

**ECONOMIC COMMISSION
FOR AFRICA**



**COMMISSION ECONOMIQUE
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Report on
**Meeting of Inter-University Council of East Africa (IUCEA) specialized
committee on ICT in Education in East Africa**

Uganda, 27-28 November 2006

By

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I- Introduction

Within the framework of the African Information Society (AIS), the United Nations Economic Commission for Africa (ECA) has been raising awareness and building research capacity of African Academia to enable them to exercise the intellectual leadership in addressing challenges of developing Africa's Knowledge economy. In this regard under the VarsityNet program, ECA has been supporting research activities at the Inter University Council of East Africa (IUCEA).

In this regard and also to debate on the trends risk and opportunities of mainstreaming ICT in Education, IUCEA convened two days meeting of specialised committee on ICT in Education in East Africa, at the Jomo Kenyatta University of Agriculture and Technology (JKUAT) in Nairobi from 27-28 November 2006. More than thirty (30) Deans of Computer Department of Universities from Kenya, Uganda and Tanzania attended the meeting.

II- Mission objectives

The mission objectives include:

- Participate in the meeting of specialized committee on ICT in Education in East Africa;
- Make a presentation on ICT & Education Policy;
- Discuss with the Parliament of Kenya and the eGovernment Directorate on the organization of workshop on "AIS implementation within Kenya and the role of Parliament".

III- IUCEA Meeting

3.1 Day 1 : ICT in Education and Training: Trends, Risks, Opportunities

The first day of the meeting focused on ICT in Education and training, trends risks and opportunities in East Africa Community sub-region. Prof Nyaigotti-Chacha, Executive Secretary of IUCEA and Professor Nick G. Wanjohi, Vice Chancellor of Jomo Kenyatta University of Agriculture and Technology (JKUAT), , delivered two keynote addresses at the opening ceremony, aimed at setting the stage for the discussions.

Six sub-topics were presented addressing various aspects of the theme of the meeting, including:

- National, regional initiatives and developmental issues in ICT education and training
- Policy issues in ICT education and training

- Pedagogical issues and e-learning cases
- Benchmarks, standards and quality
- Content development and evaluation review
- ICT infrastructure and funding for education and training

The keynote addresses highlighted the need for a comprehensive and forward-looking sub-regional ICT policy framework, which creates an enabling framework for the development of ICT in education in East Africa. To support this policy framework a permanent standing committee that will meet regularly to discuss the way forward need to be established. Regarding the VarsityNet initiative stock of what has been achieved to-date should be done and the inter-university information system developed improved and extended to high quality *Higher Education Information Management System* for universities in East Africa. The need to create an east Africa journal addressing ICT4D issues was also raised. IUCEA must develop initiatives/projects that encourage young people to be innovative through research.

Issues recommendations raised through various presentations and discussions include:

Within the East Africa it was noted that there are many ICT initiatives, but people are not aware of these, sometimes leading to duplication of effort. Therefore the IUCEA should create a portal to inform stakeholders about what are going on, including policy initiatives which are still scattered within the various national ICT strategies and policy documents.

It was also agreed that there is need to reexamine the African cultural aspects regarding ownership in relation to existing intellectual property laws, most of which are still governed by Western models of ownership, especially with respect to Internet content.

Higher Education institutions should also help Government within the region to establish an enabling environment conducive to private sector and the Diaspora participation. ICT in Education Policy must address various issues including high skilled required by the knowledge economy, education and training for all, rural communications, gender balance, the physically challenged, IP rights, and virtual universities and their cross-border implications.

To alleviate the enormous challenges facing access to physical educational institutions, participants noted that there is need to explore ways in which e-learning may be used to provide education to schools in East Africa and look at the possibility to offer full on-line learning programmes at diploma and degree levels.

The issue for implementing a sub-regional quality assurance (QA) , benchmarks, standard in line with international standard was supported.

Regarding local content development and localisation, it was noted that most tertiary institutions have not embraced OSS despite the inherent opportunities. There is still lack

of professional competence and expertise in East Africa. Most OSS projects fail because they lack proper support and maintenance models and structures, after implementation

There is therefore need for policies and strategies for sensitization and awareness creation amongst the potential users and decision makers and if possible the integration of OSS within educational system agenda.

3.2 Day 2: Human Resource and Curriculum Development

During the second day, participants looked at the issues of Human resource and curriculum development. The following Universities presented ten Institutional reports:

- From Kenya: the National University of Nairobi, Memorial University, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Daystar University and Moi University;
- From Uganda: Uganda Martyrs University, Kyambogo University, Makerere University, Islamic University,
- From Tanzania: Tumaini University, Gulu University, and Mzumbe University.

Human resources are recognized as key to the implementation of the Universities strategic plan. In order to offer quality programs the academic, technical and administrative staff must be well trained through a comprehensible and continuous capacity development program. Therefore most of the Universities are facing the following challenges in maintaining a high quality team:

- High turnover due to industry demand for computer science professionals;
- High remuneration of computer science professionals in the market;
- Rapid growth of computer science departments nationally and worldwide leading to aggressive headhunting; and,
- Emerging professional aspect of Computer Science.

