

## **Access and Use of the Internet: A case of Undergraduate Students in Public Universities of Uganda**

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*Higher education in Africa has experienced a shift in terms of educational media. In Uganda universities have increased their investment to adopt ICT as an integral part of their instructional strategy. Until recently, students were still physically restricted to traditional technology such as chalkboards, papers and text books. With the advent of the Internet students are no longer physically bound to sources that are close by, but can easily search, download and obtain electronic materials. Access and use of any new technology in a university should be explored since it is difficult for management to know if the needs of students are met effectively. The presentation will be an attempt to examine undergraduate students' access and use of the Internet in public universities of Uganda*



### **Introduction**

The focus of this paper is on access and use of the Internet by the undergraduate students in public universities of Uganda. Though at the moment Uganda has five public universities, this article will be drawing examples from two public universities; Makerere and Kyambogo. A part from the two being the largest in the country, they have provision for access and use of Internet by their students. The presenter has had an experience from the two institutions first as a student, and as a teaching staff of Educational Technology. University education in Uganda is facing a critical challenge to cope with the demands of the 21st century and the ever increasing use of media.

### **University education in Uganda: Background**

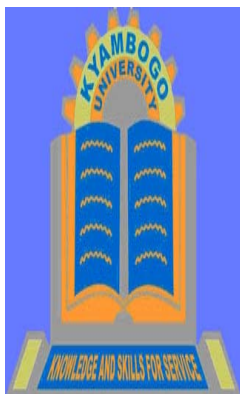
University education in Uganda began way back with Makerere University, initially established in 1922 as a technical school. By then the institution was known as the Uganda Technical College. It had begun with 14 students doing Carpentry, Building and Mechanics. It supplied low-cost labor to the colonial government and the missionaries. Later, the school began to offer other courses in Medical Care, Agriculture, Veterinary Sciences and Teacher Training. In 1937,

it evolved into an institution of higher education, awarding post-school certificate courses. In 1949, it became a University College in special relationship with the College of London. Makerere was so treasured in the whole of Eastern Africa that it admitted students from as far away as Malawi and Zambia for General Degree courses of the University of London. In 1963 Makerere was established as the University of East Africa, marking the end of special relationship with the University of London, and starting the degrees of the University of East Africa. In 1970 Makerere became an independent national University of the Republic of Uganda. With her 22 faculties now merged into eight colleges, Makerere University has a student population of about 40,000. According to University Ranking by Academic Performance Makerere is the best university in Uganda and 736th university in the world (URAP, 2010).



### **Kyambogo University**

Kyambogo is the second largest University in the country, established on 18th July 2003 as a Public University by merging three institutions. The University has a total of six Faculties with total student enrolment nearer to 16,547 students (KYU, 2010). Before the merger of Kyambogo University in 2003, all bachelors degree program had been affiliated to Makerere University.



### **The concept of the internet**

The Internet has become an ingredient of higher education curriculum that can be accessed from all around the world. In Uganda, the internet is form of technology that is still relatively new. Internet refers to a system of computer networks - a network of networks in which users at any one computer can, if they have permission, get information from any other computer worldwide.

It is simply a network of hundreds of thousands of computers all over the World, connected in a way that lets other computers access information on them (Usun, 2003).

### **Access and use of the Internet technology**

The term access when applied to the Internet and educational communication has a variety of meanings in different contexts. Internet access in this presentation denotes means to Internet connection by undergraduate students. Though the Internet is still relatively new in Uganda, it is becoming an essential instructional media used by many students at higher education.

### **Internet Accessibility in Public Universities of Uganda**

#### **University libraries**

Internet can be accessed from university libraries to facilitate information delivery by providing direct connection to electronic information resources. In public universities of Uganda libraries made the first Internet access centers with Makerere as a pioneer in 1997. The Internet resources were made available with funding from donors. Internet utilization in libraries has made a shift from printed forms of information resources to electronic information materials leading to better quality, efficient and effective research by students. Students submit document request forms to articles through electronic journals.

#### **Cell phones**



Cell phones are used by students in learning since majority of them have personal mobile phones. According to Muyinda (2010), in Makerere University over 90% own mobile phones and 100% use at least a mobile phone service. Cell phones are either employed as data modems to form a wireless access point connecting a personal computer to the Internet, or students browse directly from the devices. In the earlier alternative, mobile phones provide a gateway between the cellular service provider's data network technology and the PCs. In Uganda not many student can afford mobile phone models supporting a standard method of browsing mechanism. Majority of the undergraduate students use simple cellular phones which forbid this kind of usage. A few students who can afford multimedia type of phones directly browse the Internet but at an extra fee.

