

**DETERMINANTS OF STUDENTS' ATTITUDE TOWARDS LMS BASED ON THE
EXTENDED TECHNOLOGY ACCEPTANCE MODEL: WITH SPECIAL
REFERENCE TO THE FACULTY OF MANAGEMENT STUDIES, RAJARATA
UNIVERSITY OF SRI LANKA**

R. M. W. Thathsarani^{1,*}, W. D. Sehani²

*¹Department of Business Management, Faculty of Management Studies,
Rajarata University of Sri Lanka, Mihintale, Sri Lanka*

*²Department of Marketing Management, Faculty of Management Studies, Rajarata
University of Sri Lanka, Mihintale, Sri Lanka*

*Corresponding author (email: shaniranasinghe9@gmail.com)

INTRODUCTION

The development of technology is accelerating fast today. Technology contributes to the learning process, especially in times of crisis, such as the COVID-19 pandemic. This pandemic is fatal because it is easy to spread. The learning modes can be beneficial and enhance existing learning outcomes (Astuti & Indriani, 2020). The study by Samsudeen and Mohamed (2019) revealed that the e-learning platform was also scalable and capable of connecting to other multi-platforms. Aside from realising the massive benefits of E-learning, developed countries are successfully implementing it (Salloum & Shaalan, 2019).

Developing countries are more hesitant to adopt new technological ventures than developed countries. However, Sri Lankan and Indonesian studies explained that online learning is the most effective in this context (Zuhairi et al., 2019). Although such systems have grown significantly in recent years, institutions still face several challenges regarding e-learning. It is timely and essential to understand how changes in the learning environment (as a result of the COVID-19 outbreak) have affected student learning behaviour, especially their e-learning behaviour (Weerathunga et al., 2021).

Rajarata University is a rural university in Sri Lanka. Moreover, it became a first-time experience for them in this e-learning process. This study will test the students' Attitudes toward using LMS for learning using the extended Technology Acceptance Model (TAM). Only the students' Attitudes toward LMS were examined in this study. As a limitation, the study relied on self-reported data to determine the actual use of LMS.

LMS is frequently chastised for its ineffective use. It is not that LMS are unsuccessful. Most of the time, it is not due to poor design but the instructor's lack of pedagogical skills. However, the question remains unanswered regarding the Attitudes toward online learning platforms like LMS among university students in Sri Lanka. However, the empirical study by Weerathunga et al. (2021) related to this context has used TAM, but the variables differ from the proposed framework. Researchers haven't found any related study from this context that examined attitudes towards the LMS. Also, it would be useful for other universities and decision-makers.

So finally, the problem statement can be the emphasis as, to investigate the impact of Perceived Usefulness, Perceived Ease of Use, and Perceived Convenience on the Attitude

toward LMS of undergraduates in the Faculty of Management Studies, Rajarata University of Sri Lanka.

METHODOLOGY

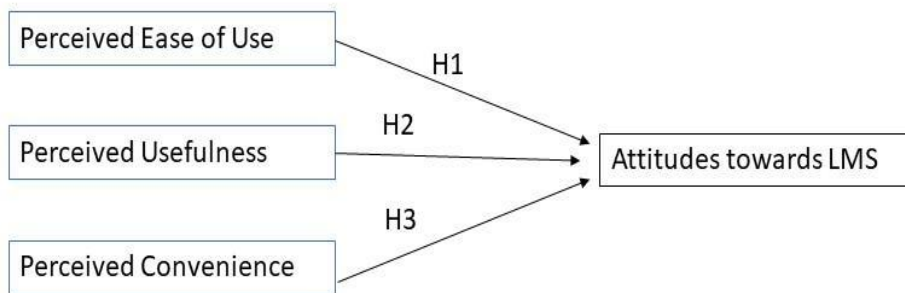


Figure 1 Conceptual Framework

The study is a positivistic and descriptive study that follows a deductive approach. Independent variables of this study were Perceived Ease of Use, Perceived Usefulness, and Perceived Convenience. The dependent variable of this study was Attitudes. Considering the relationship between research variables, the following theoretical framework was proposed for this study.

Furthermore, the researcher examined the impact of Perceived Ease of Use, Perceived Usefulness, and Perceived Convenience on Attitude. Through a multiple regression, the most impacted TAM variable towards Attitudes to use LMS of the undergraduates of the Faculty of Management Studies, Rajarata University of Sri Lanka, was examined.

H₁: Perceived Ease of Use has a direct and significant impact on students' Attitudes toward LMS in the Faculty of Management Studies, Rajarata University of Sri Lanka.

H₂: Perceived Usefulness has a direct and significant impact on students' Attitudes toward LMS in the Faculty of Management Studies, Rajarata University of Sri Lanka.

H₃: Perceived Convenience has a direct and significant impact on students' Attitudes toward LMS in the Faculty of Management Studies, Rajarata University of Sri Lanka.

The population of the study was all undergraduates who are currently learning inside the Faculty of Management Studies, Rajarata University of Sri Lanka.

A stratified sampling with simple random selection was used as the sampling method. Here, the sample size is calculated as follows,

Table 1 Study Sample

Academic Year	Population	Sample Size Calculation	Sample Size
2015/2016 Batch	375	$(375 / 1728) * 320$	70
2016/2017 Batch	417	$(417/1728) * 320$	77
2018 Batch	464	$(464 / 1728) * 320$	85
2019 Batch	472	$(477 / 1728) * 320$	88
Total Population and Sample	1728		320

The sample size is considered 320, considering Morgan's chart, because the population is more than 1700.