The global objectives of Universities in the region regarding human resource is to recruit, motivate and retain qualified staff and ensure R&D activities to solve problems encountered in this area.

Acknowledging that the academic staff are integrally involved in fulfilling the mission of the school while the technical and administrative staff provide critical support, the following actions issues were raised for the development of staff:

Academic Staff

- Balanced capacity building in all mission areas;
- Mandatory capacity building;
- Capacity building opportunities to be used as a benefit that attracts quality human resources;
- Extend the types of academic leave: sabbatical, industrial, administrative leave;

- Reward and remuneration tied to productivity in mission areas.

Technical Staff

- Quality of service must be the core value of technical staff;
- Capacity building is a benefit;
- Recruitment of a senior technical person to provide strategic direction;
- Continuous capacity building of technical staff must be planned and budgeted because staff and student support in emerging technologies is critical for success of mission;
- Recruitment criteria for technical staff must be carefully crafted;
- Competitive remuneration of technical staff is necessary to retain good workers.

Administrative staff

- Core value for administrative staff must be customer service (encompassing internal clients such as students and staff and external clients)
- Business and management skills are mandatory;
- Technological skills that enable the planning, implementation and maintenance of a highly automated environment are also mandatory;
- Content development and maintenance skills are desirable;
- With research and development becoming a core activity the administrative staff are required not only to create a high-quality environment that frees the academics to innovate, but also to run complex businesses.

IV- Conclusion and recommendations

The second day ended with the following recommendations:

- 1- The proposal of the creation of the East Africa Permanent Committee on ICT in Education was approved; IUCEA to finalize the procedures related to this creation;
- 2- Develop under the coordination of IUCEA a sub-regional policy on ICT in Education;
- 3- IUECA to develop a portal of best practices within the region and facilitate access to it;
- 4- The VarsityNet inter-university information system to be improved. Reviewed by all members countries to have a “high quality Information System for students records management and other administrative tasks”;
- 5- Promote and implement East Africa ICT R&D, incubation and entrepreneurship Center;
- 6- IUCEA to undertake the development and adoption of a sub-regional Quality Assurance (QA) Standards framework;

- 7- Develop and implement an “Indigenous knowledge, localization and African language in the cyberspace” in the East Africa sub-region; IUCEA should seek the potential of collaboration with ECA Academia Research network working in this area;
- 8- Develop and implement a comprehension capacity building program on e-learning and curriculum development for Higher Education Institutions in East Africa;
- 9- Create “East Africa Journal on ICT for Development”.

V- Follow-up from ECA

The following follow-up activities can be undertaken from our side:

- Sub-regional ICT Policy and strategy: Support the development of sub-regional ICT Policy and strategy and make the linkage with the East Africa Community e-Government framework;
- QA Standard for Higher Education Institution: Support the development of sub-regional QA in line with International standard;
- East Africa ICT & Education Committee: Consider support to the committee development

VI- Meeting with Kenya National Assemble and the Directorate of eGovernment

At the end of the specialized meeting, I met with the Vice-clerk of the Kenya national Assemble to discuss the modalities of workshop for Member and staff of Parliament. It was confirmed that the workshop will take place 7-8 December 2006 at Safari Park. The Parliament journalists were briefed on the objective and expected outcomes.

Another meeting was organized with a representative of the Kenya Directorate of eGovernment, Mr. Gakiria Andrew. The number of resource persons was agreed and the draft of the Agenda finalized.

VI- Annex I: The Agenda

IUCEA SPECIALIST MEETING :ICT Education in Tertiary Institutions		
Monday 27th October 2006		
0800-08.30	Registration	
08.30-09.30	Opening of the Meeting	
	IUCEA address : Prof C Nyaigotti-Chacha .Executive Secretary	
	Prof N. Wanjohi . Vice-Chancellor. JKUAT	
0930-0950	Topic 1.Initiatives and Developmental Issues in ICT Education and Training.. Presenter: <i>Mr C .M.Gakuu</i>	Chairperson: Prof.A.J.Rodrigues
0950-10.00	Discussant; <i>Mr Peter Ng'ang'a</i> , Keriri Women's University of Science and Technology	
10.00-1015	Discussion	
1015-1030	Tea break	
1030-1050	Topic 2. Policy Issues in ICT Education and Training. Presenter: <i>Dr. Frank Tilya</i>	
1050-1110	e-Readiness: Making the most of ICT for Educational Development in Africa. Presenter: <i>Mr.Thierry H. Amoussougbo</i> ISTD,UNECA	
1110--11.20	Discussant; <i>Dr Gerald W Chege</i> United States International University	
11.20-1135	Discussion	
1135-1155	Topic 3. Pedagogical Issues and E-learning cases Presenter: <i>Dr E.I.Omwenga</i>	
1155-12.05	Discussant; <i>Dr T Jiwaji</i> The Open University of Tanzania	
12.05-1220	Discussion	
1220-1240	Topic 4. Benchmarks, Standards and Quality Presenter: <i>Dr Ddembe Williams</i>	
1240-1250	Discussant; Representative St Augustine University of Tanzania	
1250-1305	Discussion	
1305-1400	Lunch break	
1400-1420	Topic 5. Content Development & Evaluation Review Presenter: <i>Dr Hashim Twaakyondo</i>	Chairperson: Prof.A.J.Rodrigues

