Factors for the Low Adoption of Virtual Learning Environments in Universities of Western Uganda

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Abstract: Virtual Learning Environment (VLE) in higher learning institutions presents a podium for academic material accessibility that entails creation, evaluation, communication and general course administration with customizable interfaces. Virtual learning environments are online based platforms which are used to ease the student's course content access and improving learning ability. Virtual learning environments bear features such as collaborative tools, embedded external recourses, detailed reporting logs, roles and permissions and calendars. However without finding out the factors for the low adoption rates, the effort to implement VLE remains in question. This paper discovers the factors that have brought about the low adoption rates of VLE in higher learning institution. The study adopted both qualitative and quantitative case study research approach and a purposive (non-probability) sampling technique where both staff and student respondents were selected from the case study institutions. A survey questionnaire was administered to 22 staff members and 305 students making a total of 327 respondents using Chris Morgan (1999) formula for sample determination. The results indicated power fluctuations, poor internet connections, and luck of management support, slow computers, and skills to access the VLE platforms as the major factors. The research suggests that, institutional readiness assessment, Virtual learning environments implementation framework, implementation policy formulation, training of trainers and improving the infrastructure should be given a high priority if VLE are to be successfully implemented in higher learning institutions.

Keywords: Virtual learning environments (VLE), Universities, collaborative tools, E-learning.

INTRODUCTION

Virtual learning environment is a software system designed to help tutors or teachers in the management of educational courses for their students. It is used by universities and colleges to help lecturers to create a course website with a minimum of technical skill requirements [1].

Various intuitions embrace the use of ICT Tools of virtual learning environments to respond to rising demand for accessing online learning material and hence creating the virtual learning environments [2], in practice virtual learning environments provide web-based tool for academic materials access for both on campus and long distance students. With all the virtual learning environments advantages to both users and the trainers there is need to Identify factors that affect their use if optimal results are to be realized in higher learning institutions. On the adoption and integration of E-learning into teaching practices in Arabian universities three major factors that influence the E-learning adoption by university staff (Lack of Training, Lack of Time and Lack of institutional support) were reviewed [3]. The three aspects were looked at however they are not the only

major factors that affect the E-learning implementation in Ugandan universities, factors such institutional readiness, infrastructure, internet speed and power fluctuations were not seen to be major issues in the implementation process. At the Royal university of Bhutan it's also observed that bandwidth to support information exchange is limited and lacks consistency [4].

METHODOLOGY

The research adopted a case study design with closed questionnaire as approaches of describing the sample. The study selected 327 respondents as sample size, where 22 were staff members and 305 were students out of 363 respondents as target population. The sample size was chosen using the table of Morgan & Krejcie [5]. The selected case study areas included Mountains of the Moon University, Uganda Martyrs University and Uganda Pentecostal University.

Purposive sampling which is a non-probability sampling method was used to select specific groups in order to garner vital data from the focal persons and to make sure that no category was left out. A sampling frame of lectures and students was made to help the

researcher to know the number of participants to be covered.

Interviews were used to get specific information from some of the respondents about the implementation processes and procedures used within the universities and their perception on VLE usage.

Observation was also used to physically observe how students were interacting with the system and find out the platform access intervals by the students

Quality control methods were ensured whereby Proper documentation and record keeping of the collected data, examination of questionnaires for obvious inconsistencies before they were distributed to respondents, use of professional data management program (spss,) realistic time and schedules.

Data audit was used to protect against mistakes, errors, waste of time and loss of information, all modifications to the dataset were documented. The researcher used a data entry form resembling the questionnaire, use of professional software's. All these

were used to avoid errors and secure the research data.

Data was analyzed using SPSS in form of frequencies, percentages and pie charts for quantitative data, while for qualitative data, it was analyzed employing categorization of data into themes and sub-themes along a story manner structure.

RESULTS AND DISCUSSION
Gender of the respondents

According to the study results, out 305 respondents (students), 45.6% were females and 54.4% were males. This implies that males take a slightly larger portion of the awareness about VLE in higher institutions of learning in the three universities, the observed disparities between the number of females and males in the above table justifies that men are more responsive in accessing virtual learning services than females. The high representation of males in the study was largely because male students tend to outnumber female ones in the institutions targeted as case study. The lower number of female students is a result of the drop-out that is higher than that of the male students.

