Assessment on the Use of Learning Management System in Teaching Social Science: Input to an Enhanced Flexible Teaching Modality

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Abstract

This study examined the assessment of the actual application and usability of the Learning Management system in teaching social science in an enhanced flexible teaching modality. The survey research design was adopted for the study and data were obtained from the students of the Lyceum of the Philippines University – Laguna enrolled in the 1st semester of the academic year 2022-2023. The study measured the relationship between the actual application and usability of the Learning Management System and the related variables (attitude towards using, behavioral intention, and actual use). This study aims to learn how the students assess the LMS's applicability, usefulness, attitude toward use, and behavioral intention. Weighted Mean and Pearson R were used to analyze the data, and the results showed that students, particularly in the social sciences subject, regard LMS to be user-friendly and helpful. In addition, LMS enables them to engage in blended learning, they also demonstrated a favorable attitude and behavior. The perceived usefulness, perceived ease of use, and associated variables are significantly correlated, indicating that students believed LMS to be a simple tool that can be of benefit. The present study has added valuable information to the existing literature on students' attitudes and perceptions regarding the use of LMS in LPU-Laguna. Finally, future researchers may conduct a similar study using descriptive and quantitative research. They could also conduct a new survey with a new set of questionnaires involving a large number of participants.

Keywords: Learning Management System; Usability; Application; Ease of Use ; Usefulness

1. Main text

Education is one of the most important processes of acquiring information about the encircling world and gaining knowledge. Education may be available in other ways from the standard ones to the foremost modern way of learning. One of the foremost inventive ways of acquiring knowledge is thru the employment of a Learning Management System LMS. A Learning Management System (LMS) is a web educational platform that administers an enormous and necessary set of features to support educational activities like classroom learning, distance learning, and continuous education. (What Is a Learning Management System (LMS) and What Is It Used For?, n.d.) It also aids the management and delivery of a school's e-learning programs like creating and delivering educational content, assessing the student's needs and analyzing their scores, tracking the students' projects, learning collaborative projects, and making the education interactive,

and fascinating. In developing this type of learning strategy, the teachers will have a lesser workload because it helps them to deliver the educational materials to numerous audiences – think everything from online courses, to real-time instruction sessions. (What Is a Learning Management System (LMS) and What Is It Used For?, n.d.) Within the adaptation of technological learning, LMS can run best when it's scalable and adaptable to the assorted needs of the learners, making it comfortable and simple to access and might lead to a good learning strategy. It absolutely was wont to harbor a range of learning strategies across different formats, including (but not limited to) formal, experiential, and social learning. Higher educational institutions, schools, universities, and colleges suggested that LMS is best suited to learning. (Relevance of Learning Management Systems in Education, n.d.) Most school personnel that use LMS are the teachers, students, and administrators. Implementing the Learning Management System (LMS) can immerse the enhancement of teacher-student learning experiences and may improve teaching activities, whether instructor-based or self-paced. (Bradley, 2020) Upon knowing the LMS, students that appear more experienced will raise their engagement and performance in school. (Almoslamani, 2018) Teachers also like the employment of LMS because it saves their time in creating modules, printing, and preparing lectures because every learning material can now be uploaded to the platform. Another feature of the platform is building communication and collaboration between the learners and also the instructors. Accessibility and suppleness are a bonus of the platform it is often accessed from anywhere, at any time, and at their own pace using their smartphones. Additionally, using the Learning Management System is cost-efficient because it saves money from printing the modules, activities, and syllabus. Teachers and students also can keep track of the announcements, instructions, and queries timely. Fortunately, this platform was created to actually both scholars and teachers feel relaxed in making teaching and learning enjoyable.

Just like in an exceedingly face-to-face setup, a classroom is additionally important, while during a flexible learning scheme, Learning Management plays an integral part in online learning because it is the virtual classroom where teachers and students can interact in conducting lectures and activities. And now that the world faces a virus and therefore that COVID – 19 spread rapidly across the globe and make everyone occupy homes and stop what they're doing, education didn't stop to the slightest degree, lots of proposals and projects were tried so for us to not stop being well-read because education also helps us to be more knowledgeable in preparing us for the long run endeavors.(Singh et al., 2021) One solution that our educational sectors proposed is to possess LMS joined the platforms in learning because it provides continuity in education and minimizes harm to students and teachers. (Importance of LMS Software During Covid-19 Pandemic, n.d.) Despite the gap, students can still learn and study in their respective homes. Likewise, teachers can keep it up by conducting their lectures and educating the younger generation. It provides the pliability and accessibility they have to make sure of normalcy in their day-to-day routine. LMS may even be more practical and efficient compared to traditional methods. It's the simplest offer for integrating multimedia content like videos, links, document sharing, live conferences, and even virtual tour software. Likewise, LMS is a centralized repository of learning materials relevant to the course.

