Enhancing Teacher Training Programs Using E-Learning

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GREETINGS

- Minister, Ministry of Education - Hon. Prof. Sam Ongeri
- PS, Ministry of Education - Mrs. Magdaline Wambua
- PS, Ministry of Information & Communication - Dr. Bitange Ndemo
- Director, KIE- Mrs. L.N. Nzomo
- Representative, Microsoft East & Southern Africa – Mr. Mark Matunga
GREETINGS

- Vice Chancellors Present
- Conference Presenters
- Conference Participants
- Distinguished Guests
- Ladies and Gentlemen
A.) Introduction

- Globally, one major predictor of quality of education is the quality of teachers & quality of students.
- A key predictor of quality of teaching is quality of learning.
- Teacher education is critical in the attainment of the EFA & MDGs targets.
SYSTEM MODEL & QUALITY OF EDUCATION AS OUTPUT

INPUT

E-learning
Face to face learning
Infrastructure
Teacher motivation & attitudes
Student motivation & attitudes
Q. of programmes
Availability of materials

PROCESS

Teacher training
Student learning

OUTPUT

Quality Education
E-learning has the potential to:

- enhance teacher training programs
- equip teachers with skills for the knowledge society
E-Learning: Definition

- **E-learning** is the ability to electronically transfer, manage, support, and supervise learning.

- E-Learning is also known as:
  - Web-based learning,
  - online learning,
  - computer-assisted instruction,
  - Internet-based learning.
E-Learning: Who is Involved?

1. Teacher
   - Teaching
   - Content development
   - Testing

2. Student
   - Learning
   - Utilize simulation
   - Undertaking test
3. Administrator

- Managing systems
- Managing content
Advantages of e-learning

- Easy to manage learning envmt.
- Require no physical infrastructure
- Cost effective
- Increases access to higher educ.
- May remove stigma associated with learning
- Provides unified information
- Provides updated information
- Eliminates distance
E-learning Delivery Modes

Historically, there have been 2 common e-Learning modes of delivery:

i. **Distance learning** - uses information technologies to deliver instruction to learners who are at remote locations from a central site.

ii. **Computer assisted instruction** - uses computers to aid in the delivery of stand-alone multimedia packages for learning and teaching.
Communication technologies are generally categorized as:

i. **Asynchronous** – participants engage in the exchange of information without the dependency of other participants’ involvement at the same time e.g. e-mail
• **Synchronous** - activities involve the exchange of ideas & information with one or more participants at the same time e.g. video conferencing
Some of the e-learning Initiatives available locally include:

i. Digital library - collections are stored in digital formats

ii. E-learning systems e.g.
   - Moodle (Modular Object - Oriented Dynamic Learning Environment) – this is an example of a virtual learning environment
Blackboard Learning System - this is another example of a virtual learning environment

iii. Video-conferencing

iv. Open Courseware - course materials in a virtual learning environment created by universities and shared freely with the world via the internet
Challenges Facing Teacher Education

i. Shortage of teachers at all levels

ii. The quality of training has been found inadequate due to the high student/teacher ratio, lack of resources
iii. Poor access to computers by students in teacher training institutions because of:

- Shortage of ICT facilities
- Unaffordable cost of ICT hardwares and softwares

iv. Lack of ICT skills among teachers
E-Learning’s Potential for Teacher Education Programs

1) Information-based society

- e-learning will expose teacher trainers & students to:
  - a variety of information accessible through the internet

- The internet is a storage of global accumulated knowledge that is up-to-date e.g. journals published yesterday etc
2. **Increased access** – e-learning can avail learning opportunities to many pre-service & in-service teachers than traditional face to face method

- Example: **University of Cape Coast, Ghana** has total of 18,000 full time students & 25,000 Open learning students

- As long as you have access to a computer & internet, you can access e-learning
HOW

- You do not require space & elaborate infrastructure e.g classrooms
- Requires less human capacity
- Eliminates:
  - Travel expenses
  - Accommodation costs
3.) **Internationalization**

