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72

A Study on Awareness and Attitude Toward the Implementation of LMS Among Faculty Members of Vels Institute of Science, Technology and Advanced Studies (vistas), Chennai

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Abstract: Learning Management Systems (LMS) support and aid the organization of course content. It is used by some faculties but not by all. This study aims to pinpoint the faculties' awareness and attitude toward Learning Management Systems (LMS) and how they apply them to their classes. A survey was given to VISTAS faculties after implementing LMS to gauge their use of the LMS. The researcher assessed the respondents' attitudes and awareness toward Learning Management Systems (LMS), perceptions of their usability, and actual use of LMS in the classroom. The study found that most respondents had favourable opinions of LMS. Their attitude and the LMS's perceived usability and convenience were significantly positively correlated. No statistically significant differences exist in respondents' opinions toward LMS depending on gender or topic area. However, perceived ease of use, attitudes toward LMS, and perceived utility of LMS were not associated with actual use.

Keywords: LMS, Awareness, Perceived ease of use, Perceived utility, Attitude, VISTAS

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1. Introduction

Learning Management System (LMS) is an application that facilitates the administration of digital training content. Many novel teaching-learning technologies, including LMS, have been introduced to education [1,2]. It is an essential and helpful tool in higher education. Its name expresses its defining traits.

a) ***Learning:*** A central repository for all learning materials that learners can access around the clock.
b) ***Management:*** A structured approach for managing eLearning, virtual, and in-person training procedures.
c) ***System:*** To streamline operations such as monitoring student behaviour, reporting it, analyzing statistics, generating reports, grading exams, creating and distributing certificates, and others.
d) ***The Present Status of LMS:*** Newer models have superseded conventional LMSs. A change in how LMSs assisted organizations in managing training was required due to the ever-growing, ever-expanding nature of their operations and the widespread distribution of their workforces around the globe. Changes were prompted by the millennial learner of the new age, which affected corporate training and the LMS. The modern LMS was created to satisfy contemporary learners' and the educational requirements of a skilled economy.

2. Review of Literature

The collected data unequivocally demonstrates how LMS benefits pupils. However, the lack of knowledge about the benefits of adopting an LMS resulted in a less than positive response from the academic year 2008–09 students [3]. Most students in the academic years 2009–10 and 2010–11 responded quite favourably to the LMS training provided to them. LMS has been utilized consistently, which is positive. The learning abilities of students have improved. The course activities were more convenient for the learners. The ICT services provided by Muscat College are effective. On the whole, LMS has been a great experience for the majority of students. Another sign of an LMS's influence on students is their retention rate. Over the past three academic years, 83% of students have been retained on average. It has been constant from 2009–2010. In 2008–09, the retention rate was 74%. The research study closes by claiming that Muscat College students have benefited dramatically from Learning Management Systems. The volume of responses demonstrating the LMS's general unreliability and how the faculty's productivity is hampered by the LMS's delayed response time should concern the administration. However, several concerns must have been resolved to give the faculty a better environment for quicker adaptation and use [4].

The issue of training is another one that needs more attention. Most faculty members said they would prefer some training on the LMS, frequently specifically with different tools or advanced development. The majority acknowledge that the school provides resources and additional assistance, but they also feel they are not involved in the design or features of the system. Most educators use the LMS to communicate with students, distribute documents like the course syllabus, and post grades [3]. Researchers were more startled by the faculty's divided responses to the questions of whether or not they were effectively using the LMS in their courses and whether or not they would like more training on course planning and tactics because, in response to an earlier question, faculty members had stated that 68% of them (combined) would like additional training on the LMS as previously discussed. This survey outlines faculty members' issues and concerns regarding their LMS usage. Many of the faculty were prepared to teach online and hybrid courses and their experiences teaching online courses were virtually evenly distributed among them. Unfortunately, only a few of them are creating online courses for their institution, with time as the justification. One instructor commented that they need more time to construct online courses properly. No more time is provided for us to set these up. It would be beneficial to conduct focus groups or even faculty interviews to expand on this preliminary research and gain more insight into the elements that impede and facilitate the usage of the LMS in course instruction [4,5].