When most colleges shifted from traditional to an innovative way of teaching, the Lyceum of the Philippines University – Laguna LMS wasn't new, before the COVID – 19 pandemic arises, LPU- Laguna uses the platform to unite the mediums in delivering content and activities of the scholars. But the institution doesn't merely put most of the time and energy into the LMS because they still have their classes inside the area and are focused on integrating the simplest experience during a classroom setup, not until the pandemic happened.(Hsu, 2012) This study will help us assess if there are effects of using the Learning Management System in the Social Science discipline and the way it can help the teachers to make a more engaging flexible learning activity. It will mainly focus among college students enrolled within the school year 2022-2023 who have already experienced to use the LMS within the flexible learning scheme. This study is mainly focus on the effectiveness, usability and application of the Learning Management System in teaching Social Sciences.

1.1. Structure

This study employed a descriptive-correlational design to determine the relationship between the application of the Learning Management System to teaching Social Science courses. Descriptive research is a study approach in which data is qualitatively acquired and then quantitatively examine. It is a scientific methodology in which the sample population is observed in its natural surroundings ("Experimental Research," 2019) Correlational research, on the other hand, is a method that seeks to discover the presence of a link or association between and among variables as well as the kind and degree of that relationship. In addition, a quantitative research methodology was applied to examine and comprehend the study's variables. The main instrument for acquiring data was a standardized questionnaire, which was used by the researcher. Three hundred ninety-five (395) students from the Lyceum of the Philippine University in Calamba City, Laguna, served as respondents of the study enrolled during the academic year 2022–2023. The researcher employed simple random sampling.

Simple random sampling was utilized in the study. Lottery method of sampling was used where in the researcher randomly picks a number with each number was a corresponding item in order to create a sample. The sample population was drawn from the total population, 1061 of only three hundred ninety-five (395) were utilized in the study. A series of questions from different research was used in this study, with just a few minor changes and alterations in the wording and validation to support the viewpoint of LMS usage. This helps to better assure the validity of the material. The survey items were done through Google Forms. It was sent to respondents through a survey link.

Part I: this includes age, gender, college department, experience in LMS, and length of years of using the LMS.

Part II: this is all about the Perceived Ease of Use and Perceived Usefulness. All item indicators were for the application of the Learning Management System. It was adapted from Alharabi & Drew,2014; Agawin,2020 and Capuchino et.al, 2020. It was modified by the researcher before it was utilized in the study.

Part III: the questionnaire includes all the related factors in teaching Social Sciences and all the item indicators for the delivery of the Learning Management System. The questions were adapted from Alharabi & Drew,2014; Agawin,2020 and Capuchino et.al, 2020. However, modifications were made before the administration of the said instrument.

The researcher used pilot testing to examine the reactions of the target population and made the necessary improvement to the questionnaires. Therefore, the researcher implemented a pilot study with a total of thirty (30) respondents. A reliability test was also conducted through Cronbach alpha which indicated that the questionnaire is acceptable and reliable to use. The data collected from the respondents was classified and tabulated for further analysis using Frequency and Percentage, Weighted Mean, and Pearson r. The researcher used a descriptive correlational study. The null hypothesis will be tested at a 0.05 level of significance.

1.2. Tables

Table 1. Summary Table of Assessment of The Actual Application of The Learning Management System in Teaching Social Science in Terms of Perceived Ease of Use

Perceived Ease of Use Related Variables	Mean	SD	VI
User Friendly	4.33	.622	Satisfied
Accessibility	4.46	.537	Satisfied
Design for Learning	4.41	.602	Satisfied
Overall	**4.40**	**.587**	**Satisfied**

Legend: 1.0-.49 (Very Dissatisfied); 1.50-2.49 (Dissatisfied); 2.50-3.49 (Neutral); 3.50-4.49 (Satisfied); 4.50-5.0 (Very Satisfied)

Accessibility was the highest among the three sub-variables. Since LMS's accessibility to all users is one of its remarkable features. According to Snoussi, (2019) respondents described LMS as an accessible tool for acquiring educational materials. They affirmed that the LMS's features are what make it accessible and available among students.

