajectory that facilitates progress towards MDG goals in poverty reduction, food security, education and health.”

A pathway to addressing this deficiency is to strengthen the capacity of researchers in African universities. This can be achieved through training in contemporary techniques in research and publication of research findings. A series of intensive conferences and workshops is thereby proposed for both young and old researchers.

UNESCO Bamako Cluster Office and its partners are already contributing to the improvement of the human capability index through the organisation of annual conferences and capacity building workshops on Quality Assurance in Higher Education in Africa. The purpose of this new series of conferences and workshops is to contribute to the improvement of the technology activity index by facilitating integration of African universities into regional and international research capacity building initiatives in Africa, in particular centres of excellence, regional and international research and knowledge networks, Networks of the International Scientific Unions and International groups of Scientific leaders. It is recognized that this kind of cooperation is cost effective and will help researchers to benefit from experience, expertise, best practices and facilities available at participating institutions.

The proposed conference prominently features within the Africa’s Science and Technology Consolidated Plan of Action which mainly aims at implementing the African Union research and development programmes through the NEPAD network of Centres of excellence in five

programme clusters. The conference is also in line with the African Union Plan of Action of the Second Decade of Education in Africa (2006-2015) and the African Regional Action Plan on the Knowledge Economy (ARAPKE) : A Framework for Action.

This first conference is also seen as a follow up to the “Knowledge for Africa’s Development” (KAD) Conference organized in 2006 in Johannesburg as part of the World Bank’s “Knowledge Economy Forum” to assist African policy and decision makers in the formulation of strategies focused on the role of education, ICTs and innovation to promote the Knowledge economy in Africa

The conference will be followed by a training workshop on the theme “Development and Use of Virtual Facilities for Quality Teaching and Research in Africa”

### Objectives

- To review the state of research in higher education institutions in Africa
- To identify human resource and institutional obstacles to quality research
- To propose strategies for enhancing research capacities
- To update participants with modern methods of conducting and reporting research

### Sub-themes

1. State of research in higher education in Africa: Accelerating catch-up
2. Advances in research methods in scientific and non-scientific disciplines
3. Innovative practices in research: Learning from success stories
4. Maximising synergy between academia and industry in research and development
5. Enabling environment and policies for funding research

### Participants

- Ministers in charge of higher education and research
- Vice-Chancellors/Rectors/Provosts
- Head of research institutes and agencies
- Directors of research in higher education institutions
- Supervisors of theses and dissertations of higher degree students
- Researchers in all disciplines in the higher education system in Africa and other regions of the world
- Research funding agencies
- Other stakeholders and interested persons in higher education research

### Resource Persons/Institutions

- National and international award winners in research
- Funding agencies for research

### Expected Results

- Participants who have acquired modern skills in the conduct of scientific and non-scientific research
- Enhanced contribution of African scholars to the global world of knowledge
- Networking for research collaboration between African scholars and colleagues from other regions of the world
- Outline Plan of Action for improving research capacity in the African higher education system

### Venue and Date

The conference will take place in Bamako, Mali from 9<sup>th</sup> to 11<sup>th</sup> November, 2009. There is a follow-up workshop in Ségou, Mali from 13<sup>th</sup> to 14<sup>th</sup> November, 2009. Arrival is on the 8<sup>th</sup> while departure is on the 15<sup>th</sup>.

### Conference Fee

No registration fee is charged to participants. As a general rule, ICBRECA does not pay for participants' travel and living expenses. However, limited funds are available to help meet the cost of attendance of selected specialists.

### Exhibition

A limited amount of space will be available for commercial vendors' displays/exhibits during the conference.

### Working Languages

The working languages of the meeting will be English and French.

### Call for Papers

Papers or posters on issues falling within the sub-themes outlined above may be submitted as contributions to the conference. Persons who wish to present a paper or poster at the conference should submit an **extended synopsis** (in English or French) of 800 words (i.e. two A4 format pages of single spaced typing or the equivalent, including any tables or diagrams and a few pertinent references) to the Conference Secretariat, email: [j.shabani@unesco.org](mailto:j.shabani@unesco.org) **by September 1, 2009**

Authors will be informed **mid-September** whether their paper/poster has been accepted for presentation by the Programme Committee. A subset of papers presented at the conference will be published subject to peer review. Further details will be provided after the extended synopses have been reviewed.

