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## **Analysis of University of Ilorin Lecturers' and Students' Awareness and use of Learning Management System Platforms in Pre and Post Covid-19**

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### **ABSTRACT**

*The study examined the University of Ilorin lecturers' and students' level of awareness and use of learning management system platforms in the pre and post COVID-19 lockdown. A descriptive survey was adopted for the study where all lecturers and students across all the 13 faculties of the University of Ilorin constituted the population. A total of 1813 (322 Lecturers and 1491 students respectively) were randomly sampled for the study. A 25-item researcher-designed questionnaire entitled "Learning Management Systems Platforms Questionnaire (LMSPTQ)" with psychometric properties of content validity and a 0.71 reliability index was used to elicit the required data. The data were analyzed using descriptive statistics of percentage, and the mean percentage was used to answer the research question. Findings are also summarized in a bar chart. The findings revealed that Learning Management System platforms was not prominent and were of low use in the pre-COVID-19 era while they were prominent and enjoyed high usage during the post-COVID-19 lockdown. Platforms such as Zoom, Google Classroom, Google meet, telegram, WhatsApp, and YouTube, among others enjoyed high usage. It was thus recommended that learning management systems platforms should be adopted for use by universities beyond the University of Ilorin since such platforms are used by all faculties and departments.*

**KEYWORDS:** Awareness, Pre and Post-COVID-19, Google meet, Google classroom, Management

## **1 INTRODUCTION**

The value of education in human development has been extensively documented, with education catalyzing national and human capital development. Education is a means of self-development that is passed down through generations through learning, information, skills, and habits. The value of education in a country's economic, social, and moral development cannot be overstated. Since the appearance of the novel Corona Virus Disease (COVID-19) 2019, education at all levels has been jeopardized, which is cause for serious concern. COVID-19, a novel disease, became known when it was identified as the causative agent in reported cases of patients with pneumonia admitted to hospitals in Wuhan, China, in December 2019 (WHO 2020). This disease is spread through the airborne zoonotic droplet, and people can get infected when in close contact with the cough and sneezing of persons who have symptoms of the virus (Kumar, Malviya & Sharma 2020).

On March 12 2020, the WHO officially declared COVID-19 also known as coronavirus a pandemic (Wren-Lewis 2020). Due to this pandemic, educational institutions in most countries around the world were closed. Data from UNESCO showed that the peak in the closure of schools was at the beginning of April 2020, when about 1.6 billion students were affected across 194 countries (UNESCO 2020). In March 2020, the Federal Ministry of Education in Nigeria directed the closure of all schools and they only began reopening in October, of the same year. As a result, countries have relied on several containment measures, including a range of physical and social distancing measures to flatten the epidemiological curve and avert morbidity and mortality due to COVID-19 (Impey 2020). Though school closure is intended to control the spread of the virus within schools, prevent carriage to other vulnerable individuals, and sustain public health, these closures have had

widespread socioeconomic impacts (Lindzon, 2020).

Furthermore, the far-reaching impacts of social/physical separation, as well as the attendant lockdown measures and school closures have hampered the education sector (Yinka & Adebayo 2020). Over 188 of the 195 countries have implemented nationwide school closures and educational restrictions (UNESCO 2020). The shutdown is projected to have impacted more than 1,576, 021, 858 students worldwide, accounting for 91.3 per cent of all students (UNESCO 2020). School closures entail enormous economic, health, and social consequences in addition to the impact on students (Impey 2020).

COVID-19 in Nigeria has impacted higher education. Because schools were closed, higher education leaders had to devise measures to ensure that learning is sustained while the lockdown is on. Some Nigerian institutions, particularly those that are privately owned, moved fast away from conventional face-to-face education and toward the use of Learning Management System (LMS) software. (Lindzon 2020). Learning Management Systems (LMSs) are web-based applications that run on a server and can be accessed via a web browser from anywhere with an internet connection. LMS provides educators with the following features: administrative backing for learning activities, assignments, communication assistance, and other parts of course instructions (Yinka & Adebayo 2020).

