Personal e-learning Technologies Usability by Undergraduates for Learning in the University of Ilorin, Ilorin Nigeria

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Abstract
This study examined undergraduates' usability of e- learning technologies for learning in the University of Ilorin, Nigeria. The sample of the study comprised two hundred (200) undergraduates randomly selected from five faculties in the University of Ilorin. Descriptive survey method as adopted for the study using adapted questionnaire for measuring available e- learning technologies and their usability with 15 and 20 items respectively. The data for the study were analysed using frequency count and percentage to interpret the research questions. The result of the study showed that all the respondents for the study agreed that there were e-learning technologies in the University; and that 86% (172) of them maintained that the University possessed all the 15 e-learning technologies listed. Whereas, 14% (28) others attested to the University to have possessed 11 of the e-learning technologies as being available. 78% (156) of the study sample used smart phones to access e-learning and also 44% (88) of them used them to an average extent. It is therefore recommended that University authorities should encourage the undergraduates by providing opportunity for them to access and use e-learning technologies for their learning at subsidized rate and monitor this by involving lecturers to key into the technologies usability. Undergraduates should be trained and retrained periodically on how to use the technologies provided for learning in-order to develop better skills, gain competence and improve on their performance academically and otherwise.

Keywords: e-learning, Technologies, Availability, Usability

Introduction

E-learning technology is one of the most effective resources for advancing knowledge, skills and development in any institution of learning. The role of e-learning technologies in teaching and learning process cannot be over-emphasized. The e-learning technologies are driven by the use of Information and Communication Technology (ICT). This has become a global phenomenon used in describing the various innovations and revolutions that have evolved in the society and educational systems. ICT refers to the totality of methods and tools that are used in gathering, storing, processing and communicating information (Olutola & Olatoye 2015). The improvements in the field of Information and Communication Technologies (ICTs) have offered a new approach to education, by switching the conventional process of obtaining and transferring knowledge to e-learning technologies (Ali, 2013).

Higher institutions in Nigeria view ICTs as essential in the process of learning and teaching. ICTs have offered new methods of sorting out the educational atmosphere in institutions and new ideas in the teaching process as well as the transformation of the roles played by individuals in the educational process. The use of Information and Communication Technology is an important part of education at all levels (Allen, 2011). ICTs, including e-learning technologies facilitate cooperative learning, provide more information and make complex learning experiences easier to understand. According to Westhuizen (2004), technology embraces a potential to enhance access to information and increase interactivity and communication between lecturers and undergraduates. ICT incorporates the operational use of equipment and programs to access, retrieve, convert, store, organize, manipulate and present data and information (Gay & Blads, 2005).

Petrova and Sinclair (2005) maintained that the use of ICT in teaching and research has become the model across higher institutions where undergraduates are regarded as stakeholders in its advance and implementation. Similarly, Kumar and Kaur (2005) stated that the current change in information, its continuous impact on information and communication technologies, the tertiary institutions have reorganized the process, teaching/learning and research opportunities particularly in most Universities. It was however documented by Jerry, Dee, Nik, and Jerry (2001), that Universities have sought methods of developing ICT skills into the curriculum for teaching and learning of undergraduates. Petrova and Sinclair (2005) also stated that Universities and other higher institutions have shown that ICT has a generally positive impact in the quality of teaching and learning.

Bakhshi (2013) expressed that ICT is capable of facilitating considerable improvement in the way lectures are being delivered to undergraduates, and also assist them with the needed digital knowledge capabilities necessary for efficient communication in the 21st century. Through the use of e-learning technologies, quality education can be facilitated using ICT whereby conventional classroom instructional delivery method can be supported with the use of e-learning technologies such as smart phones, tablets and so forth. This would enable the undergraduates gain access to course contents anywhere and at any time. The introduction and adoption of ICT into the educational industry particularly in the Universities had re-defined teaching and learning processes and its utilization has been seen as an appropriate one (Kumar & Kaur, 2005; Petrova & Sinclair, 2005). Ally (2004) defined e-learning as the use of the internet to access learning materials; to interact with the learning contents, instructor, and other learners. Also to obtain supports during the learning process, in order to acquire knowledge and to grow from the learning experience. E-learning technologies on one hand, in the field of education is more on knowledge transfer and not on training which means that, in education, learning with global scope is the main idea. On the other hand, the technologies could also be used to train virtually all manners of work ranging from administrative, both high and low cadres, on the job training of staff and contract jobbers in all established institutions and particularly in the tertiary institutions.