#### **A wireless modem**



A wireless modem is currently used by many students in Uganda. It is a type that connects to a wireless network instead of a telephone system. Users connect by means of a wireless modem, attached directly to the wireless ISP (Internet Service Provider) and access the Internet. Modems are used by students in conjunction with laptops and desktops computer to access the Internet.

### **Internet Kiosks**



Internet kiosks are facilities where the end-users can access information and services on the internet.

University kiosks have been set up in strategic places on campus for academic use by students. For example, in Makerere University there are eight internet kiosks launched to provide students with technology tools and resources to facilitate learning. University Internet kiosks are used by students 'free of charge'. The procedure to use the kiosks is just presenting a valid University Identity Card to the Administrator who is in charge of a particular Kiosk. Makerere has eight Internet kiosks on campus.

### **An Internet café**



An Internet café is a place which provides Internet access to the public. Unlike kiosks, students at an Internet café have to pay a fee. Cafés serve as an alternative means to the limited number of kiosks within the universities. They also accessed by students who feel cannot abide by the strict rules and regulations set for every user who surfs Internet with university infrastructure.

### **Computer Lab/ Internet Lab**

Computer Lab/ Internet Labs are designated rooms at university which contain many networked computers for students' use. Each department or faculty has a computer lab for academic use by their students. Unlike Internet cafés, usage of the computer lab is typically free for students with access. Atypical example is the school of education computer Lab reflected in the picture below.



### **Wireless hotspots**

Wireless hotspots are designated areas on campus made for students to go and access the Internet using their own laptops. Makerere University launched wireless hotspots code-named 'Makair' for students' access. Owing to the limited number of Internet terminals within the universities available for student access, location of the hotspots makes students work comfortably at any time. Wireless hotspots play an essential role in easing the pressure to the limited IT infrastructure. On getting at a hotspot, students use their laptops to log in full email address and its corresponding password in order to access the service.



East Africa

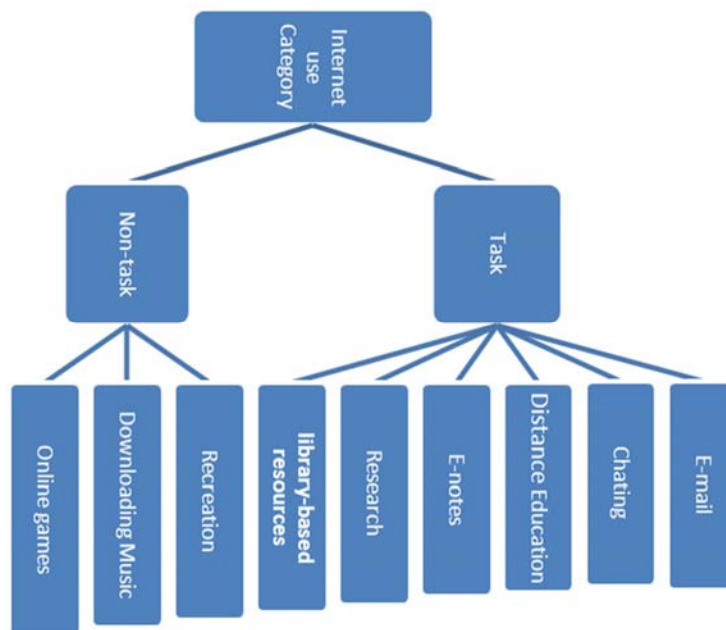


### **Internet Use**

Although the use of the Internet technology in Ugandan universities is severely underutilized, there has been some progress in Makerere and Kyambogo universities. This paper addresses issues pertaining to access and use of the Internet in Ugandan public universities. In a conceptual context, this article assumes that students use the Internet for both academic and non-academic purposes. While academic based usage consists of solely scholarly related aspects, non-academic

usage includes recreational or entertainment uses (Woodson, 2002). The graphic organizer below is related to Wesley (2010) and Woodson (2002) ideas of students' Internet use, examined in the Ugandan context.

## INTERNET USE



### USE OF INTERNET: TASK BASED AND NON-TASK BASED

The potential uses of the Internet by undergraduate students in Ugandan universities deserve more emphasis since the media is becoming crucial in the curriculum. As a developing world, many students are not so specialized Internet users.

#### Academic Based Usage

##### Emails

Sending and receiving emails is among the major uses of the Internet to undergraduate students in Uganda. The email resource is useful for students to share academic questions with their classmates and lecturers. Unlike Kyambogo University, the Makerere students are free to create their personal website using their university website. They are allowed to upload their profile/Curriculum vitae, images, files and many more through the students' link i.e. Students <http://students.mak.ac.ug>. Given that opportunity, a student can email an assignment to a professor and receives comments in a reply within a short time.