3. Theoretical Framework

A theoretical framework for predicting "the early acceptance of new computer technology that may be used in a variety of settings and circumstances is Davis' Technology Acceptance Model (TAM). It served as the foundation for the research model employed in this study. This study focused on three variables Davis [6] identified impacting whether users will accept new computer technology. Perceived Usefulness (PU) was the top component, followed by Attitudes toward Usage (ATU) and Perceived Ease of Use (PEOU) of a new system. The user's perception that the technology will enhance their performance is characterized as perceived usefulness (PU). Another determining element to be investigated is the attitude toward technology (ATU)," which affects behavioural intention regarding the usage or non-use of technology [7,8]. The model suggests that attitudes about new technology are influenced by its perceived usefulness and usability, which is a precursor to behavioural intentsto utilize it. Relationships between these parameters have been discovered in numerous studies. For instance, "perceived usefulness and perceived ease of use both significantly influenced attitudes toward utilization. It was discovered that enhanced perceived utility through perceived ease of use indirectly impacts the intention to use." Intention to utilize was directly correlated with perceived usefulness [9].

4. Aim of the Study

LMS is used to support teaching and learning in both theory and practice. Given the widespread usage of LMS to assist learning and teaching in today's classrooms, the primary purpose of the present study was to evaluate the variables believed to influence faculties' views about and the actual use of LMS at a private institution. Since readiness to adopt new technology was the key concern to be highlighted in the current study, the model shown below was designed to describe the significant factors mentioned earlier.

4.1 Research Questions

1. How does LMS have an impact on the instructors?
2. How practical and easy is it for teachers to use LMS?
3. How are the assessing tools used by the teachers?
4. Are there any connections between the faculties' opinions of the LMS's usability, perceived utility, and attitudes toward it?
5. Do the faculty members have issues uploading and editing files in the LMS?
6. Are there any discrepancies in the attitudes and degrees of understanding among the faculty members about the LMS's implementation?

4.2 Research Hypotheses

- H1: Attitude toward LMS is "related to perceived usefulness.
- H2: Attitude toward LMS is connected to the perceived ease of use of LMS.
- H3: Perceived usability and perceived ease of use are connected.
- H4: Actual use of LMS is related to attitude toward it.
- H5: The actual use and perceived usefulness" are related.
- H6: Actual use is proportional to perceived ease of use.

5. Methodology

5.1 Respondents

Fifty-six academicians from Chennai, Tamil Nadu, India's VELS Institute of Science, Technology, and Advanced Studies (VISTAS) contributed as the study's respondents. The IQAC organized the faculty training when an LMS (Moodle) was implemented at the institute in 2020. This study was carried out to track the usage of LMS by teachers during the first semester of the 2022 year of education, or following a year of instruction, because it is the policy of our institute that faculty employ technology in their teaching. All participants completed consent forms and were told that all information would be confidential.

6. Instrumentation

This study's tool was a questionnaire with three main sections. The researcher created it following a thorough examination of the relevant literature. The first component included personal information such as age, gender, teaching field, designation, and years of experience. The second section, under "attitude toward LMS," contained ten items that measured "perceived ease of use" (5 items) and "perceived utility" (5 items). "Strongly agree (=5) to strongly disagree (=1) were the extremes of the replies to questionnaire items on a five-point Likert scale. The final section of the questionnaire, titled "Awareness of LMS Use," utilized a five-point Likert scale ranging from Very much (=5) to Not at all (=1).

6.1 Validity and Reliability of the Instrument

A group consisting of five ICT education specialists examined the study questionnaire's initial draft to guarantee its validity. Their feedback was taken into account, and the necessary improvements were implemented based on that. In order to verify the questionnaire's dependability, section 2 contained 10 items measured on a five-point Likert scale, which 20 professors processed. Several items were added, while others were eliminated. Internal consistency measures were calculated, and the questionnaire's dependability indicated high internal consistency. The study might, therefore, be resumed with the actual set of professors.

8. Data Analysis

Data were statistically recorded and examined. The frequency and proportion of participants' data were determined. Standard deviations and means were assessed to determine the educators' attitudes toward LMS," perceived usability, and perceived ease of use in response to the first and second parts of the questionnaire.