The word education majorly means to gain general theoretical knowledge which may or may not involve learning how to do any specific practical work, tasks or skills. The word education can also refer to a process of training or receiving tuition. It is essential also to helping the world progress, both technologically and socially (Iworld, 2014). E-learning technology is the use of ICT to enhance or support learning and teaching in education which has become increasingly important in Universities (Adedeji, 2010). E-learning technology is also said to be the convergence of learning process and the internet, and one of the bi-products of ICT. It is noteworthy to know that the development of e-learning technologies is dependent on the development, maintenance and sustenance of ICT in any country, particularly in the

developing nations. Garrison, Anderson and Archer (2001) posited the necessity to understand the importance of socio-cognitive presence of learners as it relates to the use of e-learning technologies in a critical thinking nature, and that existing and emerging e-learning technologies have intense and immediate transformation on educational systems.

Pew (2010) opined that the world is moving into an era when e-learning technologies such as the mobile devices are not just for talking and texting, but also for accessing the internet and all it has to offer. The use of e-learning technologies is not limited to speaking alone, but also being able to use as e-learning technological facilities for other educative purposes. Students can discuss their project works and assignments over the e-learning technologies like on WhatsApp, Twitter and Facebook among others.

University is the highest level of education where the high level manpower, intellectuals and future leaders are developed. It is a place where undergraduates come together to pursue knowledge, development and promotion of intellectual capacities and appreciate one another's socio-cultural backgrounds. It is worthy to note that over two-thirds of the University undergraduates used electronic technologies in their studies while in class studying or assignments (Ajayi 2003; Jacobsen & Forste, 2011; Smith, Raine, & Zickuhr, 2011; Ng, Hassan, Nor & Malek, 2017; Olanrewaju & Odewumi, 2017).

FGN (2013) expressed the need for Nigeria as a developing country to be in tune with the modern world in all ramifications. For the University of Ilorin, it has website and portals from which they provide information for undergraduates to enable them participate in educational activities. These website and portals allow students to retrieve course forms, courseware, and information, perform online registrations and check results using various e-learning technologies, like wireless internet, broad internet, smart phones, tablets, cellphones, and laptops. Others are: interactive board, playbacks in audio/video, digital camera, flash disc, scanner, video disc and audio disc. However, a large number of undergraduates still do not use these e-learning technologies for educational purposes. Whereas, the use of these technologies for learning are of immense benefits when they are used maximally by learners. For instance, it is capable to reduce or remove abstraction in contents to learn and motivate individuals well among others. In a study elsewhere and according to Luckin, Bligh and Manches (2012), the non-utilization of e-learning technologies by learners have been seen as a consequence of poor adoption. Cuban (2001) observed that a large number of faculty members in Universities did not effectively use e-learning technologies in teaching and learning. However, in Nigeria and in University of Ilorin in particular, the use of e-learning technologies for learning among staffers has been reported by different researchers as being effective in improving teaching/learning and administrative works.

Parks (2013) stated that so little research has been done to verify the process of how undergraduates use e-learning technologies for learning. The issue of undergraduates' usability or non-usability of e-learning technologies for learning is of utmost importance. This is because when they are used well, they could encourage competence and confidence in them. However, majority of the undergraduates still patronize book materials as sources of information rather than e-learning technologies that might be more reliable, effective, efficient, and less tasking. There seems to be conflict reports on these areas of interest. It is pertinent to find out whether or not e-learning technologies do promote or improve learning outcomes. Are these technologies being actually used? How often are they being used? Hence, this research hopes to fill these gaps.

Purpose of the Study

This study sought to investigate undergraduates' personal e-learning technologies usability for learning in the University of Ilorin. Specifically, the study:

1. Investigated available e-learning technologies for learning in the University of Ilorin.
2. Found out e-learning technologies used by undergraduates for learning.
3. Determined how often undergraduates used the available e-learning technologies for learning.

Research Questions

The following Research Questions were answered:

1. What are the available e-learning technologies for learning in University of Ilorin?
2. Which of the e-learning technologies are used by the undergraduates for learning in the University of Ilorin?
3. How often do undergraduates use the available e-learning technologies for learning in University of Ilorin?

Methodology

This study employed a descriptive research design of the survey type. It involved the use of adapted questionnaire from Lund (2004) for Measuring Availability and Usability of E-learning Technologies (MAUET) and was used to elicit information from the undergraduates of the study. The population of this study comprised of all the 35,000 undergraduates of the University of Ilorin in Nigeria; and the target population were five Faculties, namely: Faculty of Education, Faculty of Management Sciences, Faculty of Agriculture, Faculty of Arts and Faculty of Physical Sciences in the University. The simple random sampling method was used to select forty undergraduates from each faculty. Hence, 200 undergraduates were the sample for the study.