Table 2. Summary Table of Assessment of The Actual Delivery of The Learning Management System in Teaching Social Science in Terms of Perceived Usefulness

Perceived Usefulness Related Variables	Mean	SD	VI
Cost Efficient	4.44	.653	Very Useful
Up-to-date Information	4.52	.572	Extremely Useful
Overall	**4.48**	**.612**	**Very Useful**

Legend: 1.0-.49 (Of No Use); 1.50-2.49 (Not Very Useful); 2.50-3.49 (Useful); 3.50-4.49 (Very Useful); 4.50-5.0 (Extremely Useful)

Up-to-date information was found to be between the two sub-variables that can be seen in the table above, according to the researchers. Since having updated announcements is one of the most important LMS features
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According to Brush K., (2019) the aid of a learning management system, users can keep an eye on each step of the learning process. They can determine if their learners are making the most of their eLearning experience and whether the quality of their content is high enough by gathering feedback and monitoring data analytics. With the help of LMS reports, instructors may monitor and assess training results.

Attitudes Towards Using LMS

Table 3. Perceived Attitudes towards Using LMS

Indicators	Mean	SD	Verbal Interpretation
1. I like using LMS in learning social studies makes it easier for me to do applications that are more realistic.	4.32	.720	Likely
2. I think using LMS is too new and strange to make it worthwhile for learning.	3.94	1.075	Likely
3. Using a Learning Management System is a positive idea	4.44	.656	Likely
4. I think using LMS fits well with my learning, and the courses that I am in.	4.33	.796	Likely
Overall	**4.26**	**.812**	**Likely**

Legend: 1.0-.49 (Extremely Unlikely); 1.50-2.49 (Unlikely); 2.50-3.49 (Neutral); 3.50-4.49 (Likely); 4.50-5.0 (Extremely Likely)

By using an LMS, the researcher found out that LMS keeps the content centralized and give each student access to the same information, instructions, and quizzes. There is no justification in citing outdated readings or lessons from the previous year. Everyone has the most recent information. A learning management system makes it simple to blend text, graphics, and video. that can't do on paper. Through the use of more engaging materials, the students will focus their attention and learn more. Users will learn more since the learning content is more interesting. Additionally, adding game-like elements to an LMS keeps users engaged and challenged based on Brush K., (2019)

Table 4. Behavioral Intention to Use LMS

Indicators	Mean	SD	Verbal Interpretation
1. Makes it possible for us to use blended learning	4.49	.627	Likely
2. Increases the amount I use the platform	4.35	.705	Likely
3. My desire to investigate and learn about the features is increased	4.25	.788	Likely
4. Helps me save time and develop a productivity habit.	4.33	.784	Likely
5. Makes me feel motivated to study	4.11	.913	Likely
6. Encourage me to study consistently	4.12	.914	Likely
7. Enables me to repeatedly practice and review	4.31	.837	Likely
Overall	**4.28**	**.667**	**Likely**

Legend: 1.0-.49 (Extremely Unlikely); 1.50-2.49 (Unlikely); 2.50-3.49 (Neutral); 3.50-4.49 (Likely); 4.50-5.0 (Extremely Likely)

Based on the results it is clear that the learning management system enables teachers to determined blended learning between the student and the instructor, however, it is important to address the issue of student motivation

In the findings of Jackson D., (2022) his study revealed that learning management system allows the students to remotely join instructor-led classes by logging into their LMS. The ability to engage and ask questions is ensured by incorporated chat and audio/video streaming. Additionally, whiteboards, polling in class, and media streaming enable teachers to interact with distant students. Virtual classes using LMS can be recorded for future training or playback by absent students.

