Using Mobile Phones for Teaching and Learning Purposes in Higher Learning Institutions: the Case of Sokoine University of Agriculture in Tanzania
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1.0 Introduction

• The emergence and advancements of Information and Communication Technologies (ICTs) have changed the way teaching and learning processes are being conducted.

• ICTs have capabilities of improving information accessibility; facilitating communication via electronic facilities; enhancing synchronous learning and; increasing cooperation and collaboration.

• In the teaching and learning, ICTs are known to be cost-effectiveness in facilitating collaborations among learners/tutors and enhance pedagogical improvement through simulations, virtual experiences, and graphic representations.
Introduction..

• The commonly used ICT tools among others include computers, radio, television, mobile phones and the internet.

• The Web based learning platforms supported by internet browsers are known to limit problems caused by distance between learners and tutors.

• Web based learning is facilitated through electronic mails, chats, web-based conferencing, message boards and web pages.
Introduction..

• Among the ICT tools mostly owned and used are the mobile phones.

• The tools provide suitable learning platforms as they have applications tutors and learners may use in their academic activities.

• Mobile phones have a potential of improving the teaching and learning processes because they are cheaper than other ICTs used for the same purpose.
Introduction...

• The current study therefore:
  • Assessed how mobile phones facilitate the teaching-learning
  • Identified the commonly used mobile phone applications and the types of learning activities facilitated through mobile phones
  • Determined the factors limiting the usage of mobile phones in teaching and learning.
2.0 Conceptual framework

- The study was guided by the modified Technology Acceptance Model (TAM) which describes how a technology may be adopted to facilitate performance of a particular activity.

- The model assess how potential users of a particular technology come to accept and use it; and explains the causal relationships between system design features, perceived usefulness, perceived ease of use, attitude toward using, and actual usage behaviour.
3.0 Research methodology

• The study was conducted at Sokoine University of Agriculture (SUA) in Tanzania and involved teaching staff and students.

• The study involved students and teaching staff who were randomly selected and included in the sample.

• Structured questionnaire were used to collect data from students while in-depth interviews and observations were employed in assessing the usefulness of mobile phones among teaching staff.
4.0 Findings and Discussion

- All of the teaching staff and students involved in the study mentioned to own and use mobile phones.

- Among the 30 teaching staff, 70% of them mentioned to own and use smart phones.

- Most of those owning smart phones knew the operating systems installed in their phones.
4.1 Usage of mobile phones among teaching staff

- All teaching staff involved in the study used their phones for Short Message Services (SMS) and calls, 84% mentioned to access internet services through their phones, 68% used Multimedia Services incorporated in mobile phones while 64% mentioned to use some Web 2.0 tools.

- Multimedia applications were used for recording events and storing files.

- Internet services accessed included e-mails, surfing, reading online documents, socializing etc.
Usage of mobile phones among teaching staff

• All staff who accessed internet services read e-mails through their phones.

• Others, 76% mentioned to surf the web while 81% used social networks

• Those who used social media mentioned to access Facebook and Facebook messenger, Skype, Twitter, Wikis and Youtube.

• Generally, it was observed that most of the mobile phone usage among teaching staff including the Web 2.0 applications could support the teaching and learning processes.
4.2 Usage of mobile phones for teaching and learning among teaching staff

- All teaching staff involved in the study mentioned to have either sent text messages or made voice calls for alerting students and communicating with colleagues on academic issues.

- Among the teaching staff who used mobile internet services, majority (76%) downloaded/accessed scholarly materials (articles, dictionaries, text books etc.)

- Others, 54% used smart phone learning applications to support the teaching learning process (sharing information)
Mobile phones for teaching and learning among teaching staff

• Others, 35% mentioned to have downloaded some learning applications from some online stores for supporting learning.

• While others (43%) used their phones for storing lecture notes and academic documents.

• Among those owning smart phones, 23% of them uploaded lecture notes and other reading materials for their students.

• Generally, the teaching staff used their mobile phones in facilitating teaching and learning purposes. However, awareness and ability of use some advanced mobile applications limited some from using some features.
4.3 Major academic uses of Mobile phones among students

- It was found that 51.3% of students involved in the study sent and received text messages on academic issues.

- Others, 33.3% used mobile phones for downloading online academic information resources.

- Few others, 10.3% used their phones for taking academic related photos while few (05%) recorded academic activities including lectures.

- Based on the findings, majority of the students used mobile phones for various academic purposes.
4.4 Factors limiting the usage of mobile phones in teaching and learning

- It was found that some teaching staff and students were unaware of the capacity and specifications of their mobile phones.
  - Some of those who owned smart phones just used them for calls and text messages as they did not know other applications supported by their smart phones.
- Others did not know that the types of mobile phone applications installed in their phones thus underutilizing them too.
Factors limitations the of usage of mobile phones in teaching and learning at SUA…

• Smart phones were sold with some applications already installed in them; however a number of important applications need to be downloaded from the mobile application stores both freely and commercially.

• Few (30% of those who owned smart phones) downloaded some applications from online store thus limiting the majority from using advanced mobile applications
Factors limitations the of usage of mobile phones in teaching and learning...

• Those who used their mobile phones for storing files complained about the storage space.

  – This limited many from installing e-learning software which are seen to have bigger sizes thus reducing space for storing lecture notes and text books in their devices.

• Others mentioned that they were not able to share stored files thus limiting them from using their mobile phones for sharing lecture notes to students.
Factors limitations the of usage of mobile phones in teaching and learning...

• Some of the teaching staff particularly females included in the study hesitated exposing their contact details including mobile phone numbers to students because some misused such contacts when given.
  – It was explained that some students called them during late hours while others sent some text messages not relating to academics.

• Web 2.0 tools are known to facilitate teaching and learning processes, however very few (20%) of the teaching staff were aware of their existence.
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Factors limitations the of usage of mobile phones in teaching and learning

— Moreover, most mobile phones with internet applications support usage of some of the web 2.0 tools; despite this fact very few teaching staff used these tools.

— It was identified that majority (80%) of the teaching staff lacked basic Web 2.0 skills thus limiting them from using online social networks for teaching and learning.

• Students mentioned that they managed to access and read most of the HTML documents but failed to read some resources with graphics
Factors limitations the of usage of mobile phones in teaching and learning...

- Others mentioned the screen size of mobile phones to limit visibility and readability of most web contents.

- Most respondents mentioned some multimedia materials which could enhance learning to be very expensive in terms of downloading/viewing cost
5.0 Conclusions and recommendations

• Mobile phones were used for teaching and learning among both teaching staff and students.

• Despite this generalization, the usage of various mobile phone applications were different.

• While all teaching staff and students mentioned to use text messages and calls few mentioned to have used some advanced learning applications.

• Others failed to access some of the useful m-learning applications as they were sold.
Conclusions and recommendations..

- Moreover, small mobile storage spaces limited some from storing large multimedia contents suitable for teaching and learning.

- Furthermore, poor Web 2.0 skills limited the majority from using mobile social networks in teaching and learning.
Conclusions and recommendations.

• It is recommended that it is necessary to study the specifications and capacity of a mobile phone before buying it.

• Web content developers should consider mobile phone versions when developing contents.

• Mobile phone operators should reduce internet service tariffs so that more can afford to use mobile internet services.

• For easy accessing of the sold online mobile applications, a mobile phone account should be directly debited instead of using VISA cards which seems to tedious to some.
THANK YOU FOR YOUR ATTENTION