MODIFIED LEARNING MANAGEMENT SYSTEM: MAKING A DIFFERENCE IN E-LEARNING THIS NEW NORMAL

DR. LOUIE F. AGUSTIN
https://orcid.org/ 0000-0002-8617-8082
louieagustin247@gmail.com
Santa Rosa City, Laguna Philippines

ABSTRACT

The Learning Management System (LMS) is a type of web-based software that is hosted on a server and is used to handle students' information, program enrollment, course content, and evaluation tools. The primary goal of this study was to ascertain the efficacy of learning management systems in affecting change in this new normal school context. The research study engaged 38 students from various courses who were enrolled in the Citi Global College's Weekend Education Program. A descriptive research design was adopted in this study. Descriptive research is one in which the range of one or more variables is described without respect for any causal or other assumption. The frequency (f) and percentage (%) relevant factors were used to determine the respondents' demographic profile in terms of age, sex, course, year level, available internet connection, and gadget use at home; whereas the weighted Mean (WM), t-test, and f-test variables were used to analyze the gathered data regarding the level of effectiveness on the quality characteristics of the learning management system and to determine if there were significant differences in respondents' assessments. The study's findings indicate that respondents were all working students; the majority of them use mobile data as their available internet subscription; and that there was no significant difference in the level of effectiveness of LMS's quality characteristics when respondents were grouped according to their demographic profile. The study recommended that instructors allow students sufficient time to process their output at the LMS because they were working students; prepare video tutorials to familiarize students with the LMS platform; use a good or faster internet connection of at least 4 Mbps and at least Android Marshmallow or iOS 8 on their mobile devices; and that the Learning Management System may be proposed for use by other neighboring schools.

Keywords: Learning Management System, e-Learning, Synchronous, Asynchronous

INTRODUCTION

Nowadays, it has become a widespread practice among students to acquire development of information and communication innovation. Since the epidemic began, all private institutions have established their own learning management system that all students will utilize. The abrupt shift away from the traditional classroom was facilitated by online education. The advancement of learning management systems occurred swiftly in response to the new normal's demand in the education system. The primary factors in determining LMSs are the tools for improving and developing skills, increasing productivity, and communicating (Ng Syuan Xin et al, 2021). They enable the creation and editing of presentations, activities, and exams for every program through the use of interactive multimedia. The Learning Management System abbreviated as LMS in the world of higher education is an online gateway that connects instructors and students. It is a location where students may conveniently exchange instructional materials and learning resources. Additionally, it serves as a conduit for communication and interaction between lecturers and students outside

of the lecture hall. Additionally, students can engage in conversation in forums, which takes up less time than learning in a traditional classroom. In this current age of modern technology, internet connectivity is readily available in urban regions, particularly those with the highest concentration of institutions. The majority of university and college students will have internet connectivity, and most universities will have open labs where students can use computers to surf the web. Additionally, some students get an internet connection at home via a subscription to an internet service provider.

A learning management system has the potential to enhance instruction, and user adoption of this kind of technology is critical for its effective use in higher education. Colleges and universities are increasingly incorporating emerging technologies into their curricula. Considering their undeniable importance, professors are tasked with incorporating them as a means of supplementing the traditional teaching environment, enhancing students' proficiencies, and improving academic outcomes. A learning management system (LMS) is an internet program that may possibly modify in-person meetings by providing students with an online learning environment (Wichadee, 2015). The existing LMSs typically offer identical capabilities, making it difficult for users to determine which is most fit for them. In the educational setting, electronic learning is often referred to as Learning Management Systems (LMSs), which are network, application tools that enable instructors to organize course resources dissemination, tasks, correspondence, and other facets of teaching.

