

# UbuntuNet Connect 2015

## Beyond

### Connectivity – The road to NREN Maturity

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**Question Banks: A tool for improving  
Higher Education Assessment across  
National Resource Networks: The  
Polytechnic of Malawi case study**



# Problem Statement

- “ICT provides a link between learning, teaching and assessment. In school, ICT is used to support learning. Currently, we have bizarre assessment practices where students use ICT tools such as word processors and graphics calculators as an integral part of learning, and are then restricted to paper and pencil when their ‘knowledge’ is assessed.(Ridgway et al., 2004)“

## Current Major ICT Systems in Place:

- Student Management Systems
- Virtual Learning Environments such as Moodle

# Question Bank



Electronic Repository of Question  
Artifacts

Question Content

Question Weighting

Question Model Answers

Question Topics

Question Exam Codes

Question Subject

# Used for Assessment

- **Educational assessment** is the process of documenting, usually in measurable terms, knowledge, skill, attitudes, and beliefs.
- **Assessment** is central to educational practice.

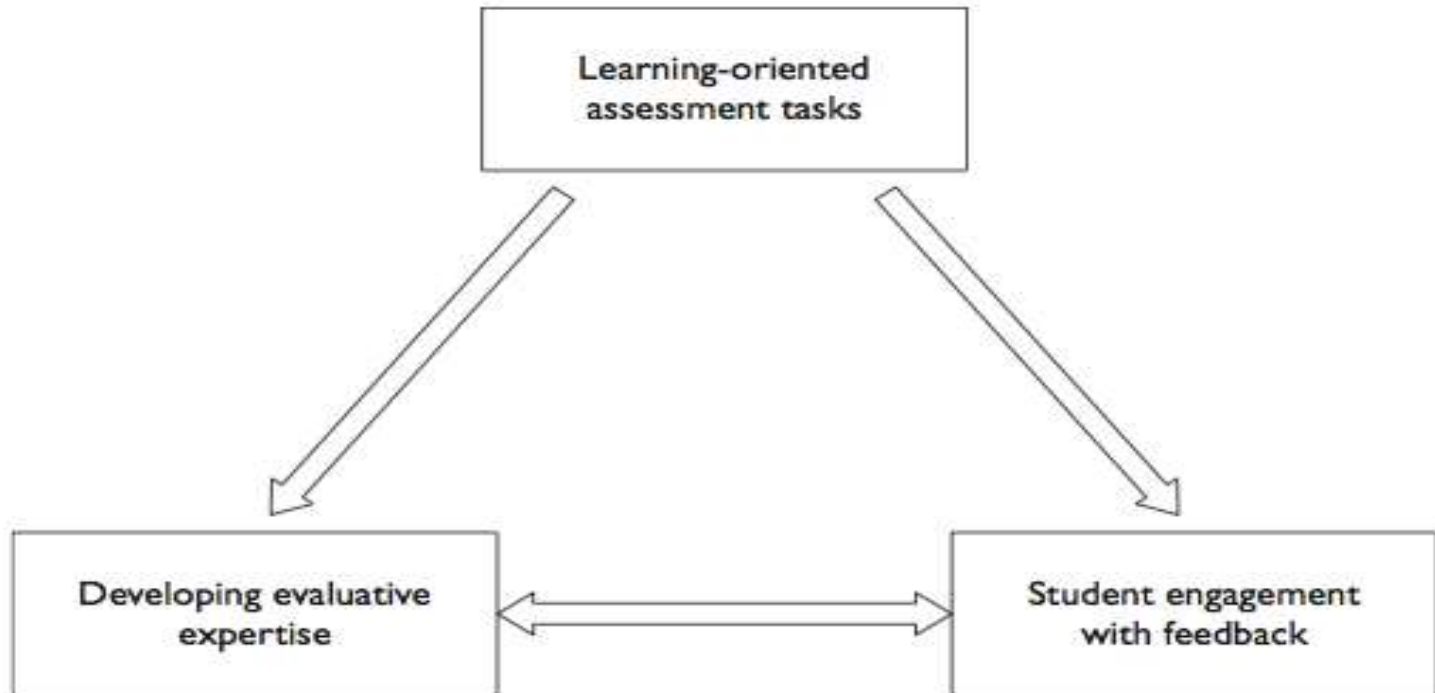
# E-Assessment

- “The traditional forms of testing or assessment are objective, summative, diagnostic, formal and informal and others. These need to be carried over into the electronic and online world with the tools that come with computers used to the betterment of assessment (Scalter and Conole, 2006).”