LMSs have become an important part of most institutions' educational systems, and interest in hybrid models, which combine classroom learning with online activities, is growing. The main purpose of a learning management system (LMS) is to complement traditional lectures with course content that may be accessible from campus or via the Internet (Edebatu, Ekwonwune & Ezeobi 2019). Learning

Management Systems are available from a variety of platforms and suppliers. Moodle LMSs, Sakai, A tutor, CouresSite, and Blackboard are among them. Moodle stands for Modular Object-Oriented Developmental Learning Environment and is an Internet-based Course Management System (CMS), often known as a Learning Management System (LMS). It was created by Martin Dougiamas as a learning platform. Moodle's first version was released on August 20, 2002. Moodle is designed to provide educators, administrators, and learners with a single powerful, secure, and integrated system for creating individualized learning environments, which is constantly improving.

The extension in the period of total lockdown gave opportunities to many institutions including universities to shift to the e-learning mode of instruction. Lecturers and learners had to quickly adjust to the new educational model since they were given virtual training on e-learning platforms. The paradigm shift from all educational course contents to e-learning platforms within the shortest time to cope with the pandemic poses a serious threat to both the teachers and students (Dorn, Hancock, Sarakatsannis & Viruleg 2020). Transition to e-learning becomes challenging particularly in developing country like Nigeria. This is because modern technology is yet to be integrated into the educational system. Students were given learning materials and pre-recorded lecture films by the majority of online universities. Essays, presentations, reports, quizzes, assignments, and other coursework-related tasks were used, with virtual multiple-choice questions and oral examinations used for the majority of evaluations.

Several universities in Nigeria did not prepare for any exigence that could disturb education, such as the COVID-19 lockdown; nevertheless, some institutions' management teams were able to provide guidance and support to ensure that learning activities continued and students were

assessed online. This was largely achievable because the schools are closed during a period when technical advancements and digitalization in the educational setting were easily available. COVID-19 has an especially negative influence on education in low and middle-income nations, where education systems have been operating on inferior platforms. It's also difficult to establish a safe learning environment for pupils in Nigeria's overcrowded, resource-constrained institutions (Yinka & Adebayo 2020).

The epidemic has a distinctive dispersing effect on education in Africa and other nations, resulting in a reduction in educational attainment, a widening of the existing difference in learning access and outcomes, and an increase in school dropouts (Blundell, Costa-Dias, Joyce & Xu 2020). The threat to education in Nigeria is exacerbated by unique vulnerabilities such as weak health systems, poverty and inequality, hunger, internally displaced people, large population densities, the urban-rural divide, and an out-of-school population (Obiako & Adeniran 2020). As a result, some state education departments have released modalities for radio and television schooling as well as internet-based learning for students in public primary and secondary schools. Even though these initiatives may be effective in wealthy countries, they can have a far-reaching negative impact on the education system in developing low-income countries such as Nigeria (Obiako & Adeniran 2020). For example, as the COVID-19 epidemic transforms digital and online education around the world, primary and secondary school students in rural and underserved regions lag due to a lack of skills and resources to adapt or transfer to new learning channels.

Furthermore, university students who may have the ability to engage in internet-based learning encounter a shortage of regular electrical sources as well as weak internet infrastructure (Zhong 2020). In most Nigerian communities, learning remotely (including Radio, TV

schooling, and online learning apps for primary and secondary students, virtual libraries, and online classes in institutions) is almost impossible. Poorly resourced institutions and socially disadvantaged students who have limited access to technology and the internet, as well as students' inability to participate in an online environment, jeopardize the government's reaction (Zhong 2020). The pandemic has damaged education in three significant ways, according to Obiako and Adeniran (2020), including missed learning for the majority of pre-pandemic pupils, loss of access to critical school-provided services, and putting more children behind. Thus, differences in educational quality and socioeconomic equality are projected to worsen as a result of the country's school closures. This is because a smaller percentage of learners in urban areas, who are more likely to come from higher-income families, have a better chance of accessing education through technology during school closure (Obiako & Adeniran 2020), leaving the majority of learners from poor homes and underserved rural and suburban areas of the country behind (Zhong 2020). Aside from that, students in schools with insufficient resources or capacity to adapt to online delivery are now missing out on learning opportunities (Leung & Sharma 2020).