Today, LMSs have become a fundamental part of most institutions' educational systems, and interest in optimization methods that combine laboratory and online activities is growing. An LMS is not designed to replace the traditional classroom experience; rather, it is intended to enhance it with course information that is accessible via internet connectivity. While the possible advantages of supplementing the traditional lecture with an LMS have been identified and explored. (Jamal & Shanaah, 2011). Additionally, an LMS provides a framework for synchronous procedures such as video and online conferences. Moreover, to presentations and text files, students can observe their teachers via video, online conversations, and live chat. The connection involving students and professors is facilitated through videoconference messages via synchronous frameworks. Both asynchronous and synchronous techniques make use of a learning management system (LMS) to stretch students with beneficial impacts that aid in their learning. To foster beneficial connections, an LMS provides a structure for asynchronous distribution techniques like emails, group meetings, video discussion slideshows, and periodicals. Asynchronous delivery solutions enable students to interact with something without being distracted by distance or time (Bradley, V. M., 2021).

Since the outbreak of the epidemic, teachers have played a critical role in implementing classroom creativity. This is why it is imperative to fathom the factors that encourage teachers to provide their students with a technology-supported learning environment. According to (Fearnley, 2020), an instructor can use an LMS to produce online course material and then manage the class to improve students' reasoning higher-order thinking skills and strengthen cooperation. LMSs include a variety of features, including virtual chatrooms, live comments, streaming video, lecture materials, instructional packages, grading, and course evaluations, which may all be tailored to meet unique instructional needs. Supported by (Anshari et al. 2017), non-traditional modes of learning supplemented by online instructional approaches benefit both teachers and students. Among the edges of an LMS include structured course content, more class participation, increased student independence, easy requirement completion, and real-time comment.

Over the years, the practice of LMSs to help with educational endeavors has grown in popularity among schools and universities. They are used by higher education institutions to supplement face-to-face instruction and to facilitate combined lecture and distant education (Klobas & McGill, 2010). Despite their meaningful share of instructional delivery, capital investments and technological requirements are important concerns when opting for an LMS. The LMS is used by institutions to enhance traditional face-to-face instruction by allowing faculty members to create

and distribute digital learning resources via the Internet. In this situation, LMSs are being used as e-learning archives. As evidence, some institutions, particularly those that offer delivery of distance learning in education, have combined LMS with traditional face-to-face delivery in order to reach more learners through diverse geographical borders (Mtebe, 2015). Given that LMSs are a subset of information systems focused on education, it is unsurprising that such metrics are used. In this aspect, the triumph of an institution's LMS implementation can be quantified in a variety of ways. Several studies have determined the effectiveness of LMSs by gauging students' engagement with the system's learning capabilities. This transition from teaching to learning necessitates a break with the traditional classroom teaching model, in which instructors speak and students respond. Permitted to take an active role in learning in the new approach, students have increased enthusiasm for engaging themselves in e-learning. Thus, the university's job is no longer to impart knowledge but to foster an environment conducive to self-discovery and learning.

In view of the fact that e-learning has altered traditional modes of teaching and learning in a variety of sectors, extensive study has been piloted on the topic of e-learning. Many educational organizations have pioneered the standard of e-learning as used in unification with traditional distance education or as an enhancement to classroom instruction. Numerous learning management systems (LMSs) have been created and deployed to facilitate the e-learning process. Numerous researches have been conducted in the field of LMSs to determine whether the adoption of LMS as a device and technology for managing and sharing knowledge in educational institutions has an effect on the teaching methods. A learning management system (LMS) requires the organization, distribution, and monitoring of learning in a digital classroom environment. LMSs are frequently seen as the foundation for any internet learning program. A good LMS should be entirely web-based, with no additional client programs required. Likewise, it is necessary that the LMS supports several sources from diverse companies and is built on open manufacturing best practices for online operations. This is an open-source learning management system study that provides an excellent introduction to the program as a sign solution. In open-source learning software suite, the program code stays accessible to anyone. The author changed this open-source learning management system to make the school LMS more user pleasant. In this LMS system, groups of students exchange courses, diversify activities, and foster teamwork. It instantly evaluates and generates in-line feedback within the browser by directly modifying files. Additionally, the system includes a comprehensive grading feature that enables users to create grades based on the subject and kind of examination. This software associates' competencies with individual learning plans throughout courses and programs. Instructors can impart and share in a private location, and courses can be easily accessible.