## Benefits:

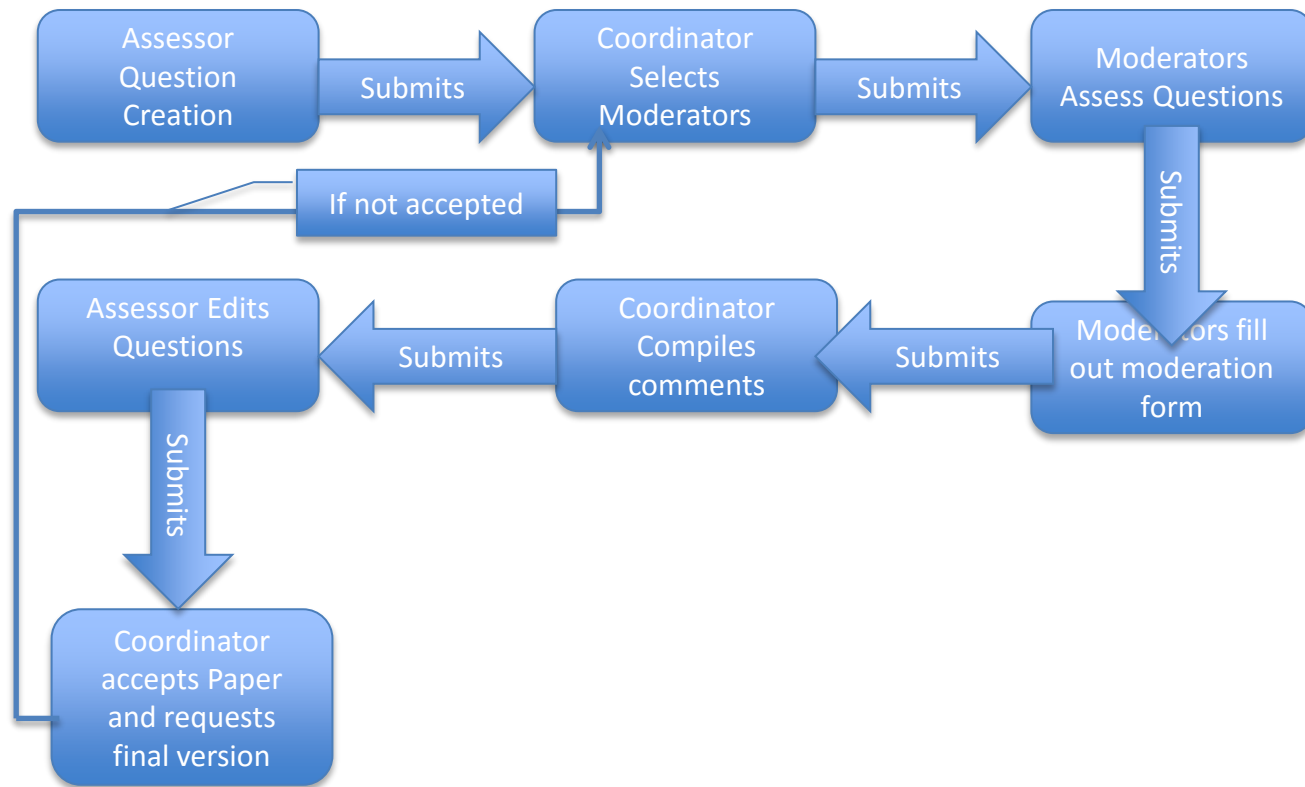
- Online or Electronic Assessment Delivery
- Automated Marking and Reporting
- Adaptive Testing

# Evaluation Approach



Learning-oriented assessment framework (King, 2009)

# The Polytechnic Assessment Process



Moderation Process Diagram



# Actors





# Student Tasks



Welcome Screen



Search Screen

# Assessor Tasks



Welcome Screen



Login Screen



Assessor Screen



Search Screen



Delete Record Screen



Error Message Screen

# Assessor Tasks



Notifications Screen

# Moderator Tasks



Welcome Screen



Login Screen



Moderation Screen



Moderation Form Screen



Moderation Form Bottom

# Coordinator Tasks



Welcome Screen



Login Screen



Register Screen



Moderator Report Form

# Discussion

- This is the first version of this system
- Lessons from other Test Banks
  - University of Southampton's “Large Scale Test Bank” (White and Davies, 2000).
- It allows for a defined moderation system to be followed in assessment creation
- It allows to an extent for adherence to good principals of learner centered assessment concepts

# Conclusion

- Future Work needs to be done
  - To create a assessment process that would work nationally across Universities
  - To work with organizations that will facilitate a structure and process creation that can be accepted across Institutions of Higher LEarning like the National Center for Higher Education(NCHE)
  - To use Malawi National Resource Network(MAREN) to ensure access this repository nationwide

# References

- Ridgway, J., McCusker, S., Pead, D., 2004. Literature review of e-assessment. Futurelab.
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- King, W.R., 2009. Knowledge Management and Organizational Learning, in: King, W.R. (Ed.), Knowledge Management and Organizational Learning. Springer US, Boston, MA, pp. 3–13.



# Thank you for your Attention