8.1 Findings - The Respondents' Information

Of all respondents, there are 35 females and 21 males (Fig. 72.1). Concerning their age, 11 faculties come under 25-30 years, 14 faculties come under 31-35 years, 11 faculties come under 36-40 years, 12 faculties come under 41-45 years, two faculties come under 46-50 years, and six faculties come under 51 and above. It was found that most respondents were Assistant Professors, very few Associate Professors, and a limited number of Professors participated. Out of 56 faculty members, almost half were from the Department of English, and the other half were from various departments of VSTAS. Moreover, 35 percentage faculties have moderate teaching experience (6-10 years), 20 percentage have more than a decade of teaching experience (11-15 years), 13 percentage of faculty members have between 16-20 years of teaching experience, 12 percentage of educators have more than

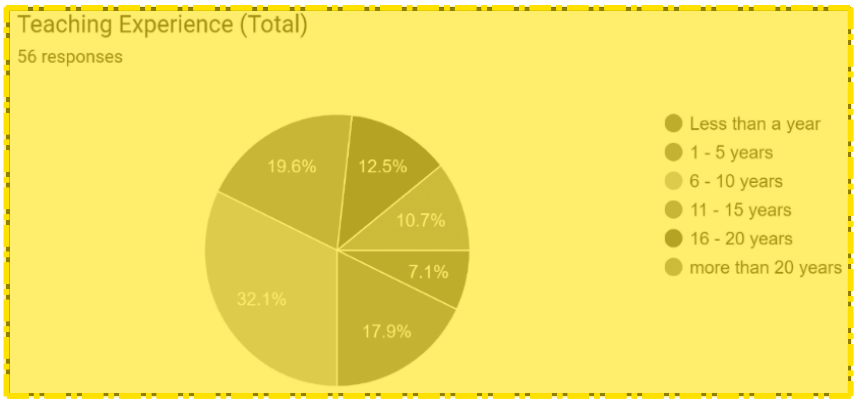

Fig. 72.1 Pie chart – teaching experience

a two-decade of teaching experience, and nearly seven percentage of faculties have less than a year of teaching experience. The pie chart represents the teaching experience for better understanding.

9. Responses from the Questionnaire

Based on the research questions, the researcher created the survey questionnaire. The questions were divided into two sections such as (1) Attitude toward LMS and (2) Awareness toward LMS.

Table 72.1 Attitude toward LMS

Attitude toward LMS	Mean	SD	Order	Level
1. LMS implementation enhances Faculties' computer literacy.	4.38	0.56	3	High
2. LMS facilitates teaching.	4.34	0.67	7	High
3. LMS lets the material be set up as the faculty has planned.	4.13	0.60	9	High
4. LMS equips Faculties with a variety of instructional tools.	4.37	0.56	4	High
5. LMS provides a platform for blended instruction and learning.	4.40	0.63	2	High
6. LMS makes communication easier.	4.36	0.62	5	High
7. LMS creates fresh approaches to education.	4.35	0.55	6	High
8. LMS provides faculties with a variety of assessing tools.	4.30	0.54	8	High
9. LMS boosts students' motivation.	4.07	0.66	10	High
Total	**4.41**	**0.56**	**1**	**High**

The perceived usefulness is defined as "the extent to which an individual believes that employing a particular system would improve his or her job performance." This is consistent with the definition of the term useful: "able to be employed to one's advantage". In an organizational environment, good performance is typically rewarded with promotions, pay raises, bonuses, and other perks [7]. Conversely, a system that has a positive use-performance relationship is one that the user finds to be highly beneficial.

A five-point Likert scale was used to generate ten questions to analyze faculty members' perceptions of LMS. Bar charts displayed the responses and illustrated the analysis computed using statistical techniques. Table 72.1 indicates the questionnaire's overall mean and standard deviation values for attitude toward LMS, which were high. The initial highest average score is seen on item 10 – LMS provides a place for self-learning. The second highest falls on item 5 – LMS provides a platform for blended instruction and learning, followed by item 1 – LMS implementation enhances faculty's computer literacy. The total mean value is also calculated as high.