Learning in the home can also be difficult or cause difficulties for students. As a result of low parental educational achievements and other responsibilities, a larger percentage of the population of learners is left behind. All stakeholders in the educational system are concerned about these issues (Crawford, et al. 2020). As a result, even though most states in the country are currently reacting through radio and television, a significant portion of students are still facing difficulties in their education.

### **1.1 Statement of the Problem**

The closure of schools, colleges, and universities by the Federal and State government was an urgent need of the current situation which prevailed in most States in Nigeria. Nigerian government started taking preventive decisions on COVID-19 just after WHO recognized it as pandemic disease. The emergence of the pandemic caused many universities and schools that are virtually finished with their academic curriculum preparing for final exams before the Nigerian government ordered the closure of educational facilities. The affected schools and institutions had to announce either cancellation or rescheduling of exam dates and other school activities to curtail the spread of the virus. In a bid to ensure that students, especially those in tertiary institutions continue learning, some of the institutions opted for the Learning Management System.

The usage of learning management systems in higher education institutions has advanced dramatically in developed cultures. Nigeria and other developing countries, on the other hand, are still working hard to close whatever gaps that exist (Nnadozie 2018). There have been circumstances that necessitated the development and acceptance of learning management platforms in the country and this has led to an upsurge in the acceptance by various institutions of higher education. It is worrisome that despite the importance of virtual instruction in every aspect of human life including education and national development, much academic staff of Nigerian universities seem not to appreciate this importance and as such appear not to use nor accept them in teaching and learning processes. This is evident in the observation of Olatomide (2012) and Alaba, Abimbola, Usman and Odulaja (2014) that most teachers do not use online teaching facilities which are parts of the Learning Management System.

The Digital 2020 Global Overview Report states that over 60% of Nigerian university lecturers have not accepted online teaching platforms (Adeoye, et al. 2020). Most private school lecturers in Nigeria have accepted virtual teaching and learning compared to their counterparts in public universities (Obiakor & Adeniran 2020). The disparity in the acceptance of virtual teaching will promote disparities in learning along socioeconomic lines in favour of those that can send their children to private institutions (Obiakor & Adeniran 2020). Non-acceptance of virtual teaching will confine the country to the traditional instructional approach of chalk and talk usually carried out in a physical classroom. The traditional instructional approach is prone to distort instructional activities due to the unexpected closure of academic institutions capable of being necessitated by industrial action, riots, natural disasters and pandemics (Tamrat & Teferra 2020). When schools are closed for any reason other than the official end of the session, it might lead to disruption of students' cognitive learning processes, delays in student graduation, a penchant for deferring academic sessions, and the chance of students participating in unwholesome behaviour characterized as juvenile delinquency which has all been observed during the present COVID-19 epidemic. All these situations will surely have social, emotional and economic implications on society at large.

Studies have been done to solve the problems associated with learning management systems in tertiary institutions in Nigeria. Yakubu, Dasuki, Abubakar and Muhammadou (2020) explored the determinants of learning management systems adoption in Nigeria. Similarly, Edebatu, Ekwonwune and Ezeobi (2019) investigated the learning management system for improved service delivery in a tertiary institution. Thus, the presents study analyzed university of Ilorin lecturers' and students' awareness and use of Learning

Management System (LMS) platforms in the pre and post COVID-19 era. Specifically, the study:

- a. Identified University of Ilorin lecturers' and students' level of awareness and usage of the Learning Management System platforms for teaching and learning in pre-COVID-19 lockdown.
- b. Identified University of Ilorin lecturers' and students' level of awareness and use of Learning Management System platforms for teaching and learning in post-COVID-19 lockdown.

### **Research Questions**

Central to the theme of this study are the questions outlined below:

- a. What is the level of awareness of University of Ilorin lecturers and students of Learning Management System platforms for teaching and learning in pre-COVID-19 lockdown?
- b. What are the level of awareness and use of the University of Ilorin lecturers and students of Learning Management System platforms for teaching and learning in post-COVID-19 lockdown?

## **2 RESEARCH METHODOLOGY**

A descriptive survey design was used in this investigation. The target population comprises lecturers and students from the 13 faculties of the University. There are a total of 43,612 students and 1,380 teachers out of which 1491 students were sampled using a simple random technique across all the 13 faculties and at all levels (that is 100 levels through 400, 500 and 600 as it applies to different faculties). Also, 322 teachers were sampled through a simple sampling procedure.