### Conference Web Site

The conference web site where information updates can be received is located at <http://www.unesco-bamako.org/conferences>

For further information, please contact:

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# TRAINING WORKSHOP ON THE DEVELOPMENT AND USE OF VIRTUAL FACILITIES FOR QUALITY TEACHING AND RESEARCH IN AFRICA

Theme

*“Development and Use Virtual Facilities for Quality Teaching and Research in Africa”*

## Background and Context

The ICT revolution has provided newer thrusts to the drive towards quality teaching and research. In Africa, lack of funds to subscribe to journals and purchase current books, the need to train large numbers of teachers, and inadequacies in research laboratory facilities have justified, among other reasons, the increasing use of ICT to deliver quality higher education and research.

Over the ages, libraries have played a central role in the preservation and dissemination of cultural, historical and scientific information. The written word has been the primary storage medium for close to 3000 years. Physical location, search methods and number of available copies have defined the accessibility of a library material. Now electronic and computer technology has come in to remove most of the limitations of accessibility and availability. Instead of the written word, we now have the “electronic word”, existing as bits and bytes in computer memory. Internet technologies such as the Intranet, World Wide Web and communications technologies have all teamed up to create a liberation from location, unlimited copies of electronic books, very advanced search techniques and a world wide distribution at the click of a mouse.

Poor quality library resources have depressed the quality of teaching and research in higher education systems in Africa. Out-dated library books and journals beget lecture notes with stale contents. Research is hampered by lack of awareness of the current state of knowledge in the field and the use of dated research paradigms and methodologies. The contributions of African academics to world research output as documented in international journals has been declining steadily since 1988 as a consequence of outdated library resources, among other reasons.

The realisation that not one single library can be all-sufficient in terms of its acquisition, is steering library development in two complimentary directions. First is the networking of libraries which ensures that network members make up for shortfalls from the strength of others. Collections that are not available in a library can be accessed from another library having such collections within the framework of a network. In unity they stand and in division they fall in offering good quality library services.

The second direction is the building of a virtual library. The pooled resources are made available electronically to each library site using information and communication technology (ICT). Thus, such libraries have the potential for providing the latest and comprehensive resources and delivering same instantaneously to users. The recent trend in academic library development is towards establishing virtual libraries. Today, there are over 150,000 national and institutional virtual libraries world-wide.

ICTs have also availed higher education teachers and researchers with tools such as Internet laboratories (iLabs) and virtual laboratory equipment that can be used to conduct practical work in settings where these tools are lacking or inadequate. Virtual Institutes and open educational resources (OERs) are hardly being put to effective use in Africa for delivering higher education. African higher education teachers and researchers are yet to take full advantage of these tools; capacity deficit being a major cause. This workshop is aimed, among other things to bridge the capacity gap.

### **Sub-themes**

1. Digital/Virtual library resources in quality teaching/learning and research
2. Electronic laboratories and simulations in teaching and research
3. Virtual institutes and open educational resources (OERs)

### **Objectives**

At the end of the workshop, participants will

- develop skills in the use of digital/virtual libraries for teaching, learning and research
- develop skills in the use of electronic laboratories and simulations
- learn techniques of conducting practicals for large classes using digital/virtual resources
- acquire skills for contributing their research to global online resources for teaching and research.

### **Expected outcomes**

- Participants who are skilled in the use of digital/virtual libraries for teaching, learning and research
- Participants who are skilled in the use of electronic laboratories and simulations
- Development of a Guide for using digital/electronic resources for teaching, learning and research in African higher education systems.

### **Resource Persons**

Experts in the use of digital/electronic resources for teaching, learning and research

### **Venue and Date**

The workshop will take place in Bamako, Mali from 13<sup>th</sup> to 14<sup>th</sup> November, 2009. It will be preceded by a conference from 9<sup>th</sup> to 11<sup>th</sup> November. Hence participants are expected to arrive on the 8<sup>th</sup> and depart on the 15<sup>th</sup>.

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For further information, please contact:

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