IMPLEMENTATION OF E-LEARNING (AT CUCK AND LESSONS FROM THE CASE OF JKUAT)

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Outline

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eLearning vs eTeaching

1. eTeaching
2. eLearning

None of the learners has an e-device

eLearning vs eTeaching

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2. eLearning

Every learner has is busy on an e-device

Main Categories of eLearning

Category 1	Description
Asynchronous (JKUAT)	Self-paced learning, either 1. CD-ROM-based (totally self-contained with links to reference materials) or 2. Network-based (through LMS on Intranet or Internet).
Category 2	Description
Synchronous training	Real-time with a live instructor on; 1. audio- or video-conferencing, 2. Internet telephony, or even 3. two-way live broadcasts

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Asynchronous mode for on-Campus eLearning

Mode 1	Description
Web-enhanced	enhances face-to-face teaching with students attending all lectures.
Mode 2	Description
Mixed (blended)	some face-to-face teaching sessions are replaced with online instruction
Mode 3	Description
Wholly online/electronic	All content and instructions are provided online/electronically with no face-to-face contact.

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Motivations

- E-learning is a global move and the Kenyan government of the day is receptive to the move. Institutions of higher learning have recently started going e-Learning mainly in order to resonate with the current government move to go digital (Support **oncampus learning** and **Distance Learning**)
- Learning resources cannot meet the ever increasing demand (over 120,000 qualifiers every year)
- Taking advantage of advancements in technology (accessible ICT tools)
- In the long run, this mode of content delivery is cheaper (with Large scale implementation)

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Motivations Cont...

- The mode may be more effective (ensures syllabus coverage for pre-developed content and encourages mastery of concepts, Kihoro et al, (2013))
- Plan to provide each class 1 pupil with laptop. Digital at primary level and analogue at Universities?
- Universities risks becoming irrelevant with MOOCS- Coursera Free courses: has over 860 courses, free modules with over 10M students in just 2 years
- Need to reach the **working class** with flexible programmes (Empty classes during the day time)

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Motivations Cont...

- Need to address the needs of the young population-dislike attending lectures and but love to online within a Campus set up
- Standardization and quality assurance
- Addressing scarcity of some resources (rare professionals, lecturer halls etc)

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JKUAT Experience

- Effort to implement eLearning at JKUAT dates back to 2006 but the implementation principle had been that of a willing buyer willing seller until 2013.
- In 2013, the top management pushed the adoption process by providing for establishment of School of Open, Distance and eLearning to spearhead implementation of distance learning programmes and justifying digitization incentives for lecturers.
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JKUAT and CUCK Experience

- ODeL programmes (More of business related) were advertised and the first batch of 43 students admitted in May 2013
- Distance eLearners mainly postgraduate students now at 450 in JKUAT
- All first year students (about 1000-equivalent to about 20 classes) who reported in may at the main campus were required to take the unit SZL 2111 HIV/AIDS online
- In September to December semester, all first year students (about 5000-equivalent to about 100 classes) took HIV/AIDS unit online and currently, 3 units are on offer online.
- The mode reduced the cost of teaching the unit from about 20% ($20 per student) of the fees to less that 5% (about $5 per student) due to large scale implementation .

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Strategy

1. Content development
2. Content management
3. Students facilitation
4. ICT systems

Explanation

- The CODs identified the lecturers (Content Authors) to digitize content under some TORs
- Each module/unit was developed into 10 lessons with basic interractivity, 3 hours per week
- Each lesson was typed using **LyX document processor** for flexibility (HTML, PDF, ePUB or MOBI)-**SAMPLE LESSON**
- A questions bank required to create self marking quizzes that allow conditional release of the lessons/content

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- Due to internet connectivity challenge, students were conditionally provided with the whole module manual which was downloadable for offline use.
- The learners were required to read and understand a Lesson presentation in order to have the next presentation released on the basis of marks obtained in the previous lesson through a dynamic quiz.
- Quiz questions randomly pulled from specified folders for each student (Mathematical ones were regenerated

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Each module was assigned a principal facilitor who was required to;

- Ensure that all students were enrolled and manage the students,
- Create a database of questions corresponding to each lesson,
- Manage the dynamic quizzes
- Address all learner issues directly through the system,
- Create other assessment tools including the end of semester examination and manage the examination process.

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Explanation

- MOODLE (Modular Object Oriented Dynamic Learning Environment) was the LMS of choice based on its cost of acquisation, flexibility and maintainance,
- Had two servers (one at KENET and Backup at Institution)
- My Relationship with KENET as the host worked for me to get free hosting at least for piloting.