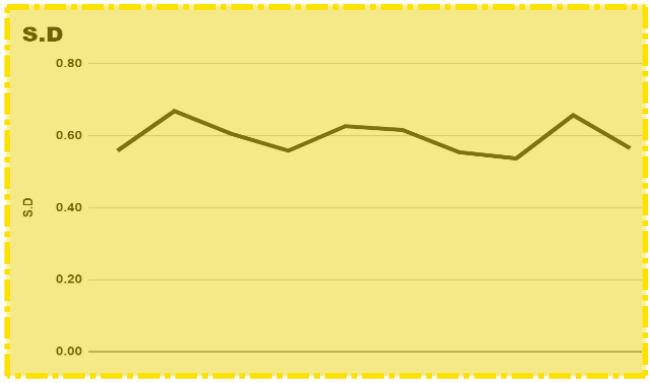

Fig. 72.2 Mean values chart

The line chart (Fig. 72.2) indicates the mean values of the ten questionnaire items that investigated faculty members' attitudes toward LMS. The line chart (Fig. 72.3) indicates the standard deviation values of the ten questionnaire items that investigated faculty members' attitudes toward LMS.

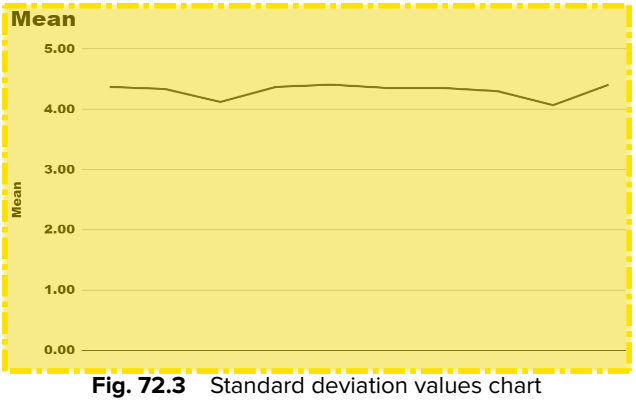

Fig. 72.3 Standard deviation values chart

10. Awareness of LMS – Perceived Ease of Use

Conversely, perceived ease of use describes "the extent to which a person believes that utilizing a certain technology would be effortless." "easy" means "the absence of hardship or substantial effort." An individual's effort is a finite resource that can be distributed among the many obligations to which they are subject. If all other things are equal, users are more inclined to embrace an application they believe to be user-friendly.

Table 72.2 indicates the questionnaire's overall mean and standard deviation values on awareness toward LMS, which were high. The first highest mean score falls on item 4 – the faculties are aware that quizzes and exercises can be created on the LMS platform. The second highest falls on item 5 – the faculty members are familiar with embedding or uploading videos on the LMS platform, followed by item 2 – the faculties are aware of the Students' Forum or Live Classrooms available in the LMS platform. The moderate mean score falls on item 7 - the faculties' are familiar with creating hyperlinks and inserting hyperlink sources in PPTs. The total mean value is also calculated as high.

The line chart (Fig. 72.4) indicates the mean values of the ten questionnaire items that investigated faculty members' awareness of LMS. The line chart (Fig. 72.5) indicates the standard deviation values of the ten questionnaire items that investigated faculty members' awareness of LMS.

