

Applicability of E-learning in Higher Learning Institutions in Tanzania

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ABSTRACT

E-learning is considered as an important component of enhancing teaching and learning processes by Higher Learning Institutions in Tanzania. In the context of teaching and learning, e-learning encompasses the use of information, computers and technology to enhance communication in distance learning. This paper discusses the applicability of e-learning in Higher Learning Institutions (HLIs) in Tanzania using three selected universities in the Morogoro Region. Data were collected using questionnaires and interviews among a sample 90 respondents, who were selected using simple random and purposive sampling techniques. Data were analysed through descriptive statistics and results presented using frequency and mean statistics. The results revealed that there is limited applicability of e-learning in the three HLIs studied. The inadequate applicability of e learning is attributed to poor attitude, lack of skills among the users and insufficient ICT infrastructure. The study therefore recommends that the government allocate funds to ensure that universities are well equipped with ICT facilities and also ensure an ICT curriculum is taught from primary school to higher education levels so as to enhance students' attitude towards e-learning.

Key Words: *E-learning, online Learning, Higher Learning Institutions, Universities, Tanzania.*

INTRODUCTION

The use of modern technologies in teaching and learning processes is considered a competitive tool for improving the academic performance of Higher Learning Institutions (HLIs) in developing countries, and Tanzania in particular. Amongst the widely used technology in teaching and learning in HLIs is E-learning. The use of e-learning has resulted in a number of changes in HLIs as far as education delivery is concerned (Lwoga & Komba, 2015). E-learning usage has allowed people in rural areas to have access to education as well distance education to become possible in Tanzania. Although, e-learning was first introduced to allow people in the remote and rural areas to gain access to higher education, e-learning is regarded as an effective way to deliver education in terms of time and costs in HLIs

The role of e-learning in HLIs is highlighted in a study conducted by Wang et al., (2007). The findings suggest that the use of e-learning such as development of multimedia, information technologies and Internet in teaching, has resulted in radical changes in the traditional process of teaching. E-learning helped teachers to closely monitor students' progress and the level of attentiveness increased. More importantly, e-learning provided greater flexibility of access to teaching and learning material as well as allowing students to benefit from being Microsoft Office Specialists, which is a major asset for their future careers. To this end, the integration of e-learning in the education system is viewed as one of the responses to meet the growing need for high quality education in HLIs from both developed and developing countries including Tanzania.

Technological advancement is regarded as a driving force for shifting from the traditional approach of the face to face mode of teaching to an e-learning approach (Willy, 2016). The study by Ozar et al., (2015) shows that higher learning institutions from the developed nations adopted e-learning in their educational system in order to improve their teaching and learning activities. A Computer-Aided Education (CAE) project introduced computers to Turkish education institutions as a means to spread computer literacy, upgrade curricula, and instructional materials and improve the quality of education has been highlighted among the steps contributing to e-learning implementation in Turkey (Kasse and Bulunywa, 2013). A study by Gaebel et al., (2013) indicates that e-learning has been widely implemented in the developed countries, especially in Europe, as a means to enhance teaching and learning processes. The study also revealed that e-learning is largely applied in academic disciplines such as business and management, education and teacher training, engineering and technology and related subjects. Although e-learning has been implemented extent in the developed nations, the situation is quite different in developing societies especially in East African universities.

Studies by Walimbwa (2006), Lwoga and Komba (2015), Makokha and Mutisya (2016) and Willy (2016) show that the implementation of e-learning in higher learning institutions in the East African countries is still at primary stage. The survey report by Hollow and ICWE (2009) on e-learning in East Africa and Africa in general indicated that although e-learning was identified as a modern and efficient way of teaching and learning in higher education, its implementation in the majority of universities is low. This is mainly due to the lack of skills among instructors and learners, and the shortage of ICT infrastructure among the users.

The low level of implementation of e-learning in higher education is also highlighted in a study conducted in Uganda by Kasse and Bulunywa (2013) which revealed that e-learning was only used for online discussions(12%) and student assessment (2%). The study further revealed challenges related to lack of competencies among the users, insufficient infrastructure as well as negative attitudes among learners and staff or instructors as the main hindrances to adoption of e-learning in higher learning institutions in East African countries. Similarly, a study by Kahiigi (2013) affirmed that lack of skills and negative attitudes of learners and staff towards e-learning adoption were among the key factors hindering the progress of e-learning in East Africa. Additionally, factors such as ICT infrastructure, ineffective institutional e-learning policies also act as hindrances to the growth of e-learning in Higher Learning Institutions in East African nations

STATEMENT OF THE PROBLEM

Notwithstanding the key role played by e-learning in improving the teaching and learning process, there is the problem of inadequate knowledge, both in research and practice, regarding its applicability in HLIs in Tanzania. The study by Awidi (2013) revealed that, despite the crucial role it contributes in the quality of education provided, successful and sustainable e-learning implementation has for a long time remained low because of the ICT-challenged environment. Moreover, the study by Lwoga and Komba (2015) and that of Noyi (2013) revealed that although the Government of the United Republic of Tanzania through its Education Sector Development Programme (ESDP), developed an ICT training Policy, e-learning has not been implemented fully under this policy. To address this gap, this paper examined the applicability of e-learning in higher learning Institutions in Tanzania. Specifically, the paper is aimed at identifying the e-learning services available and the challenges facing teachers and learners in applying e-learning in HLIs in the contemporary period.