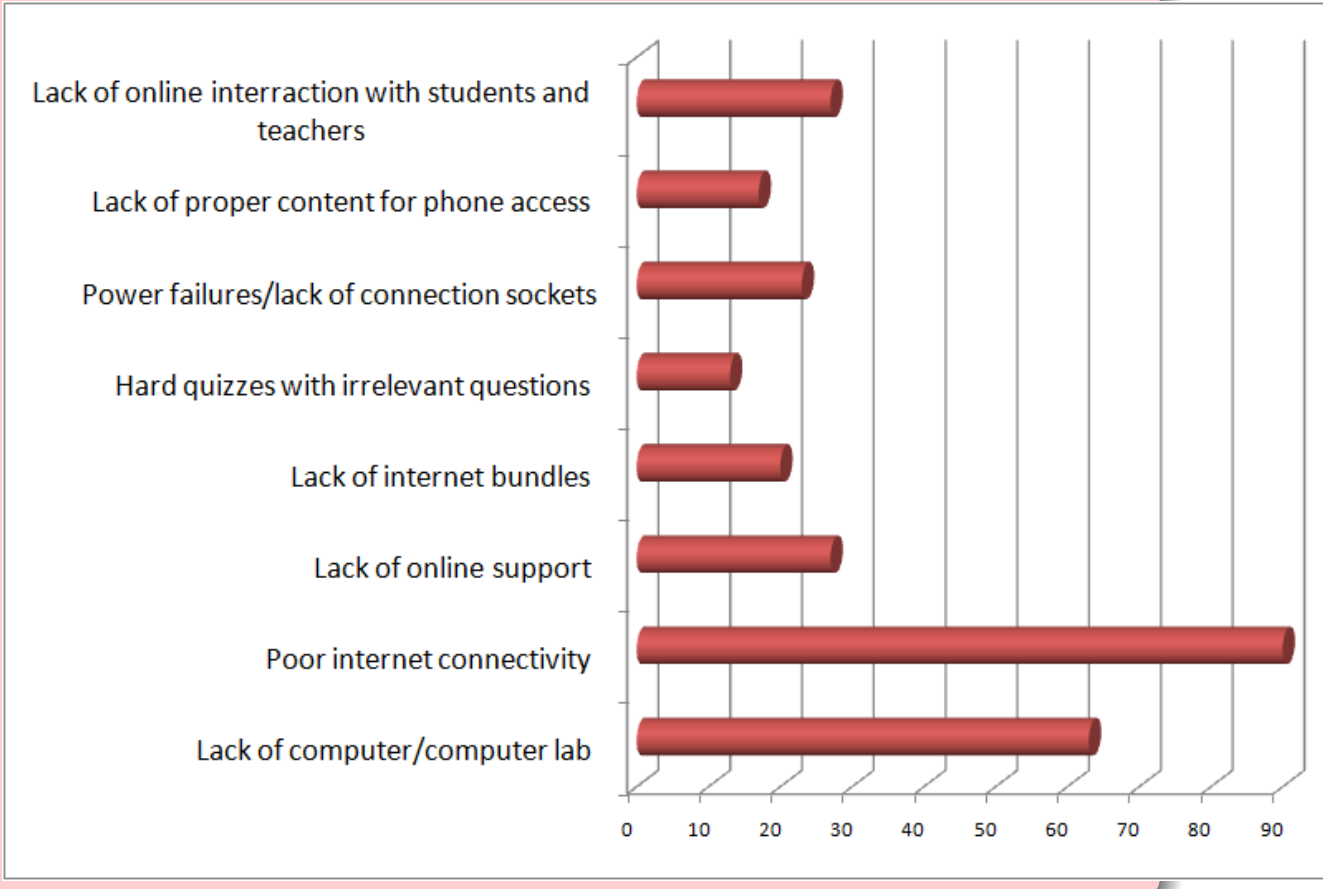
Course/unit features

- Sample Lessons
- Sample course layout
- Sample dynamic online quiz1
- Sample dynamic online quiz2

