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Undergraduate Students' Perceptions of the Use of Moodle Learning Management System in Usmanu Danfodoyo University, Sokoto

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Abstract: ***This study investigated the undergraduate students' perceptions of the use of Moodle learning management system in UsmanuDanfodoyo University, Sokoto. The study adopted descriptive survey design. The population of the study include all the undergraduate students from the University. Target population include all the 9200 students from the Faculty of Education and Extension Services. A sample of 370 students was selected as guided by the Research Advisors (2006) model for determination of sample size. A researchers' structured instrument titled "Questionnaire Measuring Students' Perception of the Use of Moodle for Learning" (QMSPUML) was used for data collection. To ascertain the reliability of the instrument, a pilot study was conducted and an index of 0.89 was obtained. Results from the study revealed that the undergraduate students had positive perceptions of the utilization of Moodle LMS. It was also found that some of the problems associated with the use of the platform for learning include inconsistency of power supply, technical and psychological issues. The study concluded that since the students perceived the LMS positively, it is crucial for the University to improve its ICT capacity and make available to students all necessary supports and facilities they need to excel academically.***

Keywords: Moodle; LMS; Perception; Learning

1. INTRODUCTION

Academic institutions, particularly at the tertiary level, are combining Information and Communication Technologies (ICTs), using learning management systems (LMS), and using blended learning approaches to increase student performance and learning in today's technology-driven cultures. In Nigeria, the primary goal of teaching at whatever level is to

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effect a fundamental change in the learner's behavior. To attain these goals, classic teaching tools such as dramatization, discussion, demonstration, and expedition approaches have been used to speed up the learning process of pupils. These tactics arose from learning theories such as cognitivism, behaviorism, and constructivism, all of which aimed to make the transmission of knowledge easier. Students and teachers have both changed their methods of learning and obtaining information as we enter the technology era, necessitating the use of e-learning devices in the classroom. Because of the rapid progress of technology in the twenty-first century, instructors' capacity to integrate technology into various instructional techniques has become critical. This development has revolutionized the way individuals teach and learn in the classroom.

Recent technological advancements have improved our ability to communicate and interact across large distances. With the advent and combination of new technologies, the business and the classroom continue to transform as technology improves. Furthermore, as computers and cellphones have become more common, we have been able to expand the boundaries of the office, as face-to-face contact is no longer the sole choice [7]. This has resulted in the development of the virtual office, in which employees who are geographically separated can collaborate as a single organization using virtual environments, computer-mediated communication, and other long-distance communication technologies [12]. Technology has revolutionized the workplace, and it has also changed the learning environment. Many colleges now provide online courses and employ a learning management system (LMS), which is a collection of tools and features aimed at making the instructional process easier [4]. Online courses allow students to pursue educational goals from afar, even if they are unable to travel to the campus. Furthermore, hybrid courses use a learning management system (LMS) and distance learning to allow students to communicate with their teachers in person [11]. It is even an increasing trend for teachers to use an LMS as part of a traditional course, which provides many opportunities for both students and teachers to increase learning engagement.

A Learning Management System (LMS) is a software application that manages training programs, classroom and online events, e-learning programs, and training content through administration, documentation, tracking, and reporting. LMSs range from software for distributing courses over the internet with features for online collaboration to systems for managing training and educational records [2]. Learning Management Systems include features such as student self-service (e.g., self-registration for instructor-led training), online learning (e.g., computer-based training, read-and-understand), online assessment, management of continuous professional education (CPE), collaborative learning (e.g., application sharing, discussion threads), and training resource management (e.g., instructors, facilities, equipment). Some LMSs are web-based to make access to learning content and management easier, and they're utilized by educational institutions to improve and assist classroom instruction while also providing courses to a bigger global audience [9].

In a conceptual sense, it appears plausible to presume that LMS technologies are necessary for teachers to execute instructional practices that are compatible with the values that underpin the educational reform movement. This may lead to the conclusion that if one instructor has more advanced LMS tools and a technologically advanced classroom than

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another, his or her instruction is more likely to improve students' learning [9]. Improving student performance, improving student learning, and involving students in the learning process remain top priorities in education. Academic institutions, particularly at the tertiary level, are adopting Information and Communication Technologies (ICTs) to help attain such aims in today's technology-driven cultures, and faculty are busy experimenting with such technologies to enhance their traditional teaching techniques. Online learning management systems (LMS) have been proved to be capable of assisting in such endeavors [9].

Learning management systems (LMSs) are also known as learning platforms, distributed learning systems, course management systems, content management systems, portals, and instructional management systems. They combine a variety of course or subject management and pedagogical tools to provide a way of designing, building, and delivering online learning environments [1]. LMSs, also known as virtual learning environments, use interactive technology in the classroom to provide varying degrees of participation and the ability to create active learning situations. A fully functional LMS meets three essential criteria: first, it must be a fully realized, networked digital environment with interactive interfaces for both professors and students. Second, an LMS delivers digital versions of curriculum content and assessments for teaching and learning. Third, a learning management system (LMS) contains features for managing classroom activity. A robust LMS should be able to centralize and automate administration, use self-service and self-guided services, quickly assemble and deliver learning content, consolidate training initiatives on a Web-based platform, support portability, and standards, personalize content, and enable knowledge reuse, among other things [1].