Grounded on the following factors and pieces of evidence regarding the critical nature of LMS during this pandemic and the fact that face-to-face classes are not permitted, the researcher created and modified a learning management system that is now being implemented in the institution where he is currently employed as a part-time professor at Citi Global College in Cabuyao, Laguna. He customized an open-source learning management system to be utilized by students in this new form of normal education. This updated learning management system focuses on the six quality features in reference to functionality, which is defined as the sum of the software product's important capabilities. Usability is a metric that indicates how easy an LMS is for users to learn, utilize, and navigate. This is a serious part of LMS design since it affects how users interact with the system. If the LMS is simple to use and understand, students will engage with it more frequently. Once a software system is functional and supplied as specified, the reliability characteristic describes the system's capacity to continue providing service under specified conditions for quantified lengths of time. This attribute includes fault tolerance, which refers to a system's ability to endure component failure. Usability is unique to functionality and refers to the ease with which a function can be performed. Efficiency is a property that refers to the sum of

system resources required to perform a task. The extent of disk space, memory, and network bandwidth available all provide useful indicators of this attribute. The maintainability quality is linked with the ability to locate and repair a fault inside a software component. Maintainability is influenced by both the readability and complexity of the code, as well as the point of modularization. It is concerned with anything that aids in determining the cause of a failure and then rectifying the fault. Additionally, the capacity to verify (or test) a system, referred to as testability, is one of the maintainability sub qualities. The term portability refers to the software's ability to adapt to changes in its environment or needs. Adaptability is a sub-feature of this attribute. The amount to which this trait is present in a system can be influenced by object-oriented design and implementation methods. (ISO 9126).

Citi Global College uses this open-source learning management system to craft courses, learning paths, tests, links, assignments, progress reports, attendance monitoring, and internal messaging. The purpose of this study was to evaluate the quality efficiency of the Learning Management System's characteristics, which resulted in the system's enhancement and recommendation for use by other college departments within the institution. According to Oliveira (2016), the potential offered by IT may bring e-learning better paralleled to the classroom mode in terms of personal interaction and maintain the distance between teachers and students, to improve the process of mediated communication, systematic guidance, and constant monitoring, all of which are aimed at the progress of skills and attitudes that enable students to have learning process independence in a continuous self-education.

In this context, information technology accord to the growth of educational systems by increasing the adaptability and availability of education, cultural, and personal and professional advancement (Oliveira, et al., 2016). Although LMSs have massive benefits, others claim that their efficacy in education is debatable. Due to the technological requirements, LMS requires a high level of dedication from instructors and technical expertise. Certain barriers to LMS implementation

have been identified, including instructor commitment, technical support, technological resources, network capabilities, instructional strategies, teaching proficiency, internet connection speed, equipment use, and students' adaptability to the online class (Al-Hunaiyyan, 2020) Concerning these LMS barriers, the researcher conducted the study to ascertain the effectiveness of the learning management system he uses in his class; he believes that the LMS enriches the teaching and learning processes, despite the fact that his students are primarily working students enrolled in a weekend education program.

OBJECTIVES OF THE STUDY

The primary goal of this study was to examine the efficacy of the modified learning management system. The following questions will be answered as a result of this:

1. To understand the respondent's profile as to age, gender, year level, course, available internet connection, and gadget use.
2. To ascertain the level of quality of the Learning Management System's characteristics as perceived by respondents in terms of functionality, usability, reliability, efficiency, maintainability, and portability
3. To determine whether there is a significant difference in the respondents' assessments of the level of quality of LMS when they are grouped in terms of their profile.
4. To list the problems and difficulties encountered when using the LMS.