Table-1: Gender of the respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	166	54.4	54.4	54.4
	Female	139	45.6	45.6	100.0
	Total	305	100.0	100.0	

Source: Primary data

How do you rate management support for virtual learning environments in your institution?

The researcher was interested in understanding the rate of management support for Virtual Learning environments in the selected institutions using only staff members excluding students because they have a better understanding of management involvement in the VLEs implementation process. The study findings revealed that 51% of the respondents evaluated to

medium, and only 9.1 % evaluated high management support, this basically implies that support to VLE in the selected institutions is not a priority and in reality lack of management support is yet another factor that brings about low adoption rates in VLE's, consequently there is need for Management support for the virtual learning environments to be implemented and enhance the adoption rates.

Table-2: Management support for virtual learning environments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	2	9.1	11.1	11.1
	Medium	11	50.0	61.1	72.2
	Low	3	13.6	16.7	88.9
	Very low	2	9.1	11.1	100.0
	Total	18	81.8	100.0	
Missing 999		4	18.2		
Total		22	100.0		

Source: Primary data

Results from interviews
One of the staff from the selected Universities said;
Virtual learning environments are very crucial more especially when students are far away from the school. Students do not physically have to find their teacher to hand in work due to secure virtual 'hand-in' folders

that have time windows. However, Students requiring eye contact from the teacher to keep focus may find it hard to concentrate with online education, some students are slow learners they like to be taught face to face and be given live example, live group discussions and demonstrations in order for them to understand.

Another staff from the said Universities stated that;
Online educations can be optimized when staff and students are comfortable using the computer and internet in learning. It is more likely for someone to get on a learning curve if their computer and internet skills are not enough to keep up with the class discussions and assignments. Online learning requires active participation and those students who only prefer listening to lectures and class will find out that silently following the class no longer works.

This suggests that; some tutors and students may need extra training on how to use virtual learning environments to acquire more practical skills on how to use VLE. Most students and staff are likely to be extremely comfortable using technology of this kind. However, some staff and students won't be as confident using digital tools and may need additional support to get started. It may be necessary to have a dedicated member of IT. Support staff available to fulfill this role.

The rated internet speed of institutions according to respondents

The speed and existence of internet surveyed in the selected institutions according to respondents was rated as follows, fair speed at 95 (31.35%) and slightly good at 119 (39.27%), 10.56% respondents reported that there is a very good internet speed, 11.55% respondents believed that there is poor internet speed while 7.26% respondents rated the internet speed very poor. According to study findings, though 39.27% of the respondents reported that the internet speed is good, the researcher finds it a major factor contributing to low adoption of VLE the fact that out of 305 questionnaires administered on students 119 respondents claim good internet and almost half the sample size which indicate that internet connections are not effective.
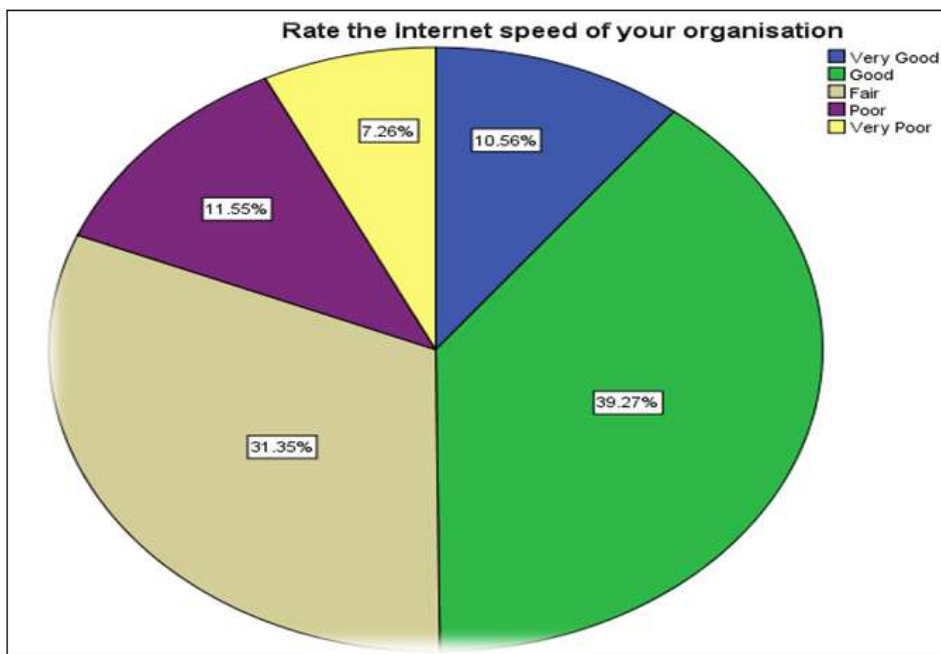