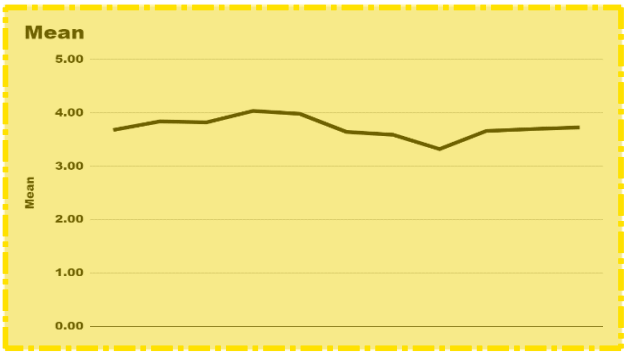

Fig. 72.4 Mean values chart

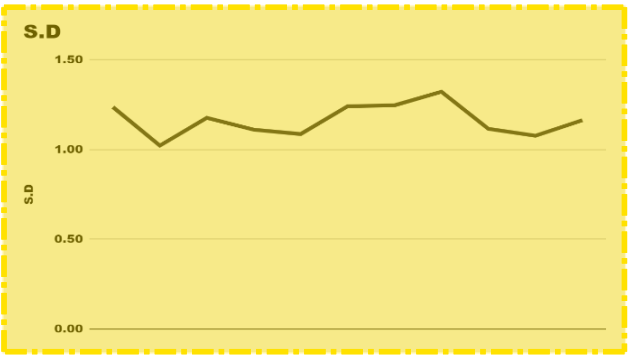

Fig. 72.5 Standard deviation values chart

11. Discussion and Findings

The first session focuses on the positive attitude toward LMS. One of the reasons may have been the faculty's ability to upload materials efficiently and change content on the LMS platform using Moodle's capabilities. The responses to the questionnaire corroborated this as well. For faculties

Table 72.2 Awareness of LMS

Awareness of LMS	Mean	SD	Order	Level
1. Are you aware of uploading or removing files from the LMS?	3.68	1.24	6	High
2. Are you aware of the Students' Forum or Live Classrooms?	3.84	1.02	3	High
3. Are you aware that the course material can be edited?	3.82	1.18	4	High
4. Are you aware that quizzes and exercises can be created on the LMS platform?	4.04	1.11	1	High
5. Are you familiar with embedding or uploading videos on the LMS platform?	3.98	1.09	2	High
6. Are you familiar with inserting links to website sources?	3.64	1.24	8	High
7. Are you familiar with creating hyperlinks and inserting hyperlink sources in PPTs?	3.59	1.25	9	High
8. Are you familiar with creating animated PPTs and uploading animated PPTs on the LMS platform?	3.32	1.32	10	Moderate
9. Are you aware that the LMS permits the monitoring of student involvement and activity?	3.66	1.12	7	High
10. Are you aware of the assessment tools on the LMS platform?	3.70	1.08	5	High
Total	**3.73**	**1.16**		**High**

who had no choice but to employ other technologies, LMS was a solution that facilitated class management and facilitated instruction. The attitudes of male and female educators toward LMS were the same. In addition, they maintained the same attitude regardless of the subject they were teaching. This outcome may be attributed to the university's policy mandating the use of technology in all classes by all faculty members. Most educational institutions, including our university, encourage the use of computer technology as an instructional tool. The training may help enhance their understanding of how to utilize the new system, such as LMS. Perceived ease of use is the subject to be discussed because it has been shown to affect perceived usefulness. As in previous studies, assessed usefulness is always most significantly influenced by perceived ease of use.

12. Conclusion

The researcher concludes that faculties can utilize LMSs if familiar with their operation. Then, they recognize its advantages. The more comfortable they are with LMS, the more valuable they feel it to be. The LMS is not difficult to use after faculties have been trained. It is relatively intuitive. It enables educators to upload learning materials, interact, and send messages whenever and wherever they are; thus, it may be used to create interactive classroom activities. An additional intriguing study demonstrated that the perceived ease of LMS use and its usefulness were strongly connected with the respondents' attitudes. Probably because LMSs are user-friendly technologies. Only fundamental knowledge of technology is necessary. Therefore, faculties can efficiently utilize LMS in their courses after receiving training. It is comfortable and easy for educators to access course materials anywhere and anytime. LMS is one of the most efficient communication platforms for students and faculties. They have a favourable opinion of it when they believe it to be beneficial and straightforward. Similarly, faculties acknowledge that LMS can facilitate language learning and teaching as they can upload course-related information.

13. Limitations of the Study

The present study used convenience sampling, resulting in a small sample with slightly more female than male participants. The researcher has surveyed at VISTAS, Chennai. The samples are limited, and the probability of conducting similar studies is restricted due to the research volume.

14. Suggestions for Further Study

This investigation would have opened up new opportunities for future research in the same sector. Comparable research may be conducted on government and government-aided colleges in Chennai. The researcher laid the groundwork for future research on LMS and other technology platforms.

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Note: All the figures and the tables in this chapter were made by the authors.