METHODOLOGY

A descriptive research design was adopted in this study. Descriptive research is one in which the distribution of one or more variables is described without consideration for any logical or other assumption. Aggarwal and Priya, (2019). The researcher employed convenience sampling to pick respondents, drawing 40% of the total population from the three classes he is now

teaching. Respondents were chosen depending on their availability, and the researcher's preference was taken into account while utilizing the convenience sampling approach to identify participants (Frey, 2018). To begin, a research proposal was presented to the administration of Citi Global College, and an agreement was obtained from participants. This research adhered to the standards established by CHED Memorandum Order No. 52 s. 2016 Pathway to Equity, Relevance, and Advancement in Research, Innovation, and Extension in Philippine Higher Education by enhancing the incubation, knowledge, and utilization processes, thereby enhancing the learning experiences of students and enriching the symbiosis that can reflect the dynamics of their national character. After obtaining approval from the school administration and consent from participants, data dissemination and retrieval for analysis were accomplished via Google forms. Google Meet and Zoom Meeting were used to facilitate related meetings and consultations.

The researcher took into account the respondents' status, as all of them are working students enrolled in Citi Global College Weekend Education Program. He allowed and offered sufficient time for participants to complete the survey questionnaire to avoid interfering with their work and study time. The health and safety protocols as stipulated by the Department of Health (DOH) and the Inter-Agency Task Force were properly followed (IATF). Consultation with professionals, such as information technology professors, was also measured to give a prior understanding of the Learning Management System.

The security and confidentiality of all data collected were maintained with care; all participants were asked to use their code name in accordance with the 2012 Data Privacy Act. The updated learning management system benefited students in the researcher's three courses. The convenience sampling technique resulted in the participation of 38 students in a survey questionnaire designed to ascertain the effectiveness of the learning management system they are now using.

Table1
Population and Sample Size of the Respondents

Year Level	Frequency (f)	%
1st	12	31.58
2nd	8	21.05
3rd	10	26.32
4th	8	21.05
Total	**38**	**100**

According to Table 1, there were a total of 38 respondents, of whom 31.58% (12) were in their first year, 21.05% (8), 10 (26.32%) were in their third year, and 8 (21.05%) were in their fourth year. The table indicates that the majority of respondents are in their first year, with the highest percentage of all respondents being in their first year.

RESULTS AND DISCUSSION

1. Respondent's profile in terms of age, sex, course, mode of internet connection, and equipment used at home

1.1. In terms of Age

Table 2
Demographic Profile for Age

Age	Frequency (f)	%
18 - 20	11	28.95
21 - 24	10	26.32
24 - 26	12	31.58
27 - 30	5	13.16
Total	**38**	**100**

The demographic features of respondents by age are presented in Table 2. The most prevalent age group was 24 – 26 years old, accounting for 12 or 31.58% of responses, followed by 18 – 20 years old at 11 or 28.95 percent, 21 – 24 years old at 10 or 26.32%, and 27 – 30 years old at five or 13.16%. The participants in this study were all working students enrolled in the institution's weekend program. As shown in the table, the bulk of participants was between the ages of 24-26. The university provides these students with the chance to grow and flourish while enrolled in their degree program. According to a study (Di Paolo and Matnao, 2016), the capacity to

AGUSTIN, L.F., *Modified Learning Management System: Making A Difference in E- Learning this New Normal,*
pp. 21 -29

work and study simultaneously may result in future success.

1.2. In terms of Sex

Table 3
According to Sex

Sex	Frequency (f)	%
Male	15	39.47
Female	23	60.53
Total	**38**	**100**

According to Table 3, the entire population consists of 15 males (39.47 %) and 23 females (60.53 %). Female students made up the large number of those who responded to the survey's questions.

1.3. In terms of Course

Table 4
According to Course

Course	Frequency (f)	%
BS in Accounting Technology	12	31.58
BS in Computer Science	16	42.1
BS in Technical Teaching Education	10	26.32
Total	**38**	**100**

As shown in Table 4, the record of students (16 or 42.10 percent) enrolled in BS in Computer Science, followed by BS in Accounting Technology (12 or 31.58 %), and BS in Technical Teaching Education (10 or 26.32 %).

