

UNDERGRADUATES' PERCEPTION ON THE USE OF LEARNING MANAGEMENT SYSTEM TO STUDY IN ILORIN, KWARA STATE

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Abstract

The application of Information and Communication Technology in teaching is a relevant and functional way of providing education to learners that will assist to inculcate the required capacity for the world of work. Hence, Learning Management Systems are solutions built and integrated into education to facilitate delivery of learning instructions to the learners. This study, therefore, explored undergraduates' perception of the use of learning management system to study in Ilorin, Kwara state. University of Ilorin was purposively selected as the target location because the institution has a dedicated learning management system built to deliver one of her core courses for all 300 level students- GNS 312. The questionnaire was utilized to obtain data from 100 undergraduates from five faculties in the University. The findings revealed that most respondents had a positive perception of the usefulness and ease of use of LMS to learn GNS 312 in University of Ilorin. The students also expressed satisfaction at this mode of delivery of the lesson. The study concludes that undergraduates in Ilorin, Kwara State have a positive perception of the utilization of LMS because they are satisfied with it. The study thereby recommended that GNS 312 should remain on the platform of LMS because undergraduates see its usefulness; they find it easy to use, learn effectively with it and are satisfied with it.

Keywords: Learning Management System (LMS), Academic Study, Undergraduates' Perception, Perceived Ease of Use, Perceived Usefulness, Satisfaction, Technology Acceptance Model

Introduction

The 21st century has witnessed massive utilisation of Information and Communication Technology (ICT) in the everyday life of an individual. This is because ICT has provided users with the capability to perform various life functions like learning, entertainment, trade, networking and lots more ubiquitously. The types of use of ubiquitous technology either for learning or leisure purposes will open to a thousand possibilities for the students, in creating an open environment and connecting classes around the world and providing more individualized instruction for students (Lei, 2010). The use of e-learning can give various benefits to teaching and in terms of the use of technology and pedagogy. E-learning integrates the main components of e-learning, such as Learning Management Systems (LMS), content management systems and learning content management systems. As technology in education is developing, many specialists in the ICT field are introducing new tools for online learning into the classroom, which are changing the learning environment (Kasim & Khalid, 2016).

Internet technology affects students' learning and teachers' performance by using online networks to create links between teachers and students, among students, and also between students and learning tools. In addition, the integration of learning management systems with mobile learning services is able to make e-learning accessible anytime and anywhere by using communication devices such as smartphones. Khalid (2011) state that the accessibility of smartphones in linking to Learning Management Systems can facilitate students in the use of learning management systems. Learning management system (LMS) refers to software applications and web-based technologies that are used by faculty and students to administer, plan, access, supplement, examine and assess learning content or to communicate about learning. LMSs are centralized, online platforms that treat curriculum, assessment delivery, and reception as commodities (Park & Mills, 2014). It is often described interchangeably as Virtual Learning Environments (VLE), Knowledge Management Systems (KMS), Collaborative Learning Environments (CLE) and Content Management Systems (CMS) (Sloan et al 2009; Moore, Dickson-Deane & Galyen, 2011).

Learning Management Systems are similar in functionality and typically includes methods to manage users, role, course information, online communication, grading, and web-based or blended delivery of content (Sloan et al, 2009). LMS as a teaching tool has been developed to organize and regulate the administrative tasks of schools and organizations. Teachers and instructors who use LMS have the opportunity to share course materials, calendars, notes, links, syllabus, opinions, and online assignments (Papadakis, Dovros, Paschalis & Rossioi, 2012). It provides students and teachers with a set of tools for improving the learning process and its management, and functions as a support in the traditional classroom education as well as in distance education (Al-Busaidi, 2012).

LMS can either be open source or commercial. When it is open source, the tutor and learners can use it for free. There are many open-source platforms, such as Moodle, Sakai, ATutor, Claroline, MyGuru2, and MyLMS. Meanwhile, Learning Management Systems like Blackboard, SuccessFactors, SunTotal, Litmos, Angle learning, Geo learning, Cornerstone and Connect Edu are commercial. A Learning Management System is a web-based software application that is designed to handle learning content, student interaction, assessment tools and reports of learning progress and student activities (Adobe, 2009). Learning content that is online is accessed through an LMS, which allows students to see and interact with learning tools via web browsers using any operating system, computer or mobile devices.

