

The Integration of library and e-learning systems: the case of selected public universities in Tanzania

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1.0 Introduction

- Advancement in Information and Communication Technologies (ICTS) have made it possible for teaching and learning to be facilitated by electronic learning systems (e-learning)
- E-learning uses electronic techniques to deliver contents and link learners and instructors (Bencheva, 2010).
- There are two types of e-learning: asynchronous and synchronous, the former does not have instant feedback while the latter has a great potential of increasing individual participation through spontaneous feedback.

1.1 Libraries in teaching and learning

- Libraries play an important role in teaching and learning through acting as access points for contents needed for teaching and learning processes.
- This has been made possible by integrating library services, learning, teaching and research (Sen, 2009).
- Most institutions have hybrid libraries: providing virtual access to electronic resources and services, while maintaining and supporting use of a physical collection housed in a library building

1.2 E-learning and library systems in public universities in Tanzania

- Most higher learning institutions in Tanzania have managed to install the basic ICT infrastructure for delivery of information resources for supporting teaching and learning.
- Libraries have been providing access to several electronic services to meet the information needs of learners and instructors

1.3 Rationale and objectives of the study

- Online learner–content interaction involves interactive activities between the learner and instructional content and/or libraries (Bloom 1981).
- For this to happen, there must be a strong link between libraries (e-libraries in particular) and e-learning systems.

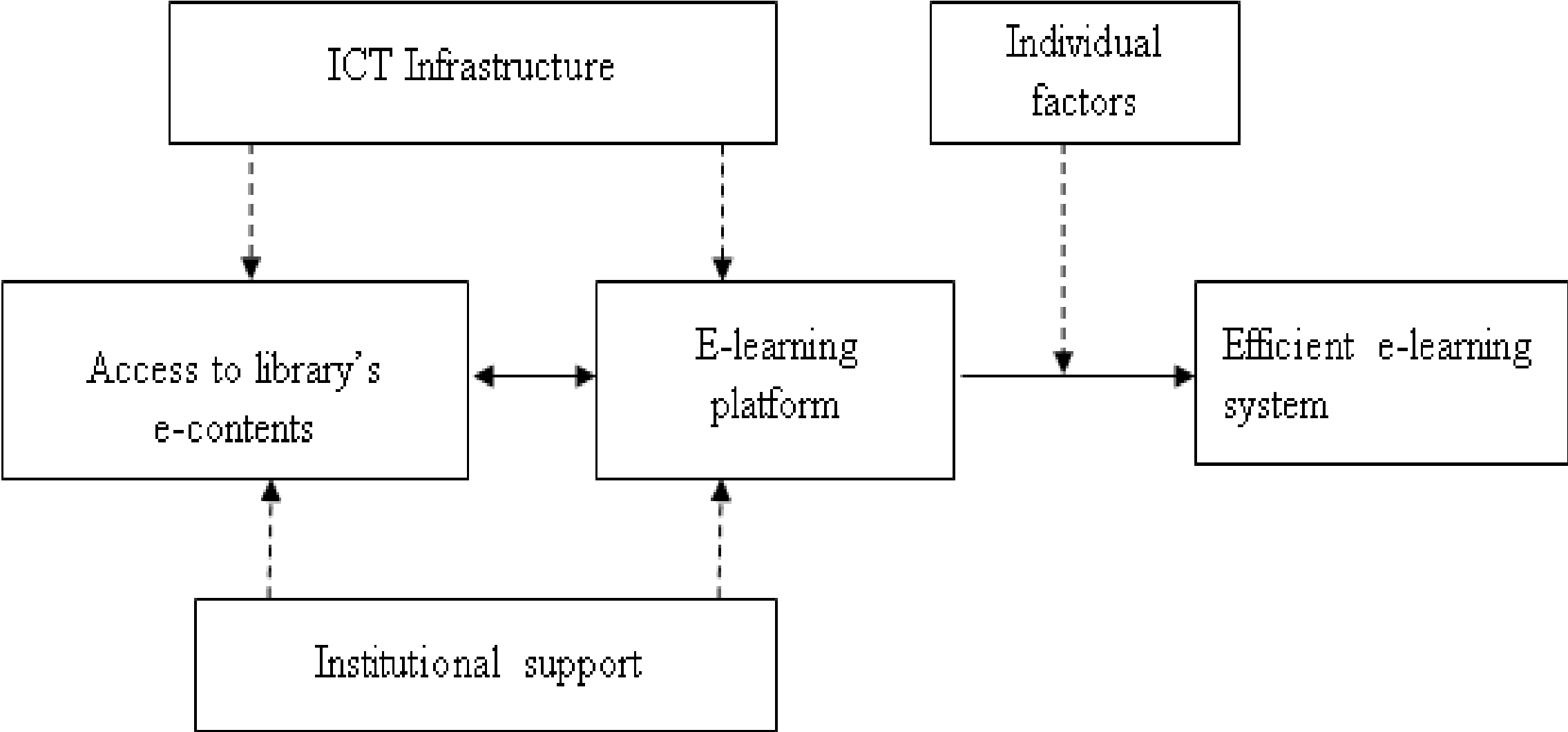
Rationale and objectives..