Feedback from CUCK students

1. Challenges
2. Ratings of some aspects
3. eLearning and computer literacy

Graph



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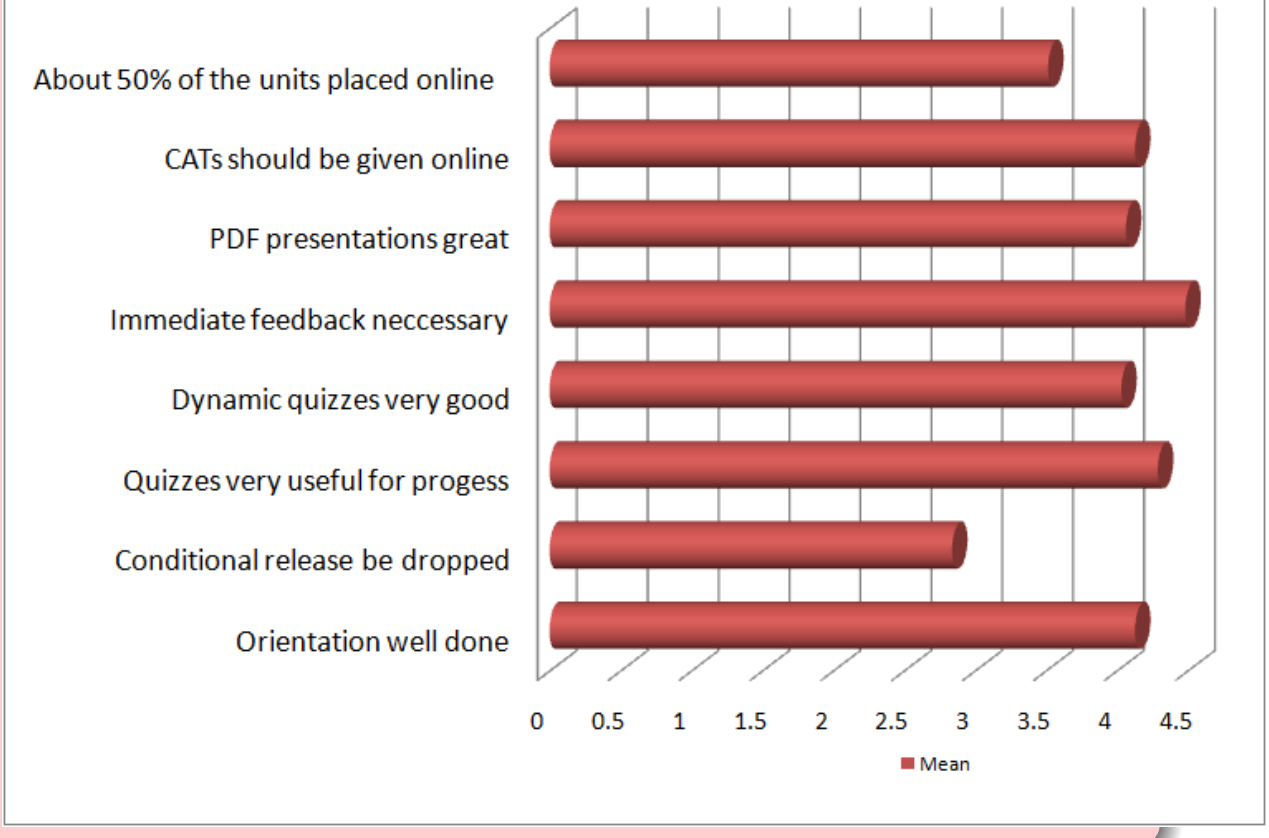