The role of a Learning Management System varies depending on the Institution's objectives, online training strategy, and desired outcomes. However, the most common use of LMS software is to deploy and track online training and learning initiatives. Typically, learning contents are uploaded to the Learning Management System, which makes them easily accessible for learners who are at a remote distance from the school location. Sometimes, LMS is deployed to tackle problems associated with a large crowd of students who have registered for the same course. In some cases, the LMS may even have built-in eLearning authoring tools that allow lecturers and tutors to develop online training materials without additional third-party software. Tutors that utilise Learning Management System can also embed external sources like media, link and forms in the classroom for students to access (Pappas, 2019)

Learning Management System can be thought of as a vast repository where you an institution can store and track information regarding classroom activities of both the learners and the tutors. Anyone with a login and password can access these online training resources whenever and wherever. For self-hosted Learning Management Systems, users must also have the LMS software installed on their hard drive or access to the institution's server. Whatever the installation option, the thing to bear in mind is that LMS users fall into two categories: First, online learners who use the Learning Management System to participate in online training courses; second, the eLearning team who relies on the LMS platform to disburse information and update the online training content.

Use of the learning management system has become nearly ubiquitous in the modern college experience and essential elements of the modern college experience. Whether distance or traditional student, residential or commuter campus, undergraduate or graduate, these systems have rapidly been accepted throughout higher education. In the past ten years, online course management systems have replaced other alternative means to deliver class contents such as live satellite or closed-circuit television (Falvo & Johnson, 2007). The introduction of learning management systems, along with increased computer use in the home and in business has brought an increasing number of students and teachers to the online learning environment.

The success of LMS, however, is dependent on the user's perception of the delivery channel as user's perception is capable of pushing people towards or away from a particular new technology. Perception is the ability to see, hear, or become aware of something through the senses, or awareness of something through the senses. Perception is the subsequent selection, organization, and interpretation of sensory input, it is the process of obtaining information about both the external and internal environments, which results, via integration utilizing memory, in the conscious experience, recognition, and interpretation of objects, object relationships, and events. Perception is understood as the improvement in performance due to prolonged exposure to a particular training or task (Marc, 2015). Perception can be viewed as the way or how a person sees and feels about a concept in technology that could influence the acceptance of such technology for utilisation.

Technology Acceptance Model has been used by many researchers to test user acceptance towards a given type of information and communication technology (ICT). This technology can be in the form of software, application, computer-based system, and hardware. The Technology Acceptance Model (TAM) is an expansion of Ajzen and Fishbein's Theory of Reasoned Action (TRA) (Priyanka & Kumar, 2013) which was a theory initiated by Fred Davis in 1986 and since then has gone through several modifications and validation. The aim of the theory is to describe factors that determine technology acceptance, information technology usage behaviour and to provide a parsimonious theoretical explanatory model (Bertrand & Bouchard, 2008). Ducey (2013) explains that the TAM includes Perceived Ease of Use and Perceived Usefulness which are the important determinants of technology acceptance and user behaviour. Since the introduction of TAM, the model has been used to explain all kinds of computer-based systems, software, and hardware acceptance.

TAM has proven to be a theoretical model in helping to explain and predict user behaviour of information technology (Legris, Ingham, & Collette, 2003). TAM provides a basis with which one traces how external variables influence belief, attitude, and intention to use. Two cognitive beliefs are posited by TAM: perceived usefulness and perceived ease of use. According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioural intentions, attitude, perceived usefulness of the system, and perceived ease of the system. TAM also proposes that external factors affect intention and actual use through mediated effects on perceived usefulness and perceived ease of use. Figure 1 depicts the TAM model (Davis, 1989).

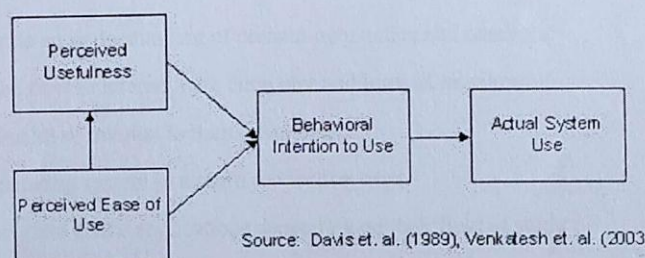


Figure 1: Technology Acceptance Model

Perceived ease of use (PEU) is the degree to which the student believes that using the learning management system is free of effort. This is an important aspect for online students since an easy system to use will lead to satisfaction and reuse of the system. A difficult system will lead to more effort required by the student to use the system. This may make students feel unsatisfied and leave the course he/she is attending. Perceived Usefulness (PU) is the degree to which the student believes that using the learning management system would enhance his or her grade performance. Perceived Ease of Learning (PEOL) is the enjoyable and convenience as a subjective physiological experience that is the context of information technology and computer-mediated environments.