1420-1430	Discussant; <i>Mr Denis Ssebugwawo</i> Kampala International University	
1430-1445	Discussion	
1445-1500	Tea break	
1500-1520	Topic 6. ICT Infrastructure and Funding for education & training <i>Mrs Nora Mulira,</i>	
1520-1530	Discussant; <i>Dr G R Koda</i> University of Dar es Salaam	
1530-1545	Discussion	
1545-1700	Summary of days proceedings by Presenters and Discussants	Consolidated by Messrs JM Wafula and Philip Ayoo
Tuesday 28th October 2006		
0800-08.30	Administrative Issues	IUCEA
08.30-1000	Topic 7. Human Resource Development : Institutional Reports	Chairperson: Prof.A.J.Rodrigues
(15 minutes each)	University of Nairobi, <i>Dr Katherine Getao</i> Hubert Kairuki Memorial University Islamic University in Uganda JKUAT <i>Prof. S.M Kang'ethe</i> Uganda Martyrs University Kyambogo University <i>Mr. Henry Matovu</i>	
1000-1030	Discussion	
1030-1045	Tea break	
1045-1215	Topic 8. Curriculum Development : Institutional Reports	
(15 minutes each)	Makerere University <i>Dr. Venansius Baryamureeba</i> Tumaini University Daystar University; <i>Dr Jon D Masso</i> Moi University : <i>Dr Gregory Wanyembi:</i> Gulu University Mzumbe University <i>Mr Simon Njovu</i> <i>Presentation of varsityNetfindings,</i> <i>Philippe Ayoo Inter-University Council of East Africa</i>	
1215-1245	Discussion	
1245-1400	Lunch break	
1400-1500	Summary Report of mornings proceedings by Presenters and Discussants	Consolidated by Messrs JM Wafula and Philip Ayoo
1500-1530	Tea break	
1530-1630	Draft report of meeting	Chairperson: Prof.A.J.Rodrigues Consolidated by Messrs

		JM Wafula and Philip Ayoo
1700	End of Workshop	

VII- Annex II: List of Participants

UNECA – Ethiopia

1. Mr Thierry Amoussougbo
Regional Advisor, ICT and Science & Technology Division
United Nations Economic Commission for Africa

Kenya

1. Prof Nick G Wanjohi
Vice-Chancellor
Jomo Kenyatta University of Agriculture and Technology
2. Mr C M Gakuu
Head, Department of Extra Mural Studies
University of Nairobi
3. Dr E I Omwenga
Director, ICT Centre
University of Nairobi
4. Prof Anthony J Rodriguez
School of Computing and Informatics
University of Nairobi
5. Mr Joseph Wafula Muliaro
Institute of Computer Science and IT
Jomo Kenyatta University of Agriculture and Technology
6. Dr Katherine Getao
Director, School of Computing and Informatics
University of Nairobi
7. Dr Mwangi Waweru
Director, Institute of Computer Science and IT
Jomo Kenyatta University of Agriculture and Technology
8. Dr Gregory Wanyembi
Head, Department of Information Technology

Moi University

9. Dr Jon D Masso
Dean, Faculty of Science
Daystar University
10. Dr Gerald W Chege
Head, Department of Information Systems
United States International University
11. Mr Peter Ng'ang'a
Head, Department of Computer Science
Keriri Women's University of Science and Technology

Tanzania

1. Dr Hashim Twaakyondo
Director, Centre for Virtual Learning
University of Dar es Salaam
2. Mr Titus Tossy,
The Open University of Technology
3. Mr Simon Njovu
Head, Department of ICT
Mzumbe University
4. Dr G R Koda
Head, Department of Computer Science
University of Dar es Salaam
5. Mr Raikka Haapakorpi
Tumaini University
6. Mr Tibuhinda Ngonzi
St Augustine University of Tanzania
7. Mr Kaizilege Karoma
Hubert Kairuki Memorial University

Participants, Uganda

1. Dr Ddembe Williams
Deputy Dean, Faculty of Computing and Information Technology
Makerere University

2. Mrs Nora Mulira
Deputy Director, Directorate for ICT Services
Makerere University
3. Prof Venansius Baryamureeba
Dean, Faculty of Computing and Information Technology
Makerere University
4. Mr Henry Matovu
Ag. Head, Department of Computer Science
Kyambogo University
5. Mr Denis Ssebuggwawo
Dean, School of Computer Studies
Kampala International University
6. Mr Nimrod Mafabi
Gulu University
7. Mr Ahmed Ssenyonjo
Islamic University
8. Mr William Mugisha
Uganda Martyrs University

IUCEA

1. Prof. Chacha Nyaigotti-Chacha
2. Mr Philip Ayoo
3. Ms Mildred Warugaba