To collect the data for the study, researchers created a questionnaire named "presence of university of Ilorin lecturers and

students on learning management system platforms," which had psychometric features of content validity and a reliability value of 0.81. The collected data were analyzed using percentages.

### 3 RESULTS & DISCUSSION

#### Results

The responses of both the lecturers and students were collated and presented thus;

**Research Question One:** What is the level of awareness and use of University of Ilorin lecturers and students of the Learning Management System platforms for teaching and learning in pre- COVID-19 lockdown?

Table one revealed that both the lecturers and students of the University of Ilorin are not aware of all the Learning Management system platforms before the COVID-19 lockdown. This was evident from the percentage scores that range from 56.0% to 99.0% in favour of the respondents who were not aware of the platforms before the COVID-19 lockdown.

Table 1 was also summarized in figure 1

**Table 1: Percentage response on the level of awareness of LMS before COVID-19**

ITEMS	Aware	
	Aware %	Not Aware %
Zoom	16.0	80.0
Google Classroom	22.0	78.0
Google meet	9.0	91.0
WhatsApp	23.0	77.0
Facebook	15.0	85.0
Telegram	14.0	86.0
YouTube	40.0	60.0
Microsoft Team	2.0	98.0
Moodle LMSs	6.0	94.0
Sakai	3.0	97.0
A tutor	11.0	89.0
CouresSite	5.0	95.0
Blackboard	9.0	91.0
Schoology	4.0	96.0
Brightspace	4.0	96.0
LearnDash	5.0	95.0
Canvas	6.0	96.0
LifterLMS	3.0	97.0
Udemy	1.0	99.0
Coarsera	3.0	97.0
EThink	2.0	98.0
Edufirst.ng	21.6	78.4
Flexisaf	33.2	66.8
Gopius	18.1	81.9
Gopius	18.1	81.9
superprof.ng	43.1	56.9

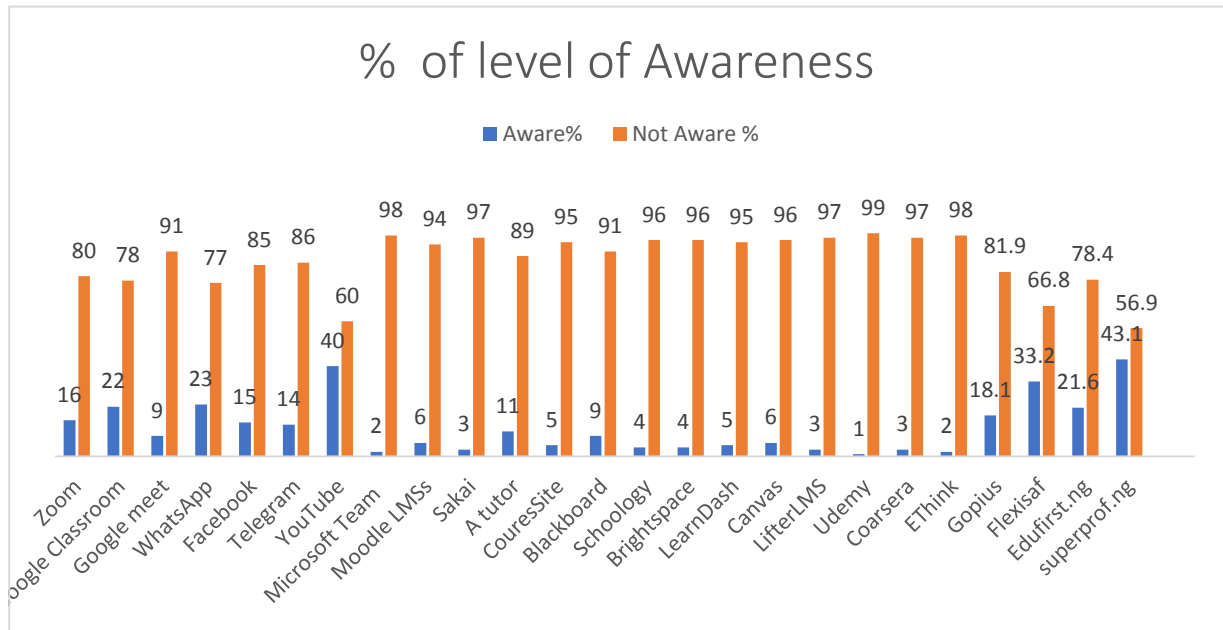


Fig. 1: a % level of awareness of both the teacher and students on LMS revealed a 21.6% level of awareness while 78.4% were not aware of the various LMS platforms for teaching and learning at pre-COVID-19 Lockdown.

