

# Phasing out Islands of Knowledge: Cyberspace Enables Universities to Share Learning Resources

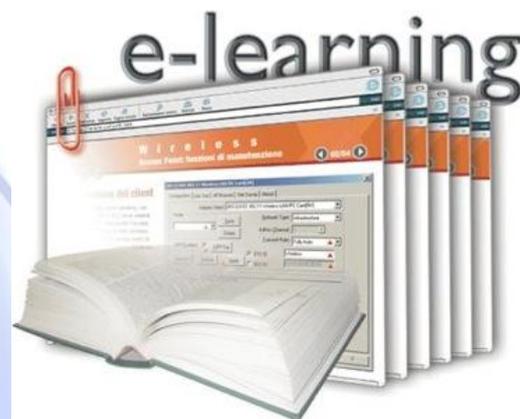
## EXECUTIVE SUMMARY

Traditionally, all researchers have worked in intellectual communities, and increasingly, one of the most important uses of information technology in research would be to support their collaboration. In a study conducted in East Africa, the need for sharing learning resources, which is key in any academic and research undertaking, has been reaffirmed. It is expected that through the sharing of e-learning resources, inequity amongst East African universities could be minimised. Within this arrangement, it would be essential that all researchers have access to at least a common base of collaborative technologies such as web access and e-mail. Additionally, more advanced collaboration technologies should be introduced and systematically deployed at the universities. Ten key issues have been identified as core to the successful sharing of e-learning resources including: availability of a coordinating agency, resource mobilization, national research and educational networks, and harmonized policies and processes. Other issues include infrastructure improvement, capacity building, justification for sharing, motivation and existence of sharable resources.

## THE CONTEXT

As the demand for higher education continues to expand, as demonstrated by the rise in student numbers, the need to explore other ways of providing learning becomes more apparent. Universities in East Africa are increasingly adopting the use of technologies for teaching and learning, although this is being done in isolation at individual university levels. The current status of use of such technologies within the universities varies from basic to advanced. Therefore, in this state of affairs, sharing of digital learning resources becomes difficult. Need arises therefore for developing guidelines that can enhance e-learning resources sharing in a formalised way. The lack of such a framework to share e-learning resources has constrained their operations.

Increasingly, technology-based solutions have been established to overcome the problems associated with access to learning resources by creating yet another dimension for authentic learning beyond the boundaries of the classrooms. ICTs provide an array of powerful tools that may help in transforming the present isolated, teacher-centred and text-bound classrooms into rich, student-focused, interactive knowledge environments. However, the power of e-learning is more than technology – it is the social dynamics of networking. The revolutionary impact of e-learning lies not simply in having a multimedia platform on a single desktop. It is the combined power of a world-wide network of such computers – that connects authors, instructors and learners globally – with the immediacy of text, graphics, audio and



video, as well as interactivity and collaborative sharing. In this context, collaborations can reduce costs associated with designing and implementing commonly used e-learning platforms and courses (i.e. sharing of reusable learning objects housed in a common repository). It is for this reason that a study was undertaken to establish the feasibility of sharing learning resources within universities in East Africa.

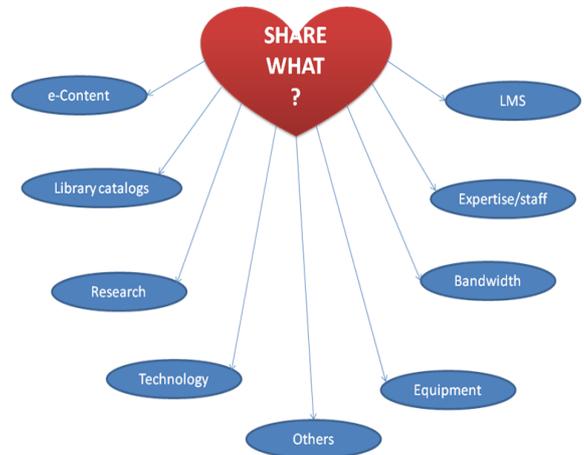
The study took the form of a survey to assess the existing e-learning approaches and systems amongst universities in East Africa that would lead to the development of a framework for a shared e-learning system. Using a purposive sampling technique, 30 universities (16 public, 14 private) from the five East African Partner States (Burundi, Kenya, Rwanda, Tanzania and Uganda) were selected for the survey. Study methods included documentary review, face-to-face interviews, and open observation on location. Data was collected from the various e-learning stakeholders who were selected purposively from the universities.

## Key Findings

### THE KEY FINDINGS OF THE STUDY INCLUDE THE FOLLOWING:

1. There is significant progress by universities in East Africa to develop strategic plans to guide their activities. There is also significant progress in ICT policy planning, as demonstrated by significant improvement in the number of universities with ICT policy plans during the two years between 2008 and 2010 (from 42% to 65%). However, lack of e-learning strategies could be a sign that this area is still not regarded highly within the institutions.
2. The challenge of unequal developments in infrastructure for e-learning is apparent in East Africa. Due to this challenge, there has been less flexibility in learning, low quality of learning experiences, high costs of education and low productivity.
3. Whereas commercial software products still dominate most university administrative MIS implementations, learning management system (LMS) implementations are progressively moving towards open source.
4. Whereas access to library materials is key for teaching/learning and research, only 23.1% of the university libraries have web-based online public access catalogues (OPACs). This means that resources of most universities are not readily available to the wider academic and research community.

5. There are quite many e-learning resources that could be shared within the partnership, as summarised on the **figure** below.