1.4. In terms of Available Internet Connection

Table 5 illustrates the sort of internet connection the respondents are utilizing. As demonstrated, most of the respondents obtained or utilized mobile data with 29 or 76.32% while postpaid has just nine or 23.68%.

Table 5
Available Internet Connection

Internet Connection	Frequency (f)	%
Mobile Data	29	76.32
Post Paid	9	23.68
Total	**80**	**100**

It clearly indicated that mobile data was the biggest source of internet connection the respondents are having at home.

1.5. In terms of Gadget

Table 6
Available Gadget

Gadget	Frequency (f)	Percentage (5)
Laptop	10	26.3
Mobile Phone	24	63.2
Desktop/PC	4	10.50
Total	**38**	**100**

According to Table 6, the majority of students utilized a mobile phone (24 or 63.2 %); a laptop (10 or 26.3 %); and a desktop or personal computer (4 or 10.50 %), which is the least of all the equipment used. Additionally, it demonstrates that students are more inclined to manipulate their mobile phones.

2. Level of quality of the Learning Management System's characteristics as perceived by respondents

According to the survey results, the effectiveness of the learning management system's quality attributes is Very Satisfied, with a total weighted mean of 3.96. As a result, the quality Functionality has a weighted mean score of 4.34, Usability has a WM score of 3.94, Reliability has a WM score of 3.86, Efficiency has a weighted mean score of 3.88, Maintainability has a weighted mean score of 3.83, and Portability has a WM score of 3.92. Given that Functionality has the highest weighted mean score of all the quality criteria, it can be stated that the learning management system is functional and extremely valuable in the learning process of college students.

P – ISSN 2651 - 7701 | E – ISSN 2651 – 771X | www.ioer-imrj.com
AGUSTIN, L.F., *Modified Learning Management System: Making A Difference in E- Learning this New Normal, pp. 21 -29*

26

Table 7
Level of Effectiveness of Quality Characteristics of the Learning Management System

Level of Effectiveness of Quality Characteristics of LMS	Weighted Mean (WM)	Interpretation
Functionality	4.34	Very Satisfied
Usability	3.94	Very Satisfied
Reliability	3.86	Very Satisfied
Efficiency	3.88	Very Satisfied
Maintainability	3.83	Very Satisfied
Portability	3.92	Very Satisfied
Total	**3.96**	**Very Satisfied**

This may also imply that, while responders are at work, they can open and explore the system during their break time to complete courses and outputs. The LMS's capability is available in both synchronous and asynchronous modes. It is intended to facilitate the pupils' learning process. Its adaptability opens up a world of opportunities for all pupils, as long as they have a device and an internet connection. Additionally, an LMS provides a framework for synchronous delivery techniques such as video and online conferences. Additionally, to presentations and text files, learners can observe their teachers via video, online conversations, and live chat. Interaction between students and professors is facilitated via videoconference communication via synchronous frameworks. Both asynchronous and synchronous techniques make use of a learning management system (LMS) to give learners beneficial impacts that aid in their learning. To foster beneficial connections, an LMS provides a structure for asynchronous distribution techniques, like as emails, focus groups discussion, audio conversation presentations, and newspapers. Asynchronous delivery solutions allow students to communicate with one another without being distracted by distance or time (Bradley, V. M., 2021).