**Table 2: Percentage response on the level of use of LMS before COVID-19**

ITEMS	Usage		
	Often %	Always %	Not use all %
Zoom	1.0	1.0	98.0
Google Classroom	2.0	19.0	79.0
Google meet	2.0	0.0	98.0
WhatsApp	25.0	12.0	63.0
Facebook	12.0	4.0	84.0
Telegram	11.0	1.0	88.0
YouTube	31.0	20.0	49.0
Microsoft Team	1.0	0.0	99.0
Moodle LMSs	1.0	0.0	99.0
Sakai	0.0	0.0	100.0
A tutor	0.0	0.0	100.0
CouresSite	1.0	0.0	99.0
Blackboard	0.0	0.0	100.0
Schoology	0.0	0.0	100.0
Brightspace	0.0	0.0	100.0
LearnDash	0.0	1.0	99.0
Canvas	0.0	0.0	100.0
LifterLMS	0.0	0.0	100.0
Udemy	0.0	0.0	100.0
Coarsera	0.0	0.0	100.0
EThink	0.0	1.0	99.0
Edufirst.ng	1.0	0.0	99.0
Flexisaf	0.0	0.0	100.0
Gopius	0.0	0.0	100.0
superprof.ng	0.0	0.0	100.0

Table two also revealed teachers' and students' low level of usage 'not used at all' carries the majority, with 100%

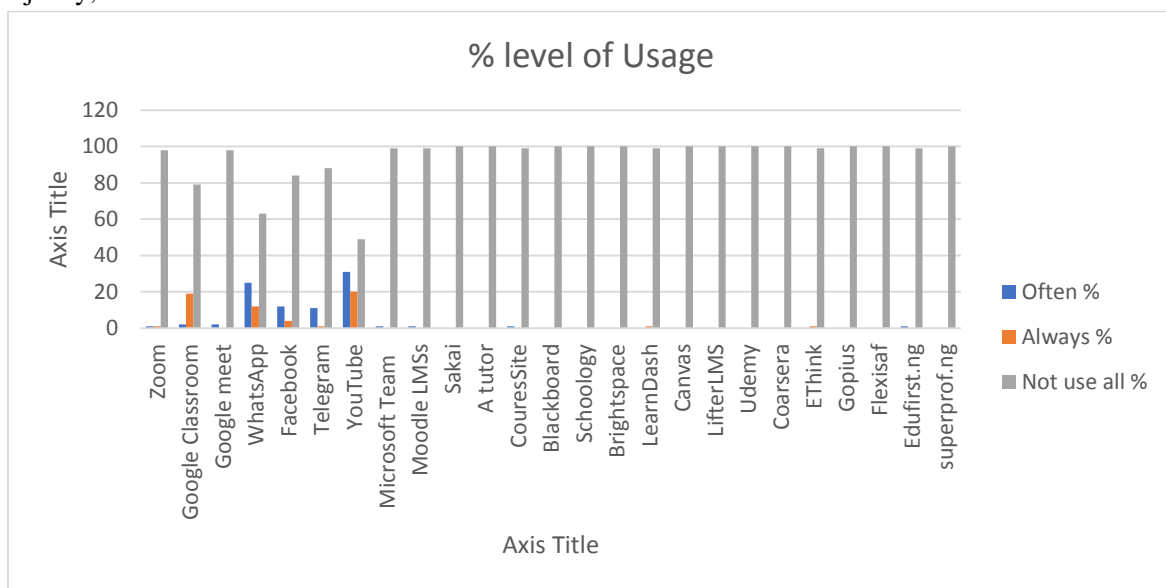


Fig. 2:% level of usage

Fig.2 revealed % that the level of usage is low since 'not-used' take almost all the 100% as shown in the figure

**Research Question 2:** What is the level of awareness and use of University of Ilorin lecturers and students of the Learning Management System platforms for teaching and learning in post-COVID-19 lockdown?