- internet provides a variety of internationally developed materials
- useful in developing internationally recognized:
  - Teachers
  - Content
  - Methodology
4) **Collaboration & interactivity**

- E-learning offers extensive collaboration & interaction opportunities among students & teachers through:
  - Web charting
  - Posting of assignments on-line
  - Student-to-student charting
Kenyatta University is a partner in a global modules project where groups of higher education institutions in all regions of the world are developing modules to enhance the interchange of quality learning. Kenyatta University staff & students participate in global modules.
5) Friendly learning opportunities

- on-line learning offers learners a private & fair environment in which they can attempt new things

6. Allows learners to make mistakes without exposing them thus avoid shyness

7. Encourages life-long learning thereby promoting EFA
Why e-learning is best suited to tackle capacity building of teachers in service

- E-Learning has the potential to:
  - Provide training to meet the high demand for teachers for the rapidly expanding primary & secondary school sectors
  - Provide in-service training for unqualified teachers

- Teachers can be trained without leaving stations of work
In Kenya face-to-face in-service programmes mounted by KESI, KISE, TTCs & universities have minimally met demand & need to be enhanced through e-learning.

Teacher Training institutions need to re-think their strategies to go e-learning to some extent.
What is needed for Effective Implementation of E-learning Programs

i. **Involvement of management in e-learning**

- Senior management has to be involved to ensure that the e-learning courses are implemented appropriately

- E-learning programs require a well thought out plan so that it is not implemented in a haphazard manner
ii. Involve content experts & professionals such as:

- graphic designers
- networking specialists
- programmers

- Institutionalize e-learning by creating awareness among all stakeholders
iv. Conduct requirements analysis of target user needs before designing e-Learning courses

v. Create a vibrant ICT department to support best technological practices

vi. Establish criteria to assess expected results and benefits (Monitoring & evaluation)
E-Learning Efforts at KU
Computer Centre with 600 Computers
Students at the new Computer Centre
- The entire Main Campus, Parklands, Ruiru and Mombasa are on fibre optic backbone

- Number of modules online – 250

- Number of staff trained in e-learning – 460

- 20,000 e-journals already available.
INTER-CAMPUS CONNECTIVITY

Kenyatta University ISO 9001:2000 Certified
ICT for Visually Impaired Students using Jaws
ICT PROJECTS UNDERWAY

- Digitize past papers
- Digitize all thesis & dissertations
- Digitize supervision of PhDs & Masters degrees
- To digitize library at KU with 343,000 books
- School of Law using digital libraries where students access text books & journals
- We Digitized library at KU, Main Campus

Kenyatta University ISO 9001:2000 Certified
Ultra modern library

Approach View
Is E-learning Affordable?

- Yes and no but with planning its possible:
- You need:
  - Access to computers
  - Access to the internet
  - Technology back-up
  - Capacity building for learning & teaching
  - Preparation & uploading of modules
  - Power (Electricity)
  - Change of mindset toward technology
Possible Solutions

- Hopefully the internet cost will come down eventually with under sea fibre optic cable
- Create partnerships & linkages to get equipment – i.e. use bulk advantage
- Approach development partners advanced in technology to help, but ensure well thought out research based proposals
Recommendations

1) Teacher training institutions should provide in-service training on ICTs & ICT integration in order to:

➢ improve the teacher educators’ e-learning skills
➢ Increase & institutionalize ICT integration to instruction
2) Teacher training institutions should provide:

- necessary ICT infrastructure,
- technical support,
- proper leadership,
- Train teacher trainers to use ICT
- promote & encourage use of ICT facilities by teacher trainers for integration of ICTs to instruction
3) Teacher educators should integrate ICTs to instruction to serve as models to the pre-service teachers.

4) Institutions should encourage ICT integration to instruction in all courses.

5) There is need to conduct training on ICT integration & strategic planning for ICT integration to school administrators.
6) Institutions should establish mechanisms for quality assurance in e-Learning

7) Create appropriate e-learning policies at national & institutional levels
Thank You