Table 5. Summary Table of Assessment of The Actual Delivery of The Learning Management System in Teaching Social Science in Terms of Actual Use

Actual Use Related Variables	Mean	SD	VI
Course Content	4.45	.618	Very Useful
Teaching – Learning Activity	4.33	.661	Very Useful
Course Assessment	4.37	.620	Very Useful
Overall	**4.48**	**.633**	**Very Useful**

Legend: 1.0-.49 (Of No Use); 1.50-2.49 (Not Very Useful); 2.50-3.49 (Useful); 3.50-4.49 (Very Useful); 4.50-5.0 (Extremely Useful)

Course content was the highest among the three sub-variables that can be seen in the above table. Since professors give clear and accurate content for every Social Science course. Therefore, it is easy to access the course content.

Likewise, it enables teachers also to provide instructional content to a variety of audiences, including those participating in live instruction sessions and online courses. An LMS is the heart of a comprehensive learning technology system, and it functions best when it is scalable and flexible enough to meet the various demands of your students. It's also a crucial element of a successful learning technique. It was undoubtedly inclined to support a variety of educational approaches in a range of settings, including (but not limited to) formal, experiential, and social learning. Brush K., (2019)

Correlations of Variables

Table 6. Correlations between the application and delivery of the Learning Management System in Social Science

Related Variables	Perceived Ease of Use			Perceived Usefulness	
	User-Friendly	Accessibility	Design for Learning	Cost-Efficient	Up-to-date Information
Attitudes Toward Using	.670**	.631**	.674**	.656**	.660**
Behavioral Intention	.633**	.588**	.686**	.686**	.666**
Actual Use					
Course Content	.622**	.610**	.728**	.701**	.706**
Teaching-Learning Activity	.553**	.632**	.670**	.622**	.673**
Course Assessment	.626**	.642**	.739**	.679**	.699**

**Correlation is significant at the 0.01 level (2-tailed).*Correlation is significant at the 0.05 level (2-tailed).Verbal Interpretation of r-values: +1.0 Perfect positive +/- association +0.8 to +1.0 Very strong +/- association +0.6 to +0.8 Strong +/- association +0.4 to +0.6 Moderate +/- association +0.2 to +0.4 Weak +/- association 0.0 to +0.2 Very weak +/- or no association

It can be seen in Table 14 that perceived ease of use (PEOU) related factors such as user friendly, accessibility and design for learning are significantly related to respondents' attitude towards using LMS. Similarly, the perceived usefulness in terms of cost-efficient and up to date information also registered significant relationship on attitudes towards using LMS. It can be inferred that the better the LMS was accessible, user-friendly and has an excellent design for learning, the more that the learners will intend their attitudes towards using it. The same with how they can save money and how updated they can grasp information from the LMS.

In the study of Alturki et al., (2016) it was found out usability refers to how easily users can use, navigate, and understand a learning management system (LMS). Since it influences how users engage with the system, this is an important component of the design of an LMS. If the LMS is easy to use and figure out, learners will use it more frequently. Level of accessibility must be one of an LMS's most significant benefits. In that case, LMS should be seven days a week, twenty-four hours a day, every online course and its supplementary materials are accessible whenever and wherever. Without a central location to get the required learning resources and tools, the training process could be rather complicated and confusing, not to mention difficult to arrange. Aside from that (Bradley, 2020) students can get educational information from teachers and instructional designers in real time, and they may also receive prompt feedback depending on their preferred grading scheme. Teachers may use the reporting and analytics capabilities to track and analyze students' progress in addition to communicating with them.

On the other hand, the perceived ease of use (PEOU) as regards to user friendly , accessibility and design for learning, were found out to be significantly related to behavioral intention. This only shows that students will utilize more often the platform when they perceived it as user friendly, accessible and how they can learn based on how it was designed. As cited in (Rawashdeh et al., 2021), improving the structure of the e-learning can create new opportunities for more engaging and interactive learning. Moreover, it also let the learners look at the ways on how they can develop, how they will benefit on the experience of utilizing it.

Likewise, perceived usefulness (PU) in the context of cost efficient and up to date information revealed a strong relationship with behavioral intention. Simply because the intended behavior of the respondent in the Learning Management System increases, the more, they see it as cost efficient and up-to-date information. Likewise, It was found out by (Dangara, 2016) that the online activities and course work can be done through online, greatly benefitted to lower the learning and development cost of a student. It has similarity with how LMS can deliver feedback to the students on time through automated alerts and how the instructors were notified on the completion of the user's task.