Behavioural intention (BI) is the degree to which a person's perceived likelihood or subjective probability that he or she will engage in a given behaviour. Behavioural Intention reflects how hard a person is willing to try learning management system, and how motivated he or she is, to use a particular technology. Undergraduates behavioural intention to use learning management systems in the university would to a great extent determine how well they would be engaged academically in the course of study. For instance, all Undergraduates in the University of Ilorin offer general courses like GNS 312 and this made the institution integrate LMS to administer the general course. The introduction of the LMS removed issues of overcrowded classrooms that stakeholders experience during lectures. GNS 312 is a general studies course offered by 300 level students of the University of Ilorin. The course title is Digital Skill Acquisition. The course is usually offered 2 hours per week for 15 weeks and students are expected to be engaged for 30 hours before the end of the semester. The University of Ilorin adopts LMS to teach this course because of the mammoth number of students that offer the course.

The course content includes the following Computer Fundamentals: types of computers, computer network and information sharing, elements of a personal computer, Understanding Memory, Identifying Input/output devices, storage systems, types of Printers, and troubleshooting techniques; Computer Security and Privacy: Protecting data and computer, safe working environment, ergonomics, computer viruses, and data backup; The Internet and the Web: Internet providers, connections and protocols. E-mail, Internet services, E-commerce, Browsers, search tools, Web utilities, Intranets, extranets, and firewalls; Office Applications: Operating Systems, Word processor, spreadsheet, database Management system, and presentation graphics.

The course is designed to deliver required digital literacy skills to all 21st century graduates so as to be able to compete for the 21st century jobs. The course covers the general introduction of computing and computer fundamentals, computer security and privacy, internet and the world wide web, operating systems and office applications. The emerging technology-driven society has changed the required skills and knowledge by university Graduates. This can only be delivered through a digital literacy course with relevance in all disciplines.

The main objectives of GNS 312 are to enable students to acquire the required digital literacy skills. At the end of the course, the students would be able to:

1. Demonstrate an understanding of computing practice and concepts;
2. Understand how to interact with computer and internet resources;
3. Use the wealth of internet to their advantage;
4. Use an operating system in a more productive way;
5. Use appropriate office applications depending on their field of study

Students are expected to satisfy all requirements as specified in the course. Students must as well participate in all assignments whether individual or group. Students log in to the LMS portal through their e-mail accounts. Continuous Assessments are carried out on the LMS site. Students require the use of computer or mobile gadgets with internet access to participate in the class. The university place priority on students' activities while online as this is included in the grading rubric for the final semester score of the student.

The course delivery strategies for lectures and practical are purely virtual. An online discussion is made available to all students registered for the course to exchange ideas with their lecturer. Students are expected to be familiar with the following: Components of computer, Ways of securing data and information on the internet, identify components of an E-mail address, Creation of E-mail accounts, Microsoft Access, Establish a one-many relationship between entities of a database, Command prompt, Common windows icons e.g, taskbar, menu bar. The course A questionnaire down into modules that the students access weekly.

Many studies have been conducted to test the application of TAM. For example, Aypay, et al. (2012) tested the theory in predicting the intensity of technology acceptance among pre-service teachers and results indicated that there is a relationship between the model and information acquisition. Burger and Naude (2019) checked students' perception of the technology environment and results indicated that students' satisfaction is greatly linked with the ease of utilisation which in turns affects the students' academic performance. Jaffar et al (2019) worked on medical students' perception of technological environment and concluded that the perception of the students is a great determinant of how motivated they are to learn in the institution. Vukovic, Pivac and Kundid (2019) tested hypothesis regarding TAM for internet banking acceptance among users and reported that both elements of Perceived Usefulness and Perceived Ease of Use influence the acceptance of internet banking.