3. Significant difference in the respondents' assessments on the level of effectiveness quality of LMS when they are grouped according to their profile

Table 8
Summary of the Respondent's Assessment on the Level of Effectiveness on the Quality of LMS when grouped according to their profile

Variable	P Value	Computed Value	Critical Value	Statistical Interference
Sex	0.921	0.009	4.113	Not Significant
Age	0.363	1.098	2.882	Not Significant
Year Level	0.385	1.044	2.882	Not Significant
Course	0.684	0.383	3.267	Not Significant
Available Internet Connection	0.463	0.548	4.113	Not Significant
Available Gadget	0.421	0.886	3.267	Not Significant

Table 8 summarized the respondents' assessment of the level of effectiveness of the learning management system's quality characteristics. When the t-test and the f-test statistical tools were used, the results showed a statistical interference of Not Significant or no significant difference, which was determined by the respondents. In the data, it is revealed that the variable gender has a p-value of 0.921 and a computed value of 0.009 at the critical value of 4.113; age has a p-value of 0.363 and a computed value of 1.098 at the critical value of 2.882; however, the variable year level has a p-value of 0.385 and a computed value of 1.044 at the critical value of 2.882; and the variable course has a p-value of 0.6 At one instance, the available internet connection resulted in a p-value of 0.463 and a computed value of 0.548 at a critical value of 4.113, whereas the available gadget resulted in a p-value of 0.421 and a computed value of 0.886 at a critical value of 3.267 at the same time.

The findings of the survey showed that there was no statistically significant difference between the demographic profiles of the respondents and the level of efficacy in the use of LMS in the learning process of students at Citi Global College. It follows that learning

P – ISSN 2651 - 7701 | E – ISSN 2651 – 771X | www.ioer-imrj.com
AGUSTIN, L.F., *Modified Learning Management System: Making A Difference in E- Learning this New Normal, pp. 21 -29*

27

management systems (LMS) are an excellent tool in closing the gap in the education system during this period of the pandemic. When it comes to implementing any type of innovation in the classroom, teachers are essential. Consequently, it is critical to identify the elements that encourage teachers to provide their students with a technology-supported learning environment. According to Fearnley (2020), a teacher or a professor can use a learning management system (LMS) to generate online course content and then oversee that subject to improve critical thinking skills and foster collaboration among college students. LMSs provide a wide range of capabilities, including online group chats, discussion threads, video conferencing, instructional materials, learning packages, grading systems, and course assessments, all of which can be tailored to meet unique instructional requirements. Supported by Anshari et al. (2017), non-traditional modes of learning that are held by online approaches to instruction have a good impact on both instructors and students in the classroom. Some of the advantages offered by a learning management system (LMS) include better-organized course content, increased student involvement, increased autonomy among students, easier submission of requirements, and rapid feedback.

4. Problems and difficulties encountered when using the LMS

The following are the difficulties faced during the study's conduct:

1. The respondents' available time for responding to the survey form.
2. At work, a shaky internet connection.
3. The performance of the available gadgets for usage at home and at the workplace was really low.
4. Understanding the graphical user interface (GUI)

CONCLUSIONS

In light of the study's findings, the following conclusions were drawn:

1. All responders are employed students.
2. The most of respondents use mobile data to access the internet.
3. The majority of students have access to a mobile phone.
4. When respondents are classified according to their demographic profile, there is no significant variation in the level of efficacy of the quality attributes of LMS.

RECOMMENDATIONS

In light of the study's findings and recommendations, the following steps are strongly recommended:

1. Allow sufficient time for students to process their output at the LMS, as they are working students.
2. The instructor may present a video tutorial to assist students in becoming acquainted with the LMS platform.
3. It may be recommended to use a high-speed internet connection of at least 4 Mbps and Android Marshmallow or iOS 8 for Apple devices.
4. Other surrounding schools may request to utilize the Learning Management System.

REFERENCES

Aggarwal, R., Ranganathan, P., (2019). Study designs: Part 2 – Descriptive studies. perspectives in clinical research. 10. 34. 10.4103/picr.PICR_154_18.