METHODOLOGY

The study employed a cross sectional survey type research design which allowed the collection of a large amount of data at one point in time at minimum cost and time. The data were collected from ninety (90) respondents at Mzumbe University, Sokoine University and Jordan University

located in the Morogoro regions. Questionnaires supplemented with interview guides were used to collect the data. The sample selection process utilized simple random and purposive sampling techniques. The use of simple random sampling in research provides an equal chance for each member of the population to be selected and hence reduces bias (Dawson, 2007). The data collected were analyzed and presented in the tables using frequencies and means.

RESULTS

This section provides the study results for e-learning service availability and the challenges facing e-learning users in the teaching and learning process in HLIs in Tanzania.

E-learning Services available in Higher Learning Institutions in Tanzania

This section sought to identify the e-learning services available to HLIs in Tanzania. A four point Likert scale was used to capture information regarding e-learning services available in HLIs. In the scale 1 represented strongly disagree while 4 represented strongly agree. The results are presented in Table 1 below.

Table 1: E-Learning services available in three selected HLIs in Morogoro

E-learning services available at HLIs	Mean response	%
Online Teaching	3.7	92.5
Online tests	3.5	85.0
Online library	3.9	97.5
Students registrations	4.0	100
Examination results	3.9	97.5
Online time table	3.8	95.0
Payment status	4.0	100
Grand mean (%)	3.8	95

The findings in Table 1 indicate that the majority of respondents (Grand mean response =3.8) agreed that e-learning services are available in higher learning institutions to support teaching and learning. The findings indicate that, more than 95% of respondents are aware of the e-learning services available in their learning contexts. The study further revealed that, the available e-learning services include online teaching, online tests/exams, online library, online student registration, as well as an online payment system.

Challenges Facing Learners and Tutors in using e-Learning in HLIs in Tanzania

The aim of this section was to determine the challenges facing learners and instructors/tutors in applying e-learning in higher learning institutions in Tanzania. The study findings revealed eight challenges which were common both to learners and tutors/instructors. These challenges are presented in Table 2 below.

As indicated in Table 2, an average 93% of the respondents strongly agreed that there are challenges with using e-learning. Moreover, the study findings revealed that the most critical challenges facing e-learning in HLIs among instructors and learners include, but are not limited to: Inconsistent electrical power (Power cut off) and insufficient Internet connectivity. The two

challenges were reported to be the critical problems affecting the effective application of e-learning in higher learning institutions.

Table 2: Challenges facing Learners and Tutors in applying e-learning in HLIs in Tanzania

Instructors/Learners challenges	Mean response	%
Bandwidth Insufficient internet connectivity,	3.90	98
Inconsistent electrical power	4.00	100
Financial constraints in terms of operating cost of internet services,	3.80	95
Few technical experts to support the e-learning users in HLIs	3.60	90
Computer illiterate for some students,	3.50	88
Shortage of computers in the computer lab	3.70	93
E-learning is not user friendly to people with visual impairment	3.50	88
Grand mean (%)	3.70	93
Response Key 4:Strongly agree 3: Agree 2: Disagree 1:Strongly disagree		

Further, challenges were related to an inadequate number of technical experts to support the e-learning users within the particular university, lack of computer literacy skills among some students, financial constraints to meet the operating cost of Internet services and shortage of computers in the computer lab, impacting the application of e-learning in HLIs. To elaborate more on the challenges facing e-learning for teaching and learning purposes, some respondents from the selected universities were interviewed.

The interviewees from, Sokoine University, Mzumbe University and Jordan College University agreed that:

“E-Learning as the aspect ICT in higher learning institutions is the donor’s oriented project which depend on fund from the donors”.

Having to depend on donor funding makes it difficult for a university to always be well equipped with ICT facilities.

Further, the interviewees agreed that:

“To some extent e-learning it has been integrated but not as effectively as we wish or needed due to various problems happening”.