6. A sharable LMS is required. "... a common learning management system should be implemented so that lecturers from all participating institutions post their materials for students to access free of charge," said one of the respondents. Another respondent said, "... a group of reviewers should be put in place in all courses to ensure that posted content on the sharable LMS meet acceptable minimum standards".
7. Over 90% of respondents expressed willingness to share resources with their colleagues from other universities. However, sharing of learning resources is still done in an *ad hoc* manner without any formal arrangements to guide the practice.

INTERNET<sup>HWY</sup>

CYBERSPACE<sup>ST</sup>

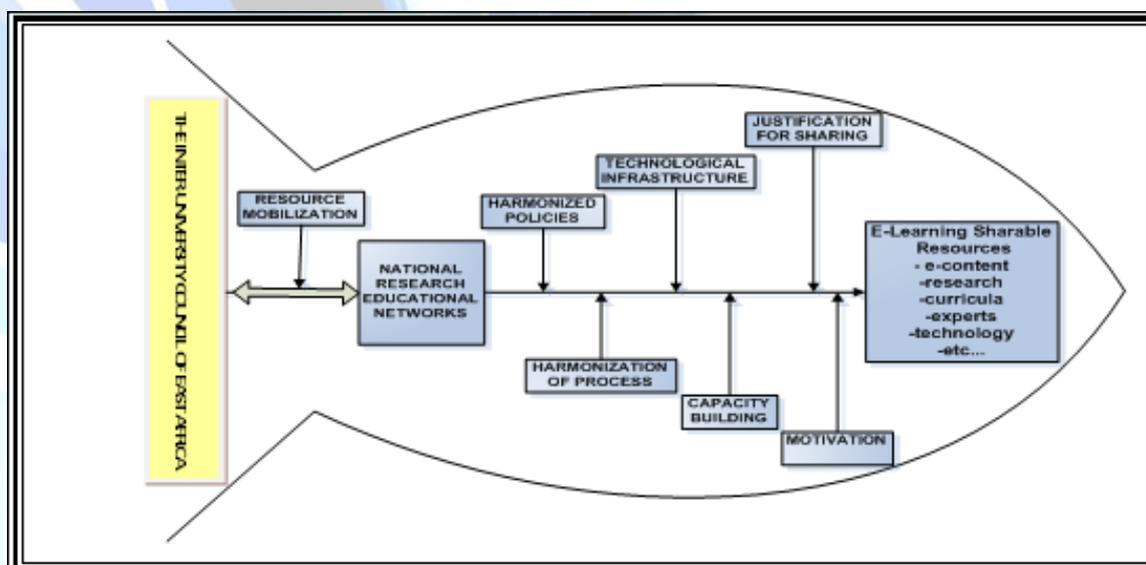
## POLICY RECOMMENDATION: "Implementation of a Framework for e-Learning Resources Sharing"

In order to share e-learning resources in a more rationalised and formal way, the following policy recommendations are made:

1. **A Regional Coordinating Agency should be established:** Resource sharing requires a coordinating agency to provide a 'clearing house' role. Due to its exiting mandate of uniting East African higher education institutions such a role would be best played by the IUCEA.
2. **National Research and Education Networks should be strengthened:** The goal of these networks is to unite local universities for the purpose of sharing research and educational resources through the exiting collaborative engagements. These NRENs can provide a basis for further sharing of resources in other aspects including e-learning.
3. **Resource Mobilization for e-learning should be undertaken:** Financial and other resources are key ingredients to e-learning resources sharing. Resources may be mobilized at the regional (IUCEA), national (NREN) and institutional (university) levels.
4. **Harmonized Policies on e-learning should be put in place:** With harmonized policies national boundaries would be transcended, quality of learning would be improved, benchmarks and standards would be established and resources would be effectively utilized to increase productivity within the region.
5. **Harmonization of Processes should be enforced:** Related to harmonized policies, are harmonized processes which are used for undertaking different activities related to sharing e-learning resources. There would be need to harmonise administrative, financial, educational, research, legal and ethical, security and sharing processes.
6. **Infrastructure for e-learning should be set-up/strengthened:** Some universities are well endowed with modern infrastructure while others are not. There would be need for each participating university to implement some basic infrastructure that would allow for full participation in the sharing process.
7. **Capacity Building in e-learning should be undertaken:** Majority of university staff are not professional teachers and therefore do not have the necessary pedagogical skills to make them good teachers even in the face-to-face teaching environment. To effectively share e-learning resources, there is need for e-learning pedagogical skills, instructional design, animation, graphic design, and skills in web design, implementation and support for learning management systems.
8. **Justification for Sharing should be widely disseminated:** Many university staff are willing to share educational resources but doubt their universities' policies in allowing them do so. It is therefore the role of the coordinating agency to show the significance of sharing educational resources locally, regionally and internationally to university staff and management.
9. **Motivation avenues for participating in e-learning resources development should be put in place:** This relates to policies governing the nature of ownership, contribution and compensation for those who contribute e-learning resources to the partnership. Both the local university and the network must devise policies for rewarding e-learning resource developers and facilitators.
10. **E-Learning Sharable Resources should be developed:** A resource sharing framework is only applicable if there are resources to share. These must be developed and maintained in suitable formats that encourage sharing.



## SEQUENCING OF THE IMPLEMENTATION OF POLICY RECOMMENDATIONS FOR E-LEARNING RESOURCES



This policy framework is based on the report of a study on the “Development of a Framework for sharing e-Learning Resources within Universities in East Africa”. It is part of the MRCI project entitled “Enhancing the Capacity of East African Universities to Utilize ICT for Sustainable Regional Development,” being implemented by the Inter-University Council for East Africa.

### ACKNOWLEDGEMENT

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