Al-Hunaiyyan, Ahmed, Al-Sharhan, Salah, AlHajri, Rana. (2020). Prospects and challenges of learning management systems in higher education. *International Journal of Advanced Computer Science and Applications, Vol.* 11, No. 12, 2020. https://thesai.org

Anshari, A., Almunawar, M. N., Shahrill, M., Wicaksono, D. K., & Huda, M. (2017). Smartphones usage in the classrooms: Learning aid or interference? *Education and Information Technologies,* 22(6), 3063–3079. https://doi.org/10.1007/s10639-017-

Bradley, V. M. (2021). Learning management system (LMS) Use with online instruction. *International*

AGUSTIN, L.F., *Modified Learning Management System: Making A Difference in E- Learning this New Normal,*
pp. 21 -29

Journal of Technology in Education (IJTE), 4(1), 68-92. https://doi.org/10.46328/ijte.36

Buenaflor, Leonard. (2017). ISO 9126 Software quality characteristics. https://medium.com/@leanardbuenaflor/iso-9126-software-quality-characteristics-a25a26e7d046

CHED Memorandum No. 52 s. 2016. Pathways to equity, Relevance and advancement in research innovation and extension in Philippine Higher Education. https://ched.gov.ph/

Di Paolo, A., Matano, A., (2016). The impact of working while studying on the academic and labour market performance of graduates: The joint role of work intensity and job field match. https://www.aiel.it/cms/cms-

Fearnley, Marissa R. (2020). Learning management system adoption in higher education using the extended technology acceptance model. *IAFOR Journal of Education: Technology in Education Volume* 8 – Issue 2 – 2020. https://files.eric.ed.gov/

Frey, B., (2018), The SAGE encyclopedia of educational research, measurement, and evaluation. https://www.researchgate.net/publication/323348765_The_SAGE_Encyclopedia_of_Educational_Research_Measurement_and_Evaluation

Jamal, H.,Ameera S., . (2011). The role of learning management systems in educational environments: *An Exploratory Case Study.* http://www.diva-portal.org

Kaul, M., , Kless, A., Rieke, A., Bonne, T., (2017). Game changer for online driven by advances in web technology. *Journal of International Conference e-Learning 2017.* ISBN: 978-989-8533-63-0 © 2017. https://files.eric.ed.gov/

Klobas, J. E. & McGill, T. J. (2010). The role of involvement in learning management system success. *Journal of Computing in Higher Education,* 22(2), 114–134. http://doi.org/10.1007/s12528-010-9032-5

Mtebe, Joel S. (2015). Learning management system success: Increasing learning management system usage in higher education in sub-Saharan Africa. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 2015, Vol.* 11, Issue 2, pp. 51-64

Ng Syuan Xin et al. (2021). A systematic review for online learning management system. *An Article. Journal of Physics.* https://iopscience.iop.org/

Oliveira, et.al (2016). Learning management systems (lms) and e-learning management: an integrative review and research agenda. *JISTEM - Journal of Information Systems Technology Management. JISTEM* (2) • Aug 2016 • https://doi.org/10.4301/S1807-17752016000200001

Wang, Y.-S., Wang, H.-Y. & Shee, D.Y., (2007). Measuring e-learning systems success in an organizational context: Scale development and validation. *Computers in Human Behavior*, 23(4), pp.1792–1808.

Wichadee, S. (2105). Factors related to faculty members' attitude and adoption of a learning management system. *The Turkish Online Journal of Educational Technology*, 14(4), 53–61.

AUTHOR'S PROFILE

Dr. Louie F. Agustin graduated with the degree of Doctor of Philosophy in Information Technology from Selinus University of Science and Literature, Via Pompeo Scipione Dolfi, 4, 94277 Bologna BO, Italy. He also finished his Masters's in Information Technology from the Technological Institute of the Philippines, Manila. Currently, he is a Professor at Citi Global College, Trimex Colleges, World City Colleges, Saint Michael College of Laguna, and Nova Schola Tanauan.

COPYRIGHTS

P – ISSN 2651 - 7701 | E – ISSN 2651 – 771X | www.ioer-imrj.com
AGUSTIN, L.F., *Modified Learning Management System: Making A Difference in E- Learning this New Normal, pp. 21 -29*

29