##### With Chat Communication

With chat communication technology, students can join in discussions with guests at distant locations, or collaborate with classrooms around the globe (Woodson, 2002). These systems enable teacher-student and student-student one-to-one, one-to-many and many-to-many interactions synchronously or asynchronously through computer conferences or bulletin boards. Internet provides student access to online services with embedded message boards for structured discussions about what they covered in lectures. Students visit different chat rooms to talk with peers about class assignments, for example, the Makerere University chat room, Makerere law society chat room and Makerere University department of Medical Microbiology chat room provide students with chat communication technology.

### **Internet as a Research Tool**

In this millennium, research is one of the key distinguishing qualities of any institution of higher learning (The Economist, 2005). The undergraduate curriculum in Uganda constitutes research methods as a course. The support provided by the Internet in conducting research has been realized in locating of references for literature review, data collection from respondents, data analysis packages and the dissemination of research findings through publication. Students gain the capacity to do and communicate research findings which is an internationally recognized minimum competency for any worthwhile university. To remain relevant in the academia, universities need to identify research enhancing opportunities like use of the Internet to exchange research finds.

### **E-Notes**

More recently, there has been a rapid growth in the use of the Internet as a method of acquiring notes to supplement traditional lectures. eNotes.com is a student and teacher educational online resource that provides lesson and study guides. The website offers materials with main focus on humanity related topics within the undergraduate curriculum. A cross-section of educators worldwide contributes much of the subject matter by editing the uploaded works to verify their genuineness.

### **Distance Education**

Online educational materials, texts and computation tools are the wave of the future distance education. Students access web sites that reinforce the academic concepts of their lecture course. The Internet plays a great role in facilitating distance education in Uganda. Through the Open Distance and e-Learning (ODEL) the Internet-based learning systems deliver materials to individual learners. The African Virtual University (AVU) launched the interactive Open Education Resources portal OER@AVU which can be accessed at <http://oer.avu.org> from all parts of the world. It contains quality resources developed together with universities in Africa. The newly launched interactive portal hosts modules in science related disciplines mainly made for undergraduate distance education in Uganda. The Internet addresses the issue of quality content for distance education, which for long has been a barrier in the development of higher education the developing world (E-learning-Africa, 2011).

### **Internet Public Library-Based Resources**

The Internet has provision for Public Library, for instance The Internet Public Library- IPL and ipl2. This is a non-profit student-run website where visitors can ask reference questions. Students

who have compared the use of traditional library based resources with the Internet Public library-based, have found the later being superior (Gratton-Lavoie & Stanley, 2009). Also there is a new network of African universities put in place to disseminate materials useful in animal husbandry studies in sub-Saharan region. This overcomes the shortage reference resources for agriculture students. With the Internet students use better tools to support their assignments approved curriculum and desired core competencies to suit the standard of higher degrees. Public university scholars and professors are currently commending students to include internet sources as part of their references for academic papers.

### **Non-Academic Usage Of The Internet**

The non-academic usages of the Internet among undergraduate students address leisure and entertainment activities.

#### **Chat Rooms**

Students are engaged in some leisure like online dating which allows them to make contact and communicate with each other. Dating is done with an objective of developing a personal sexual relationship. Online dating services are also available on cell phones. Ridiculously Beautiful Girls in Kampala and Uganda SeekingArrangement.com are among the leading dating website for university students in Uganda for Mutually Beneficial Relationships.

#### **Downloading Music and Facebook**

Students engage in downloading music and video technology from the Internet. Learners unveil new music for entertainment in their halls of residence. Various file-sharing applications, such as Napster, Morpheus, and Aimster, just to name a few, enable students to download some of their favorite music or videos without cost. Digital recording acquired from online is later used in CD writing for leisure and entertainment.

#### **GAMES**

Undergraduate students play computer games for recreations. Some games watched over the internet during leisure such as soccer, wrestling, bullfight and netball. The expansion of such games has vitalized the overall use of computer networks. Online games range from simple text based games to games incorporating complex graphics and virtual worlds populated by many players simultaneously. Internet games are also available on cellophanes, though on subscription.

#### **The implication of Internet utilization to the universities of Uganda**

Despite the significance of the Internet in the academia, some students at university are not effectively using the technology for their daily academic tasks. To the given assignments, students hardly include references located on the Internet, hence raising a deep concern; what are the implications of Internet utilization to the students' body in universities of Uganda?

##### **1. More computers to supplement the existing stock.**

Provision of sufficient computers highly impacts on student use of the Internet, (Braak, 2008). More computers should be purchased to supplement the existing stock. Some students do share computers among themselves when browsing the Internet for academic



materials. According to a study in Makerere University by Okello and Magara (2008), when using the Internet students faced limited access to the computer terminal. It was reported that 90% out of the sampled undergraduate students did not find enough computers in the laboratories, and therefore could not do much searching.