The objective of the Study

The main objective of this study is to investigate the Perception of Undergraduates on the use of Learning Management System to learn in University of Ilorin, Ilorin, Nigeria. Specifically, this study:

1. Investigated undergraduates' perception of the usefulness of the Learning Management System for learning-
2. Examined undergraduates' perception of ease of usability of the Learning Management System to learn
3. Determined the satisfaction derived from the use of the Learning Management System for study

Research Questions

1. What is the perception of undergraduates about the usefulness of the Learning Management System for learning?-
2. What is the perception of undergraduates on ease of usability of the Learning Management System to learn?
3. Determined the satisfaction derived from the use of the Learning Management System for study

Research Methodology

The research was a descriptive research method of the survey type. The survey was chosen for this study because it enables the researcher to collect large amounts of information about the ease of use, usefulness, satisfaction and enjoyment undergraduates derived from the use of learning management system to learn GNS 312. The population of the study were undergraduates in Ilorin Kwara State. University of Ilorin undergraduates were purposively selected as target population because the institution has a learning management solution specifically built and integrated into the administration of the core

compulsory courses of the university which are the General Studies (GNS), most especially the GNS312. 100 undergraduates among those who have utilised the developed LMS were selected across 5 faculties of the University to form the sample for the study. The Faculties are Education, Agriculture, Social Science, Management Science and Communication and Information Science. 20 undergraduates were randomly selected from each of the faculties listed above bring the total number of samples to 100. The data generated were analysed using frequency, percentages and correlation analysis.

Data Analysis and discussions

The data presented provide a summary of the major characteristics of the respondents that were involved in the study. A total of 100 copies of questionnaires were distributed but 99 were properly filled and retrieved amounting to 99% return rate. This was thus used for the analysis.

Demographic Information

Table 1:
Respondents Distribution by Their Gender

Gender of Respondents	Frequency	Percent	Cumulative Percent
Male	52	52.5	52.5
Female	47	47.5	100.0
Total	99	100.0	

Table 1 shows the distribution of undergraduates that formed the sample for this study. 52 were male students and 47 were female students.

Table 2:
Respondents Distribution by Their Faculties

Faculties	Frequency	Percent	Cumulative Percent
Agricultural Sciences	20	20.2	20.2
Communication and Information Sciences	20	20.2	40.4
Education	20	20.2	60.6
Management Sciences	19	19.2	79.8
Social Sciences	20	20.2	100.0
Total	99	100.0	

Table 2 shows the distribution of respondents according to their various faculties. 20 undergraduates were randomly selected as a sample from five faculties in the University of Ilorin. The Table indicated that all faculties have 20 respondents except management sciences with 19 valid respondents.

Results of the Research Questions

Research Question 1:

What is the perception of undergraduates about the usefulness of the Learning Management System for learning?

Table 3: Undergraduates' Perception of Usefulness of LMS

S/N	Items	Mean
1.	Learning Management System helps me to be more effective.	.98
2.	Learning Management System helps me to be more productive.	.88
3.	Learning Management System is useful.	.99
4.	Learning Management System gives me more control over the activities.	.80
5.	Learning Management System saves me time when I use it.	.81
6.	Learning Management System meets my needs.	.54
7.	Learning Management System does everything I would expect it to do.	.55
	Grand Mean	0.79

Undergraduate's view about the usefulness of the learning management system to learn GNS 312 in University of Ilorin was investigated and the result was presented in table 3. Table 3 shows that a number of undergraduates still express concern about the LMS being able to meet their needs and do what everything they expect it to do. However, the students agree that LMS makes them more effective, productive and efficient. Overall, the grand mean score was 0.79 which was greater than the benchmark of 0.50 established that most respondents had positive perception on the usefulness of learning management system to learn GNS 312 in University of Ilorin.

Research Question 2:

What is the perception of undergraduates on ease of usability of the Learning Management System to learn?

Table 4: Undergraduates Perception of the Ease of use of LMS

S/n	Items	Mean
1.	Learning Management System is easy to use.	.88
2.	Learning Management System is simple to use.	.89
3.	Learning Management System is user-friendly.	.88
4.	Learning Management System is flexible.	.77
5.	Using Learning Management System is effortless.	.60
6.	I can use the Learning Management System without written instructions.	.73
7.	Both occasional and regular users would like the Learning Management System.	.89
8.	I can recover from mistakes quickly and easily using the Learning Management System.	.94
9.	I can use the Learning Management System successfully every time.	.80
10.	I learned to use Learning Management System quickly.	.84
11.	I easily remember how to use the Learning Management System.	.82
12.	It is easy to learn to use the Learning Management System.	.92
13.	I quickly became skilful with the Learning Management System.	.88
	Grand Mean	0.82

Table 4 shows undergraduates' perception of the ease of use of LMS to learn. The undergraduate's opinion on how easy the learning management system in University of Ilorin is to learn GNS 312 was investigated and the result was presented in table 4. A number of students expressed concern at how effortless the LMS used for EDU312 as it requires certain inputs from the students. Overall, the grand mean score was 0.82 which was greater than the benchmark of 0.50 showed that most respondents opined that learning management system is easy to learn GNS 312. The students showed

quite a positive perception at the ease of use of learning management system to learn as they expressed that the system is easy to understand and they gained quick mastery of the system.