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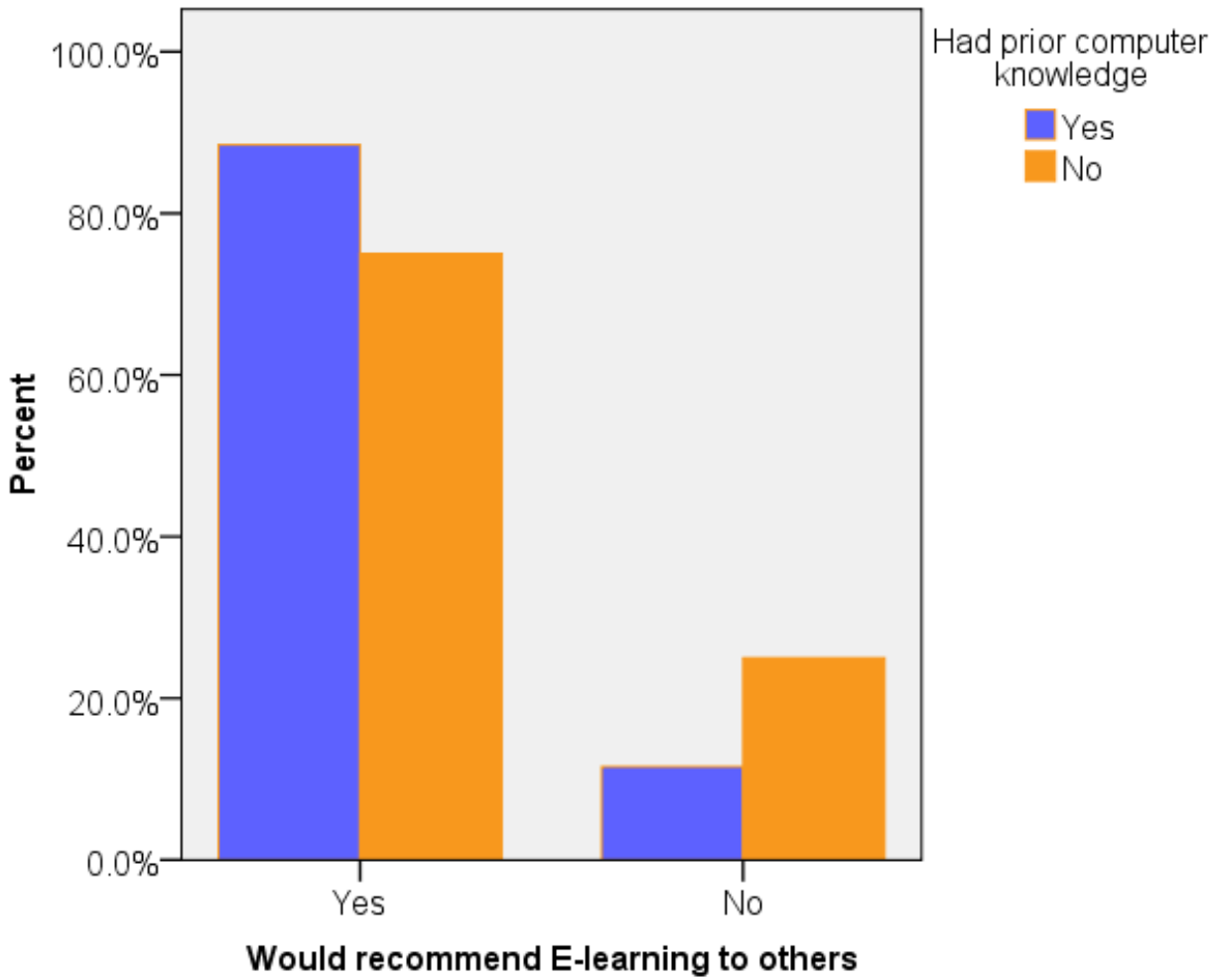

Outline

Challenges and Strategy

1. Servers memory overloads
2. Limited Bandwidth and network challenges
3. Lack of computers and powering points
4. Inadequate e-content
5. Next Challenge:

How to address the challenge

- Procure and Installed Primary Server at Main Campus
- Server memory enhanced
- Provide for conditional release of content spreading students access needs based on their progress
- Content made in downloadable lessons thus minimizing server activity

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How to address the challenge

- Purchased extra bandwidth
- Increased the hotspots for Wireless network
- Allowed local server to be accessed through the intranet

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How to address the challenge

- Provided for Lab access for those without computers
- Policy for each student to report with own laptop effected
- Plans to create modile power connection socket boxes

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How to address the challenge

- Policy on incentives developed and sold to Authors
- Content development being made part of performance contract
- eLearning section allowed to recruit and train e-content officers to do the conversion

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- JKUAT, EGERTON and MAKERERE Universities together with some eLearning practioners wrote a proposer under EDULINK II which was funded. Currently developing a graduate mentoring, tracking and e-supervison system.
- Providing for on campus sessions for students interract with supervisors

Challenges beyond implementers

- Inadequate funding by government and planners and the Government making it hard for managers to implement new ideas without looking at the immediate financial benefits.
- Appointments of top managers who have no passion for use of ICTs and promotion criteria that is focused on traditional parameters.
- Lack of qualified e-curriculum for instructional designers in the market.
- eTesting is still not recognized by the regulatory bodies.

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Conclusion

- The on-campus model works best if targeted to young school leavers who are not engaged elsewhere and so are unwilling to take up distance eLearning programmes.
- Right policies addressing resource allocation and incentives should be in place in order to inform management strategies
- The concept of conditional release of lessons based on auto-marked quizzes could help manage large classes (students could have their own discussion forums).
- The concept of Blended programme instead of Blended unit is quite attractive to on-campus students with non-practical units.
- With on-campus implementation, the University could leap major financial benefits in addition to addressing shortage of Lecture rooms/seats and lecturers

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Acknowledgments

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- JKUAT - created a conducive environment and approved/enforced the relevant policies
- CUCK - Taping into the experiences and facilitating the current implementation
- UBUNTUNET CONNECT - Providing and Sponsoring FORUMs such as this for sharing experiences

THANK YOU for Your Attention



Welcome to Kenya