The adapted instrument called MAUET was used to elicit responses from the respondents. The questionnaire copies were divided into sections A, B and C. Section A covered demographic information of the respondents, section B was on the e-learning technologies available; while C contained items bothering on the undergraduates' frequency of usability of e-learning technologies, using the 4-points likert-like scale of Strongly Agree, Agree, Disagree and Strongly Disagree. The researchers administered 200 copies of the questionnaire to the respondents and collected immediately after filling them for high return rate. All the 200 copies collected were usable, hence, the study sample. The three research questions were answered using frequency count and percentage.

Results

Research Question 1: What are the available e-learning technologies for learning in University of Ilorin?

Table 1: Availability of e-learning technologies for undergraduates learning

S/N	E-learning technologies available	Frequency	%
1	Wireless internet, broad internet and FM radio; and interactive boards.	172	86
2	Personal computer: laptops/desktops, Smartphone/tablet, scanner, digital camera, playbacks in audio/video, cellphones, flash disc, video disc and audio disc.	28	14
	Total	200	100

Table 1 showed the various e-learning technologies available for learning in the institution of study. These include: wireless internet, broad internet and FM radio; interactive boards, personal computers in laptops and desktops, and smartphone/tablet. Others are: scanner, digital camera, playbacks in audio/video, cellphones, flash disc, video disc and audio disc. It was revealed that 86% (172) responded to all the 15 listed e-learning technologies that they were available in the University. Then, other respondents 14% (28) in all maintained that the available e-learning technologies in the University were 11 of the listed ones. This means that all the respondents agreed that e-learning technologies were available for undergraduates learning in the institution of study.

Research question 2: Which of the e-learning technologies are used by the undergraduates for learning in the University of Ilorin?

Table 2: e-learning technologies used by undergraduates for learning

S/N	E-learning technologies	Frequency	%
1	Smartphones/tablets	156	78
2	Personal computers: laptops/desktops	44	22
	Total	200	100

Table 2 showed that 78% (156) of the undergraduates of the study used smartphones/tablets as e-learning technologies for learning; and 22% (44) others used personal computers (laptops/desktops). This means that overwhelming majority of the undergraduates used smartphones/tablets for learning than personal computers.

Research question 3: How often do undergraduates use the available e-learning technologies for learning in University of Ilorin?

Table 3: Frequency of undergraduates' use of available e-learning technologies for learning in University of Ilorin

S/N	Items	Frequency	%
1	Not at all	19	9.50
2	Monthly	17	8.50
3	Weekly	76	38
4	Daily	88	44
	Total	200	100

Table 3 showed that 9.50% (19) respondents responded not to have used any of the e-learning technologies for learning at all; 8.50% (17) of the study sample used it on monthly basis. From the respondents, 38% (76) of them used it weekly, while 44% (88) used it daily. This showed that less than majority of the respondents used the available e-learning technologies daily.

Discussion of Findings

The findings of this study revealed that e-learning technologies were available in the institution of study for undergraduates learning. Also, the undergraduates of the study used smartphones/tablets and personal computers to access these e-learning regarding the usability in the institution. That smartphones were used more than personal computers for e-learning by the study sample. This finding is in line with the finding of Smith, et al (2011), Ng, et al (2017) and Olanrewaju and Odewumi (2017) that University students used smartphone for different kinds of class work and seen to be the dominance technological tool used.

Another finding also showed that less than majority of the respondents used e-learning technologies daily, but sparingly on weekly and monthly basis. Only very few ones from the study sample did not use the e-learning technologies for learning at all as revealed by the study. This might largely be as a result of lack of skill and or due to poor economy of developing countries in general and particularly low income of parents to afford smartphones for their wards' usage in the University. This finding corroborates the work of Ng, et al (2017) and Olanrewaju and Odewumi (2017) that smartphones had become the culture of University students and dominated all their learning activities in the classroom.

The findings of this study showed that the use of smartphones and personal computers for learning by undergraduates could be veritable technological tools to improve and promote learning outcomes. If the e-learning technologies could be accepted, adopted and integrated fully into the educational system generally, and particularly Universities, they might help developing countries to catch up with developed ones in this digital era; and also, lead to ground breaking in educational spheres of this 21st century.

Conclusion

The utilization of e-learning technologies has come to stay in educational sector. Its acceptance, adoption and use are engendered in all tertiary institutions and particularly the Universities. Of particular note, almost all the undergraduates are found to use smartphone for almost all their learning activities and to this effect therefore, Universities authorities in general should be committed to encouraging the use of e-learning technologies greatly.

Recommendations

The following are recommended from the findings of the study. That:

1. Students should be encouraged to make use of the available e-learning technologies well to enhance their learning outcomes.
2. University authorities should continuously maintain the existing e-learning technologies and procure more current facilities to meet up with best world practices. Also, they should vigorously monitor the usage of the existing technologies and practically be engaged in their full utilization.

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