- The current study is set to investigate how library and e-learning services are integrated together thus improving teaching and learning processes in higher learning institutions in Tanzania. Specifically the study:
 - Identified electronic technologies and applications used for providing library services;
 - Determined library services incorporated in e-learning;
 - Investigated how library applications and processes enhance access to contents for e-learning;
 - Determined how higher learning institutes in Tanzania support e-learning and;
 - Recommended on how library and e-learning services can increase the efficiency of e-learning systems

1.4 Conceptual framework

- The current study was guided by the model shown in Figure 1 which defines the key factors for effective e-learning in an academic institution setting.
- It guided in assessing how libraries enhanced access to e-content in the e-learning system.
- It guided in assessing the institutional ICT infrastructure and its role in linking library and e-learning systems.
- Finally the model assisted in defining the types of institutional support learning and library systems get for effective e-learning.

Figure 1: Positioning electronic library services in e-learning systems



2.0 METHODOLOGY

- The study employed qualitative research approaches in studying how library and e-learning systems are integrated.
- It was conducted in three randomly selected public universities in Tanzania (Sokoine University of Agriculture (SUA), Muhimbili University of Health and Allied Sciences (MUHAS) and the Open University of Tanzania (OUT)).
- Data were collected through web analysis, documentary reviews and in-depth interviews through key informants.
- E-resources librarians and ICT personnel managing e-learning systems were purposely selected for the study

3.0 RESULTS AND DISCUSSION

3.1 ICT Infrastructure

- Findings indicate that all of the Universities had basic ICT infrastructure need for e-learning and provision of e-library services.
- It was found that both universities provided internet services, they all had wired and wireless connections and had internet speed exceeding 20 MBS
- Wireless Internet connectivity was accessible around lecture theatres and offices within each of the three universities.

ICT Infrastructure..

- Users could access internet services through wireless connection where individual laptops were used as access points or through wired connection from computer laboratories (each university had computer laboratories installed with computers).
- Moodle learning management system was adopted by the three public universities
- However, none of the three universities had e-learning infrastructure which could support synchronous learning.

3.2 E-library services provided by the selected public universities

- Each of the three universities had a hybrid library providing access to e-resources and physical collection.
- Findings indicate that both libraries had basic ICT infrastructure need for provision of electronic library services
- Libraries enhanced access to e-journals, e-books, repositories, databases, CD/DVD ROMs, library catalogue, online information literacy training manuals etc.
- MUHAS Library and SNAL enhanced access to subscribed e-resources from multiple publishers through LibHub the single login interface linked to the library websites.

3.3 Delivery of e-resources in the selected university libraries

- Selected libraries served in-campus and remote users.
- In-campus users paid physical visits to libraries for accessing e-resources while remote users had to access e-library services remotely.
- Access to subscribed e-resources was through Internet Protocol (IP) address and username and passwords
- MUHAS library and SNAL installed proxy server to facilitate remote access to subscribed e-resources

3.4 Integrating e-library services in e-learning systems

- Found that libraries had a lot of e-services but few were integrated in the e-learning system
- The e-learning platforms for MUHAS and SUA had a link for LibHub the single login search interface for accessing online resources from various publishers
- Proxy servers were used to enhanced access to full-text of subscribed e-resources among remote users
- Other features found on MUHAS e-learning platform were links to institutional repository
- At OUT e-library services were not linked to e-learning system, users had to visit the library website, and no proxy server was installed to facilitate remote access of e-resources

3.4.1 Institutional support to integrated e-learning system

- Both ICT units and libraries reported to rely on their mother institutions.
- Universities supported the integrated e-learning systems mainly through:
 - Developing ICT infrastructure (connectivity, bandwidth, computer labs etc)
 - Acquiring e-resources for libraries
 - Hiring personnel for managing e-learning systems
 - Enhancing e-literacy among learners and instructors

3.5 Challenges in implementing e-learning systems

- Unreliable power supply was a common challenge to e-learning among the three universities
 - it resulted to irregular accessibility of internet services.
 - With current power supply improvement strategies, the challenge will be solved soon
- Low bandwidth limited the accessibility of some internet based services
 - bandwidth subscriptions did take into considerations of demand for internet services
 - Did not consider the increasing user community of internet services
- Inadequate ICT infrastructure:
 - wired and wireless connections were only accessible in some parts of the universities
 - number of computers in the computer laboratories did not match with the increasing number of students

Challenges in implementing e-learning systems..

- The number of e-journals and databases subscribed by universities were still low.
 - on the other hand librarians complained about the low level of usage of e-resources
- Inadequate of ICT staff
 - At OUT, it was found to be difficult to impart basic ICT skills to learners because of their remoteness (the university offers distant programmes)
 - At MUHAS the number of staff for training ICT basic skills to new learners was small, this was not a problem to SUA
- Some instructors shied away from e-learning due to techno phobia, this limited students taking their courses from using the e-learning system
- Information illiteracy among learners and instructors resulted into limited usage of e-resource

4.0 Conclusions and recommendations

- Despite the growing ICT infrastructure, the usage of e-learning systems was still low.
- The developed e-learning infrastructure supported only asynchronous learning.
- Most of the e-library services found in the library websites were not integrated in e-learning systems
- Access and usage of e-resources among learners and instructors were limited by information illiteracy, unreliable power supply and poor connectivity

Conclusions and recommendations..

- It is recommended that:
 - ICT infrastructure should be improved from time to time to reflect the increasing needs of e-learning services
 - Universities should enhance access of most library e-services on e-learning systems
 - University libraries should setup strategies for increasing the level of usage of e-resources
 - Universities should incorporate a topic on “basics of e-learning” in IT courses taught to first year students
 - For making e-learning efficient, subscription of more e-resources and bandwidth is inevitable

Thank you for listening