**Table 3: Percentage response on the level of awareness of LMS post COVID-19**

ITEMS	Aware	
	Aware%	Not Aware %
Zoom	91.0	9.0
Google Classroom	79.0	21.0
Google meet	67.0	33.0
WhatsApp	100	0.0
Facebook	60.0	40.0
Telegram	90.0	10.0
YouTube	93.0	7.0
Microsoft Team	92.0	8.0
Moodle LMSs	24.0	76.0
Sakai	3.0	97.0
A tutor	56.0	44.0
CouresSite	67.0	33.0
Blackboard	76.0	24.0
Schoology	60.0	40.0
Brightspace	66.0	34.0
LearnDash	100.0	0.0
Canvas	97.0	3.0
LifterLMS	97.0	3.0
Udemy	87.0	13.0
Coarsera	100.	0.0
EThink	88	12.0
Edufirst.ng	100.0	0.0
Flexisaf	92.0	8.0
Gopius	0.0	100.0
superprof.ng	67.0	33.0

Table three also revealed results of the level of awareness of LMS by both the teachers and students in the post-COVID 19 eras is positive. This is because many respondents were aware of the different LMS platforms that can be used for effective teaching and learning in school.

The table was summarized in figure 3.



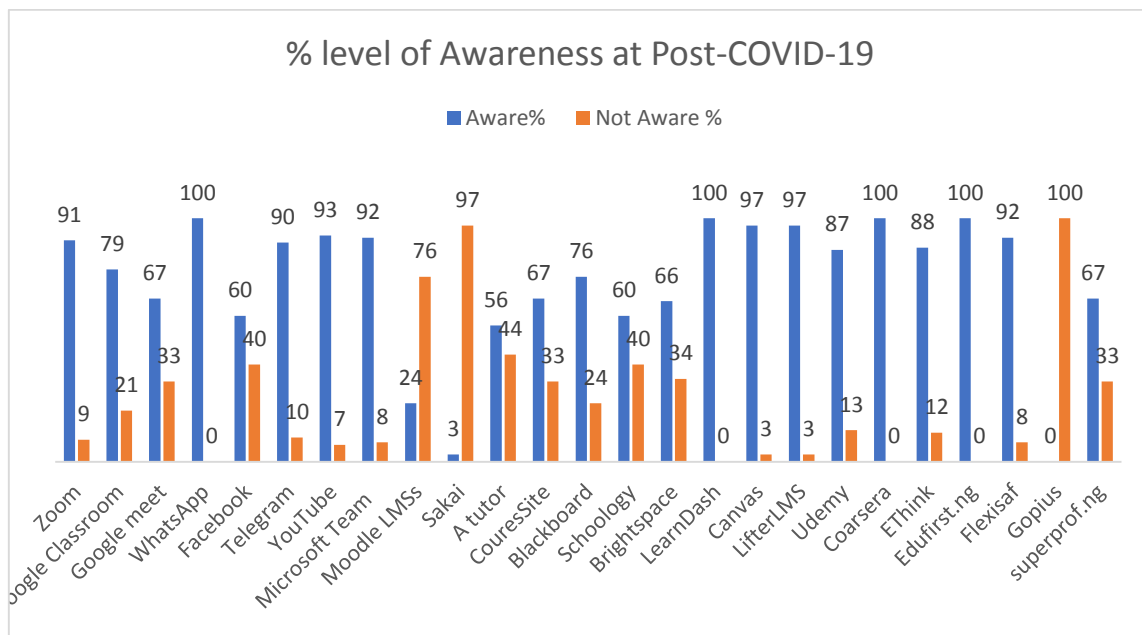


Fig. 3: A % level of awareness of both the teacher and students on LMS at post-COVID-19 lockdown revealed 74.08%. The awareness rate of the different platforms was above average.