Furthermore, the perceived ease of use as to user friendly, accessibility and up-to-date information displayed a significant relationship with the course content. This signify that how student actually utilized the course content depends on how they view it as easy to use. As stated in 9 Advantages of Powerful Learning Platforms or LMS - CAE), the administration, automation, user communication, teacher and trainer collaboration, and of course content management are all effectively, completely, and entirely under the user control with learning platforms.

Regarding the perceived usefulness, cost efficient and up-to-date information resulted in a significant relationship with the course content. This can imply that an economized and updated LMS can be useful to the learners. The LMS also eliminates the need to pay actual cash to other websites

that offer training for rent, as well as any costs associated with printing modules and materials, purchasing books, and subscribing to online conferencing platforms like Zoom. The administration of instructional materials is aided by this instrument (LMS), which also reduces costs.(Rawashdeh et al., 2021)

On top of that, the perceived ease of use as to user friendly, accessibility and up-to-date information exposed a significant relationship with the teaching-learning activity. As inferred in the result, students found that the teaching-learning activity is easy if it is easy to follow, convenient and has a good feature for studying. Similarly in the study of Holmes et al., (2018) revealed that LMSs are widely used in higher education and other types of educational institutions, and one advantage is that it's easy to track students' growth and progress. The facilitator may quickly generate the students' scores, and the pupils can see the feedback and outcomes of their actions. Additionally, it offers the students the ability to employ engaging features like threaded discussions, movie viewing, and discussion forums

Other than that, the perceived usefulness, cost efficient and up-to-date information transpired to be significantly related to teaching-learning activity. It can be understood that the money saved and how well informed the students more likely they will be engaged in the online activities. In the study of (Dangara, 2016), traditional learning approaches are typically difficult to apply in educational institutions due to resource limitations. However, by using a learning management system as a stand-alone asset for managing teaching and learning, educational institutions may dramatically reduce their costs.

Correspondingly, the perceived ease of use as to user friendly, accessibility and up-to-date information decoded as significantly related to the course assessment. The assessment of the courses in LMS were viewed as easy to use by the students therefore it was inferred that it convenient to use. As mentioned by Tria, (2020) in the Philippines, the E-learning system was used to lessen difficulties, difficulties, and complexity, notably in the delivery of curriculum information and the lack of instructional materials. Because of the threat posed by the Corona Virus, the majority of private schools have resumed their operations for this curriculum year using the E-learning framework as their learning management tool. This has allowed them to continue teaching their students. (Tria, 2020)(Tria, 2020)(Tria, 2020)

Lastly, cost efficient and up-to-date information in the perceived usefulness (PU) were significantly related to the course assessment. As to cut costs and progressive, it can be suggested that LMS is a useful tool in assessing the course or subject. Any educational course would be incomplete without student evaluation, and prior to the reinstatement of pen-and-paper exams by institutions, student evaluation was fairly expensive. This is parallel to the study of Mehta M. (2013) the organizations in charge of administering exams had to set up everything, including the locations of the examinations and the printing of large quantities of the questions. However, all of these preparations are no longer necessary thanks to online examination software. Schools no longer need to set up examination sites because students can take the test in the comfort of their own homes

1.3. Conclusions

Learning Management System features may improve the real-time communication between teachers and students so that the improvement of coursework will be of a higher standard. Learning Management System features may improve the way how instructors can give meaningful and understandable instructions to the learners on how to navigate properly the application. It was concluded that the perceived application and usability of the Learning Management System in terms of Perceived Ease of Use (PEOU), Perceived Usefulness has a strong positive relationship between the related variables Behavioral intention to use LMS, Attitudes towards using LMS and the Actual System Use. Therefore, the hypothesis stating that there is no significant relationship between the use of a Learning Management System and the actual assessed delivery in terms of attitude towards using, behavioral intention to use, and actual use was not sustained. Learning Management System may inculcate in the practice of being skillful while utilizing the application. Also, it may recommend the use of the LMS due to its features that can create modules, and incorporate calendars that automatically include the deadlines and include real-life activities that will make the students feel motivated to learn and can be use in their everyday lives. The study's variables may be used to develop a model, which the researcher can then theoretically confirm using the Technological Acceptance Model. Additionally, the research might be expanded to include a comparison of students using the Learning

Management System in a face-to-face setting vs a hybrid setup.

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