DISCUSSION

The Practice of e-learning

In determining the practice of e-learning, the study findings revealed that synchronous and asynchronous practices are used. The synchronous type of e-learning involves interaction of students with instructors using the web in real time. This type of interaction was found to be achieved mainly using instant messaging, chat, audio and video conferencing. The study findings from Mzumbe, Sokoine and Jordan Universities indicate that e-learning is done using an asynchronous approach which was preferred by users in these universities for e-learning due to

its flexibility for learning as well as saving time. These findings correspond with the study by Hrastinski (2008), which indicated that e-learning provides useful information at the time when it is needed and facilitates interaction among the learners via message boards, bulletin boards and discussion forums.

The study findings regarding e-learning practices at HLIs in Tanzania show that online learning practices are being supplemented by the strategy of face to face classroom instruction and e-learning is used interchangeably in the learning process. This hybrid approach or blended learning has the potential to meet the needs of many learners and instructors through the use of ICT. This type of learning practice combines several event-based activities such as face-to-face classroom instruction, self-paced learning (asynchronous), and synchronous online engagement.

Initiatives by HLIs to promote e learning

The study findings revealed that the initiatives undertaken by HLIs in Tanzania are aimed at ensuring a favorable and conducive environment for online learning. The study established that much investment in ICT infrastructure has been done to ensure effective and efficient provision of online learning processes. At Mzumbe University the Administration Block, Fanon Theatre, the Library, Graduation ground and staff residences have access to free Internet service. Similarly, Sokoine University was found to have access to free Internet services at the Agriculture Engineering, Library, Central Administration block and the Animal Science Department, while Jordan University was found to have free Internet services at its Administration block and the Library. The foregoing indicate that there is support for learners to have flexibility in the learning process. Moreover, the findings of this study are in line with that of Kear et al., (2012) which pointed out that online learning is mainly used when research adapts web services to design learning activities through the use of website tools. To this end, online learning in higher education plays an important role as a medium for instructional delivery of education activities.

Applicability of e-learning in HLIs Tanzania

Regarding the applicability of e-learning in higher learning institutions in Tanzania, the study findings reveal that, e-learning in HLIs has facilitated much more flexible access to learning resources. The study findings further indicate that e-Learning provides flexibility to learners in the learning process. These findings are supported by Ndoje, (2013) who found that learners in various universities had access to teaching materials online which in one way or another helped to simplify the learning process. To date HLIs are able to personalize web environments and establish forums in classes. This enhances and allows flexibility for learners in their studies. The study by Willy (2016) on the application of e-learning in HLIs in Tanzania revealed that e-learning is gaining momentum in Tanzania, and students experience e-learning services such as online teaching, online tests/exam's, online library, student registration, online time table, examination results, and payment status, all of which provides flexibility in the learning process. Advancement in technology plays an important role in promoting the integration of ICT in teaching and learning, which ultimately enhances distance learning as an effective and efficient practice.

The findings of this study confirm the results noted by Mwandosya and Montero (2017) which established that the rapid growth of e-learning courses at academic institutions has brought about a big change for students and tutors. Students may demonstrate their learning efforts via different methods such as text, email, video or audio devices. Instructors often need to restructure their courses to successfully incorporate e-Learning. The presence of e-learning services in higher learning institutions provide flexibility to users to be able to use the technology as well as to ensure a better teaching and learning process. The study findings also indicate that rapid

development of social networks such as Twitter, WhatsApp and Facebook has provided platforms for the teaching/learning process, allowing students to use social networks in the learning process. Three respondents each from, Sokoine University, Mzumbe University and Jordan College University at Morogoro in Tanzania supported the following view during the interviews:

“In our class we have formed WhatsApp group which students use that platform to share various information relating to the study were pursuing here so the students interact in discussion on various matters relating to their studies.”

The findings of this study imply that innovations in social networks have applicability to the e-learning practices used by the learners/students which promote effective teaching and learning processes in higher learning institutions.

CONCLUSION

In light of the above study findings, this study concludes that the majority of the respondents agree with the adoption of e-learning in HLIs. In addition, strategies to ensure effective application of e-learning in higher learning institutions are needed, including: *strong enforcement of an ICT institutional policy on ICT, classrooms well-equipped with ICT facilities, a university supported alternative electrical power supply, availability of technical experts as well as ensuring wireless Internet connectivity in the environment of the university, availability of university led staff development programmes, support for shared skills and ideas among staff, university led monthly discussions regarding ICT use in the teaching and learning process*

LIMITATION OF THE STUDY

The study was limited to three higher learning institutions namely: Mzumbe University, Sokoine University (SUA) and Jordan University College located in the Morogoro region, Tanzania. Thus, the ability to generalize is low as the findings may not reflect the characteristics of the collective of HLIs in Tanzania. Therefore further study should be conducted to capture a larger sample of HLIs across the country in order to increase the possibility of generalizing the findings to the entire population of HLIs in the country.

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