**Table 4: Percentage response on the level of awareness and use of LMS post COVID-19**

ITEMS	Usage		
	Often %	Always %	Not use all %
Zoom	5.0	94.0	1.0
Google Classroom	40.0	58.0	2.0
Google meet	31.0	56.0	13.0
WhatsApp	21.0	61.0	18.0
Facebook	16.0	49.0	35.0
Telegram	11.0	63.0	26.0
YouTube	31.0	69.0	0.0
Microsoft Team	17.0	78.0	5.0
Moodle LMSs	34.0	65.0	1.0
Sakai	0.0	22.0	78.0
A tutor	0.0	31.0	69.0
CouresSite	1.0	42.0	57.0
Blackboard	20	60.0	20.0
Schoology	7.0	49.0	44.0
Brightspace	17.0	65.0	18.0
LearnDash	17.0	59.0	23.0
Canvas	41.0	59.0	0.0
LifterLMS	21.0	79.0	0.0
Udemy	5.0	45.0	50.0
Coarsera	5.0	33.0	62.0
EThink	27.0	61.0	12.0
Edufirst.ng	28.0	16.0	56.0
Flexisaf	38.0	41.0	21.0
Gopius	0.0	0.0	100.0
superprof.ng	12.0	0.0	88.0

Table four revealed results of the level of usage of LMS by both the teachers and students in the post-COVID 19 eras and were positive. This is

because many respondents can now make better use of the different LMS platforms to promote their teaching and learning.

Here is the summary of table 4

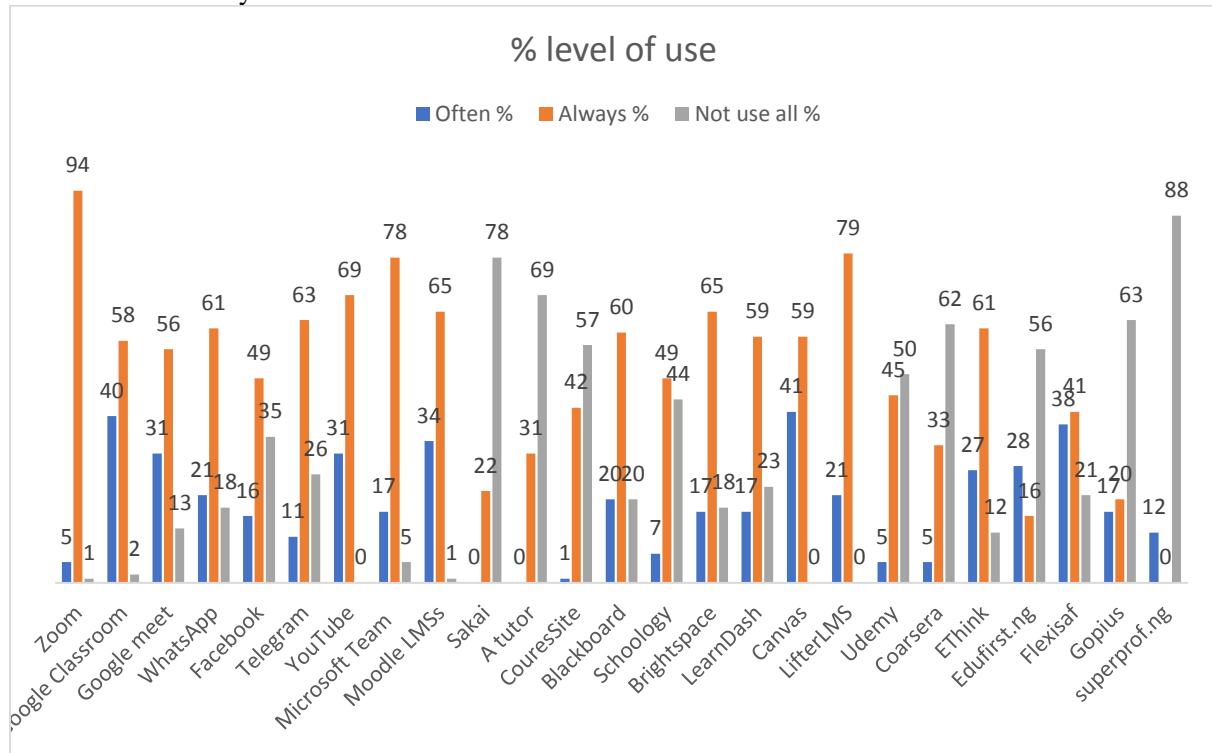


Fig. 4 with usage level at 96.54% for always use + 34.23% for often use, = 130.77%. COVID-19 lockdown, therefore, has a favourable impact on awareness of and use of various Learning Management Systems for teaching and learning.