Research Question 3:

What are the satisfactions derived from the use of the learning management system to learn GNS 312 in University of Ilorin?

Table 5: Satisfaction Derived with LMS

S/n	Items	Mean
1.	I am satisfied with the Learning Management System.	.81
2.	I would recommend the Learning Management System to a friend.	.95
3.	Learning Management System is fun to use.	.84
4.	Learning Management System works the way I want it to work.	.73
5.	Learning Management System is wonderful.	.85
6.	Learning Management System is pleasant to use.	.96
Grand Mean		0.86

Research question 3 investigates the satisfaction derived from the use of learning management system to learn GNS 312 in University of Ilorin. Table 5 shows the satisfaction index of undergraduates at the use of LMS for learning. The table indicates that the undergraduates were satisfied with their experience on the LMS. The grand mean of 0.86 which is greater than benchmark of 0.5 established that the respondents were satisfied with the use of learning management system to learn GNS 312 in University of Ilorin.

Summary of Findings

The findings were summarized as follows:

1. Most respondents had a positive view on the usefulness of learning management system to learn GNS 312 in University of Ilorin.
2. Most respondents opined that the learning management system is easy to learn GNS 312.
3. Respondents were satisfied with the use of the learning management system to learn GNS 312 in University of Ilorin.

Discussion on Research Findings

Research question one sought to find out undergraduate's view about the usefulness of the learning management system to learn GNS 312. The result obtained specified that undergraduates in University of Ilorin see the usefulness of GNS 312 being taking on learning management system platform. Due to digitalization taking place of everything in the world, undergraduates consider learning management system useful because it helps to be more effective using the internet. They prefer to learn online than going to the normal conventional classes. This result corroborates the finding of Vukovic, Pivac and Kundid (2019) that showed that users of internet banking technology perceive technology as useful. Peart, Rumbold, Keane and Allin (2017) in an earlier similar study on student's perception of technology-enhanced learning also showed that students have positive perception on the use of technology being examined.

Undergraduate's opinion on how easy the learning management system is to learn GNS 312 were examined in research question two. The result specified that the learning management system is easy to learn GNS 312 in University of Ilorin. Using learning management system to learn GNS 312 does not require undergraduates to carry manual to use it because they are conversant with using the internet frequently. They find it simple to use because it is user-friendly. This finding supports Peart et al (2017) that showed that students expressed great ease at utilisation of new technology once they have mastered the techniques involved. This could be due to the fact that the generation of undergraduates in 21st century haven't known a life without technology. Technology in various forms has been an integral part of their existence, in many cases for the whole of their lives. Hence, the undergraduates bound to adapt to technology and embrace it as a perfectly natural part of their lives because it has been part of their environment since early age.

Undergraduates in Ilorin Kwara State expressed deep satisfaction at the use of LMS to learn. The findings showed that undergraduates in the University of Ilorin learn effectively with learning management system. Using learning management system to learn GNS 312 makes undergraduates learn faster because it involves self-learning. With self-learning, undergraduates remember things done online personally than teaching taking a group of class. Thus, learning management system encourages self-learning and learners learning at their own pace. Undergraduates derive satisfaction in using learning management system because they don't need to be on the campus before learning, which makes it fun to use. Learning management system platforms is easy to toggle around due to its user-friendly interface.

Conclusion and Recommendation

This research examined the Perception of Undergraduates on the use Learning Management System to learn GNS 312 in University of Ilorin. The result obtained from the data gathered and analyzed in this study indicated that undergraduates in University of Ilorin see the usefulness of learning management system in GNS 312. The result obtained also indicated that undergraduates find it easy to learn GNS 312 with Learning Management System. This research further established that undergraduates in University of Ilorin are satisfied with the use of Learning Management System to learn GNS 312. Conclusively, GNS 312 should remain on the platform of Learning Management System because undergraduates see its usefulness; they find it easy to use, learn effectively with it and are satisfied with it. Based on the findings and conclusions of this study, the study recommends that the University should consider administering other largely registered courses in the University through the learning management system since Undergraduates perceived learning management system developed for GNS311 as useful, easy to use and enjoyable.

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