The adoption of learning management systems (LMS) is currently sweeping the academic scene in higher education institutions. Moodle is a learning management system introduced to students of Usmanu Danfodiyo University, Sokoto. Since the Moodle LMS is new to the students of the University, the researchers believed it is necessary to determine the undergraduate students' perceptions of the use of Moodle LMS for learning in the University. The study's findings would assist the University to have some information (feedback) regarding the new learning management system that is being presented to students. It is a well-known truth that evaluation must occur before, during, and after the implementation of new technologies to facilitate teaching-learning processes. The evaluation procedure aids in determining the technology's strengths and limitations for value control objectives. Despite the growing popularity of Moodle LMS, there is a scarcity of research that examines the utility and usability of Moodle LMS as employed by a case study institution from the perspective of students. There is a paucity of research that reveals whether Moodle LMS satisfies student requirements and whether the required features are actually delivered by the local instance of Moodle used by the case study university. This LMS is currently undergoing pilot testing at the University; thus, this research is worthwhile.

Objectives of the Study

The main objective of this study was to determine the undergraduate students' perceptions of the use of Moodle learning management system (LMS) in Usmanu Danfodiyo University, Sokoto (UDUS). Specifically, the study intended to:

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1. Determine undergraduate students' perceived effectiveness of Moodle LMS for learning in UDUS
2. Ascertain the problems associated with the use of the Moodle LMS by undergraduate

Research Questions

1. What is the undergraduate students' perceived effectiveness of Moodle LMS for learning in UDUS?
2. What are the problems associated with the use of the Moodle LMS by undergraduate students in UDUS?

2. METHODOLOGY

The research design adopted for this study is descriptive of survey type. This type of research design enables researchers to utilize data collected without any manipulation. All the undergraduate students from Usmanu Danfodiyo University, Sokoto formed the population of the study. All the 9200 undergraduate students of the Faculty of Education and Extension Services were purposively chosen as the target population of the study. Research Advisors (2006) was used to determine 370 as a sample size for the study from the population of 9200 across the faculty. Simple random sampling was used to select respondents from the faculty as sample for the study.

The researchers' structured instrument titled "Questionnaire Measuring Students' Perception of the Use of Moodle for Learning" (QMSPUML) was use for data collection. The instrument used was a four Likert scale of Disagree (D), Strongly Disagree (SD), Agree (A), and Strongly Agree (SA). To ensure face and content validity, the instrument was validated by five experts from the Faculty of Education and Extension Services, Usmanu Danfodiyo University. A pilot study was conducted at the University of Ilorin and a reliability index of 0.89 was obtained. The index indicates that the instrument is reliable in measuring what it is supposed to measure. Data gathered for the study were analyzed using percentages.

3. RESULTS

Research Question One: What is the undergraduate students' perceived effectiveness of Moodle LMS for learning in UDUS?

Table 1: Perceived effectiveness of Moodle LMS in Usmanu Danfodiyo University, Sokoto:

ITEM	SA	A	D	SD
The Moodle LMS is well-managed by the University	76	24	-	-
I feel comfortable while using Moodle LMS	70	30	-	-
The Moodle LMS is user-friendly	50	46	4	-
The Moodle LMS is gender-friendly	50	50	-	-
The Moodle LMS is flexible for learning	40	55	3	2

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The Moodle LMS does not consume much data	-	50	50	-
The platform can be customized to suit learner's interest	-	40	60	-
The platform can be used to teach all courses I offer	65	15	15	5
The platform is one of the best for individualised learning	40	40	19	1
The platform is apt for blended learning	60	40	-	-
The platform can easily be accessed from a website	90	10	-	-
The platform can be used via its Application	100	-	-	-
I enjoy being evaluated via the Moodle platform	-	80	20	-
The platform helps learner becomes active in the learning process	55	45	-	-
The platform promotes distance education/learning	80	20	-	-
The platform is age-friendly	40	40	5	15
The Moodle LMS is well-secured in terms of privacy	56	30	10	4

According to the findings of the study, the Moodle LMS is well-managed by the University, and students feel comfortable utilizing Moodle LMS for learning. Moodle LMS was rated as user-friendly, gender-friendly, age-friendly, and flexible for learning by 100% of respondents. In regards to the LMS's data consumption, the results revealed that half of the respondents agreed that it does so, while the other half disagreed. According to the table, 60 percent of respondents, or the majority, disagree with the statement that the Moodle platform may be tailored to meet the interests of learners.

The responders unanimously agreed that the platform could be utilized to teach all of the courses offered, as evidenced by the results. It's one of the most effective learning management systems for personalized and blended learning. The findings also demonstrated that the Moodle platform can be easily accessed via a website and can also be used via its desktop application, as agreed by 100% of the respondents. The participants believed that the Moodle platform assisted them in being more involved in the learning process, as evidenced by the results. As agreed by all participants, one of the platform's advantages is that it encourages remote education/learning and is well-secured in terms of privacy.