## **2. Acquisition of ICT skills**

Acquisition of ICT skills and knowledge is a key prerequisite to effectively use the Internet services (Woodson, 2002). Acquiring IT knowledge is an important aspect when considering the use of Internet. In their study of the media utilization in Makerere University Okello and Magara (2008), found that 49% of the students had problems in surfing resulting from their limited IT knowledge. Students cited less course literature sources than their counterparts who had IT knowledge. Some of the undergraduate students who came from secondary schools offering computer education were among those facing least hurdles with Internet. It is evident that successful experience of using computer motivates students to utilize the Internet in learning activities (Yi-wen, 2000).

## **3. The ‘bulkiness’ of information acquired**

The Internet will have to impact on the nature of information acquired by students (Caldwell & Cunningham, 2010). Internet access could enhance student learning by allowing them to read online courseware provided by the instructor plus other material relevant to the course. However, students may be distracted by surfing the “unnecessary” materials (Okello and Magara, 2008). Therefore, one may wonder, on balance, whether or not Internet access is beneficial to learning. It is habitual that students browse non-academic web sites even during class time, a detrimental effect on students’ learning. Students fail to sort out what is necessary to an academic task, out of the bulky stuff acquired from the Internet.

## **4. Time consuming**

Students are going to spend more time on the Internet. There is a tendency of users being on the ‘free’ connectivity most of their time, and more so on non-academic issues. The hazardous Internet disseminates materials with a motive of promoting pornography, racism, terrorisms, hatred plus other sort of violence. The media has highly encouraged activities that are dangerous or illegal among the youth (Rowlinson 2011). With openness to all, there is no doubt that the media is a platform to the extremist who wish to spread their distorted version of the world. A study carried out by Ndawula (2009) and Okello et al (2008) on undergraduate internet users in Kyambogo and Makerere University indicate 76.5% of the students expressing the Internet as time consuming, and wasting academic time. The institutions should come forward to devise and revise user restrictions for the technology to be an academic advantage.

## **5. Cooperativeness of staff**

The staff to facilitate IT discipline include but not limited to kiosk and Lab assistants. Basing on Okello et al (2008) study in one faculty at Makerere University, 90% of students were reported having limited access to a computer terminal and 76% lacking IT knowledge to effectively use the services. It is at this juncture that the element of staff cooperativeness deserves more emphasis. Without friendly assistance and guidance of the

IT staff, some students will find problems with the equipment. Student with sufficient guidance are bound to benefit more, and become comfortable with information searching.

#### **6. ICT infrastructure with the UNAPD Accessibility Standards**

There is need for inclusion of ICT infrastructure that complies with the Uganda National Action of Physical Disability (UNAPD) Accessibility Standards, with special reference to Kyambogo. Kyambogo is the only university with specialized training of people with disabilities in Uganda. The university has a full faculty of special needs and rehabilitation which was the Uganda National Institute of Special Education (UNISE). There are 220 students with disabilities (Lubwama, 2010) on conventional programs at KYU. Despite the above mentioned uniqueness, the university has no special consideration pertaining to access and use of the Internet for students with disabilities. Some computer labs located upstairs are not easily accessed by students on wheelchairs.

#### **Conclusions and Recommendations**

We need to acknowledge the fact that modern university education worldwide is dependent on use of automated media to support and facilitate academic programs (URAP, 2010). Likewise, universities in Uganda should embrace and adapt novel technology in the academia despite the existence of numerous challenges. A number of issues need addressed ahead of time to guarantee success of Internet use:-

- A program should be initiated to enable all university teaching staff to acquire training in IT. The move will profit the staff on use of electronic media to deliver courses and to interact with their students.
- Similarly, an IT course at all universities in Uganda should be made obligatory for all students regardless of their discipline. This will assure the system with an increase in the electronic media skills level of the students' body.
- Academic staff should commend students who use Internet materials as a way of boosting the usefulness of media among the learners. Academic staff should guide and provide their students with electronic resources as part of references for a given coursework assignment and academic papers. This move is bound to prompt students to utilize electronic resources.
- More Internet access should be provided on campus. This could be accomplished by asking for support from the developed world to supplement the locally generated fees paid by students.
- Universities should employ computer Lab and Internet kiosk staffs who are concerned and willing to assist students.
- Governing rules set for every student who surfs Internet in university infrastructure should be reinforced. For example, anybody found accessing pornography is banned from accessing the media. The media should be restricted to academic purposes; research, accessing books and typing course work and dissertations.

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