### Discussion

According to the findings of the survey, teachers and students at the University of Ilorin are not aware of so many learning management system platforms that could help and motivate effective teaching and learning before the COVID-19 experience, although such platforms were in existence in a good number. The fact that awareness level was low, and their rate of use was also very low means that when there was no pandemic in the society, only physical teaching and learning were given 100% attention and little or no attention was given to virtual teaching and learning, not to talk of blended learning.

Another finding also revealed that by the post-COVID-19 era, there was a high level of awareness and use of various Learning Management Systems to the extent of blended learning among the lecturers and students in the university. Different platforms such as Zoom,

Google classroom, Telegram, Google meet and WhatsApp, and YouTube dominated both the awareness and usage levels. Lessons were conducted through these platforms and students were learning and participating actively in their learning with a lot of activities. This indicated that Zoom, Google classroom, Telegram, Google meet and WhatsApp among others as LMS gained prominence of use in the University of Ilorin after the restrictions of movement which caused students to stay at home owing to the COVID-19 pandemic. Lecturers were opportune to manipulate teaching effectively through any of these platforms. By implication, teaching and learning post-COVID-19 has contributed positively to flexible teaching and learning likewise, the process of schooling has become so easy and accessible and more convenient; This is because teaching through Zoom is accessible to students anywhere in the society

with just their smartphones on and the application installed. Easy access to teaching and learning material is also part of the benefits. It is easy to say that the COVID-19 experience has impacted positively education. This is in line with the studies of researchers such as the findings of Olatomide (2012) and Alaba, Abimbola, Usman and Odulaja (2014) that, most teachers do not use online teaching facilities which are part of the Learning Management System. The Digital 2020 Global Overview Report also had it that, over 60% of Nigerian university lecturers have not accepted online teaching platforms (Adeoye et al. 2020). This is probably because the teachers do not appreciate the potential impact of LMS on their teaching and the learning of the students. Meanwhile, Edebatu, Ekwonwune and Ezeobi (2019) found that Learning Management systems improved service delivery in tertiary institutions. Even though LMS is becoming increasingly utilized in Sub-Saharan Africa, it is estimated that its actual usage is still low. For example, at Uganda's Makerere University (Mayoka & Kyeyune 2012), there were only 60 users in the LMS, and at Kenya's University of Nairobi, there were less than ten users (Ssekakubo et al. 2011). The University of Dodoma had 103 users, the University of Dar es Salaam had 767 users, the Open University of Tanzania had 81 users, and the Institute of Finance Management in Tanzania had 49 users (Mtebe & Raisamo 2014). Several institutions in Zambia, Zimbabwe, Mozambique, and Sudan are in a similar condition. Low use of LMS has also been discovered in studies at Kenya and Mozambique universities (Unwin et al. 2010).

#### **4 CONCLUSION & RECOMMENDATIONS**

Globally, the COVID-19 pandemic has had its impact on all sectors of the economy, and education is not an exception. The impact of the pandemic caught all sectors unaware and they had no choice but to rally around and adapt to the measures available for efficient and

continuous teaching and learning process and hence the introduction of learning management systems with its various platforms. This is an indication that the virus is not a death sentence to education given the advancement in technology and proliferation of several online learning platforms or tools. Though it is different from the traditional teaching and learning method, it helps in overcoming eventualities and ensuring continuous growth and development in the education sector. LMSs aids in restoring normalcy in trying times and if lecturers and students uses the system even after the COVID-19 pandemic, it is seen to be potent, affordable and dependable for effective teaching and learning in the new normal world. Based on the findings of the study, it was recommended that: Learning Management System platforms should be adopted for use by universities beyond the University of Ilorin since such platforms are used by all faculties and departments. Also, it is recommended that Learning Management System platforms should also be adopted for teaching in Upper basic and senior schools in Nigeria's education system. This is highly recommended because senior school students are undertaking qualifying examinations (Joint Admission and Matriculation Board) using one of the various LMS platforms.

#### **ACKNOWLEDGMENTS**

Special appreciation goes to the staff, lecturers, students and management of the sampled university.

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