Table 2: Problems Associated with the Use of Moodle LMS in Usmanu Danfodiyo University, Sokoto:

ITEM	**SA**	**A**	**D**	**SD**
I experienced login problems	58	18	20	4
Slow nature of the systems (computers) the University provided	-	50	50	-
Inconsistency of power supply	70	30	-	-
Inadequacy of ICT facilities for all students to access the LMS	98	2	-	-

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Anxiety affects me during utilization of the Moodle LMS	50	40	5	5
I often become depressed when using technology for learning	20	72	8	-

Table 2 showed results in respect of the problems associated with the use of Moodle LMS by undergraduate students of Usmanu Danfodiyo Univerisity, Sokoto. 58% representing the majority of the respondents strongly agreed that they experienced difficulties when login into the Moodle platform. The result indicated a divided opinion regarding the functionality of the computers available for use in the University. While 50% of the respondents agreed that the computers available for use in the University function effectively, the remaining 50% of them rejected such opinion. Other problems that relate to the utilization of Moodle LMS in the University as agreed by almost all the respondents include inconsistency of power supply; inadequacy of ICT facilities for all students to access the LMS; and psychological effects (anxiety and depression).

4. DISCUSSIONS

The Moodle LMS is user-friendly, gender-friendly, age-friendly, and flexible for learning, according to the findings of this study. The Moodle LMS was proven to be quite cost-effective in terms of data consumption. Friendliness, neutrality and flexibility features of the Moodle LMS as the results from this study revealed are parts of the attributes of media for effective instructional process as explained by SECTIONS Model developed by [3]. The Moodle platform can also be tailored to meet the interests of learners. The platform can be utilized to teach all of the courses offered, according to the universal agreement of the respondents. It's one of the most effective learning management systems for personalized and blended learning. These findings support [1] claim that learning management systems (LMS) combine interactive technology in the classroom and provide varying levels of participation and the possibility to create active learning environments. These findings suggested that the Moodle LMS is capable of promoting the development of 21st-century learning skills. This is due to the platform's ability to help learners become more creative, rational, and engaged in the learning process. A robust LMS is expected to be able to centralize and automate administration, use self-service and self-guided services, quickly assemble and deliver learning content, consolidate training initiatives on a Web-based platform, support portability, and standards, personalize content, and enable knowledge reuse, according to this statement [1]. Findings from the current study are supported by [10] in a study on the use of learning management system (LMS) Moodle in the midst of covid-19 pandemic: Students' perspective. The descriptive analysis of data collected demonstrated that students had a high level of acceptability of the Moodle LMS. Despite issues such as poor internet connectivity and a lack of timely feedback from teachers, students rated the LMS Moodle as convenient and user-friendly. In line with the findings of their study, it was recommended that learning via the LMS should be blended into traditional classrooms in the future to support successful teaching and learning. Similarly, a study by [8] on exploring user experience of learning management system revealed that the Moodle LMS was rated positively, and was considered as an effective sustainable learning solution in the 21st century.

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The study discovered that undergraduate students experienced technical issues with the Moodle learning management system, such as login troubles and the malfunction of some of the ICT facilities that facilitate the LMS integration into the learning process. The survey also found other issues, such as power supply inconsistency, which is a widespread issue in Nigeria. Anxiety and depression were discovered to be some of the psychological problems that influence the use of the Moodle learning management system, according to the study. Similar to the current study, [12} discovered that some of the issues with Moodle LMS include: technical issues with the App, only text-based communication between teachers and students is enabled, inconvenient and unfriendly interface, size limits of attached files with tasks, slow speed and unstable system performance that limited access to study materials. In agreement with findings of the current study, [6] did research on the utility and usability of Moodle LMS, which is used by Zarqa University in Jordan. The study's findings revealed that the following issues with using the LMS exist: unaesthetic design of the learning pages, inappropriate choice of typeface; inappropriate choice of font size, links provided to connect to learning materials were not working, the location of the login links on Moodle's home page is not obvious, it is difficult to submit an assignment, Moodle's pages download slowly, and the location of the internal search function is inappropriate and difficult to use. In addition to the current study's findings, [5] discovered that lack of direct contact between participants in the educational process, difficulties in learning material without direct contact with the teacher, and a long time spent on learning material are among the problems of using the platform for the instructional process in a study on the positive and negative aspects of using Moodle LMS in higher education institutions. When applied to a large number of students, the results revealed that many students required assistance and support in arranging their educational activities, as well as the scheduling of assignments and other duties that needed to be reported.

5. CONCLUSION AND RECOMMENDATION

Students from Usmanu Danfodiyo University are positive about the utilization of the Moodle learning management system for the effective instructional process. Moodle is a good learning management system that is apt for supporting the acquisition of 21st-century learning skills. In spite of the effectiveness of the platform, there are technical issues that can hinder its effective exploration in the University. Since most of the undergraduate students of Usmanu Danfodiyo University have positive perceptions of the platform, it is crucial for the university to address the technical issues revealed by the study, improve its ICT capacity, and make available to students all the necessary support and facilities they need to excel academically. This would help to improve the learner-platform relationship as well as prepare students for global competitiveness.

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