Fig-1: The rated internet speed of institutions according to respondents
Source: Primary data

Results from interviews
One of the students from the said Universities stated that;
The internet speed is good to support the VLE especially when it is on. However it is not stable all the time, this affects the online learning process and makes it difficult for both students and staff. Management should employ the best measures to ensure that the internet speed is good and stable to allow the process of learning.

This implies that, the speed of internet is not enough to support the VLE and this affects both the staff and students.

Moodle platform access intervals by students

One of the methods used to find out the virtual learning environments adoption in the case study Institutions were observation and interviews, According to the table below its evident enough that users at Mountains of the Moon University take long without using the system. During interviews users explained that poor internet connection; regular power fluctuations, faulty computers and skills to access the Moodle system were the major causes that make it intricate to system usage, Uganda Martyrs University and Uganda Pentecostal University were only starting the virtual learning implementation process. This greatly indicates the low VLE's in the stated institutions**.**

Table-3: Model platform login intervals

Source: Primary data

Results from Interview
One of the VLE Instructors stated that*;*
Apart from the power fluctuations and slow internet connection in the institutions, there are other factors that obstruct the Virtual learning environments adoption in a general perspective, luck of government support, institutional assessment before implementation, systems sustainability plans, implementation policies and poor infrastructures has greatly contributed to the adoption levels of virtual learning environments in the institution

One of the students from the said Universities stated that;
I spent a year and 228 days without accessing the system. "most of the time we don't understand the system login procedures because we were taught once but we did not master how to use the system, Most of the times the system is down and computers are very slow to help us access the system.

This implies that; virtual learning environments for it to be effective, it requires a combination of many factors like stable internet, power, and more capacity building for both staff and students. All these have to be stable enough to allow the VLE.

CONCLUSION
The study findings showed that a virtual learning environment is vital aspect in improving and promoting educational systems. The study identified poor internet connection, regular power fluctuations, low administrative support, faulty computers and lack of enough skills to access the VLE systems as the major factors which limit VLE usage. The study interviews indicated that achieving VLE requires stable and speedy internet, enough capacity building for students and staff, administrative support, commitment and time. The study explored and explained the concepts, methods and technologies that can enable virtual learning environments to effectively be implemented and improve the adoption rate. The study suggested remedies like institutional readiness assessment, Virtual learning environments implementation framework, implementation policy formulation, training of trainers and improving the infrastructure. All should be given a high priority if VLE are to be successfully implemented in higher learning institutions.

REFERENCES

1. Al-Harbi, M. (2016). Faculty attitudes toward and motivation for Virtual Learning Environments (VLE) for language studies: A cross-national study in Saudi Arabian universities. *Journal of Psychology and Behavioral Science*, *4*(2), 100-114.

2. Ogachi, D. O. (2013). The Adoption of Virtual Learning Environments By Academic Staff of University Of Nairobi A Research Project Submitted In Partial Fulfillment Of The Requirements For The Degree In Masters of Business Administration, University of Nairobi.

3. Alharbi, O., & Lally, V. (2017). Adoption of E-Learning in Saudi Arabian University Education: Three Factors Affecting Educators. *European Journal of Open Education and E-learning Studies*.

4. Penjor, S., & Zander, P. O. (2015). Predicting Virtual Learning Environment adoption-A case study. *arXiv preprint arXiv:1503.02408*.

5. Krejcie, R. V. Morgan. (1990). *Determining sample size for research activities*.