A structured questionnaire was distributed to the sample respondents in a google form. All analyses were carried out with the assistance of SPSS. Demographic data were analysed through descriptive statistics, and regression analysis was used to test the hypotheses of the study.

RESULTS AND DISCUSSION

The validity and reliability of the data were assured and the results are as follows

Table 2 Reliability and Validity Analysis

Variable	No of Items	Cronbach's Alpha	KMO	Bartlett's test of Sphericity		
				Approx. Square	Chi- Df.	Sig.
Perceived Ease of Use	4	.807	.796	409.888	6	.000
Perceived Usefulness	3	.837	.712	391.831	3	.000
Perceived Convenience	4	.801	.778	421.043	6	.000
Attitudes	3	.778	.672	281.334	3	.000
Behavioral Intention	4	.872	.803	654.015	6	.000

Findings revealed that all the hypotheses were supported. Furthermore, Perceived Ease of Use, Perceived Usefulness, and Perceived Convenience significantly impact attitudes toward LMS usage.

To identify the most impacted variable, the attitudes, the researchers have run a multiple regression, and the results are obtained in table 03.

Table 3 Multiple Regression Analysis - Model Summary

Summary:		
R	R ²	Adjusted R ²
0.754	0.568	0.564

The R-value shows a simple correlation of 0.75. The adjusted R² value indicates how much of the total variation in the dependent variable can be Explained by the independent variables.

The Adjusted R² value is 0.56, which means 56% of the factors affecting attitudes can be explained. There was 44% will describe the other factors.

Table 4 Multiple Regression Analysis - ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	61.977	3	20.659	141.224	.000
Residual	47.104	322	.146		
Total	109.081	325			

According to Table 4, the F value is 141.22, indicating that the overall regression model of the research is appropriate for the data. Because F is greater than one. Furthermore, the significant value is 0.000, indicating a stronger relationship between the independent and dependent variables. The F (141.22) value indicates that the p-value (0.000a) is statistically significant, and thus the equation is interpretable. Because the Significant value is less than 0.05, this is reasonable

Table 5 Multiple Regression Analysis – Coefficients Summary

Coefficients Summary					
Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Constant	.669	.162		4.138	.000
PEOU	.419	.056	.395	7.516	.000
PU	.201	.052	.228	3.880	.000
PC	.219	.054	.224	4.099	.000

According to Table 3, the p-values for Perceived Ease of Use, Perceived Usefulness, and Perceived Convenience are 0.000 because all p-values are less than 0.05. Hence, these factors are impacted by Attitudes.

Furthermore, a study identified that Perceived Ease of Use has high significant impact than Perceived Usefulness and Perceived Convenience through multiple regression. The 0.395 Beta value proves it from the coefficient summary.

CONCLUSIONS AND IMPLEMENTATIONS

The study shows that all three variables of Perceived Usefulness, Perceived Ease of Use, and Perceived Convenience significantly impacted attitudes toward LMS usage. Moreover, Perceived Ease of Use was the most impacting variable towards Attitudes. This finding is supported by Hsu and Chang (2013) and is unsupported by the statement Rabaa (2016) mentioned in the literature. The findings of this study fulfilled the knowledge gap that influences the impact of these factors and Attitudes on the management student's intention, specifically on LMS platforms in the Faculty of Management Studies, Rajarata University of Sri Lanka. Furthermore, it addresses the empirical gap in the literature about an LMS platform of a government university like the Rajarata University of Sri Lanka. The outcomes of this study can aid educators and students in anticipating the pandemic's probable impact and realigning educational and evaluation techniques. The study also benefits educational policymakers because it addressed crucial issues influencing the usage of LMS.

Commonly most State and private universities followed these LMS platforms. So, they also benefit from the study, which may have a similar context. The findings of this study contribute significantly to the literature on LMS in underdeveloped nations. The study also benefits educational policymakers because it addressed crucial issues influencing the usage of LMS. As a result, educators and governments may encourage online learning by focusing on these essential characteristics.

Keywords: Attitudes, perceived convenience, perceived ease of use, perceived usefulness

ACKNOWLEDGEMENT

This paper is an output of an undergraduate research project, which was carried out to measure the impact of Determinants of Students' Attitude and Behavioral Intention towards LMS Based on The Extended Technology Acceptance Model. Further, the authors declare that all the contributors to the study have been duly acknowledged.

REFERENCES

- Astuti, T., & Indriani, L. (2020). The EFL students' perceptions in using Google classroom for English learning during a pandemic. *Journal JRP*, 3(2), 1–8.
- Hsu, H. H., & Chang, Y. Y. (2013). Extended TAM model: Impacts of convenience on acceptance and use of Moodle. *US-China Education Review*, 3(4), 211-218.
- Rabaa, A. A. (2016). Extending the Technology Acceptance Model (TAM) to assess students' behavioural intentions to adopt an E-learning system: The case of Moodle as a learning tool. *Journal of Emerging Trends in Engineering and Applied Sciences*, 7(1), 13–30.
- Salloum, S. A., & Shaalan, K. (2019). Factors affecting students' acceptance of e-learning systems in higher education using UTAUT and structural equation modeling approaches. *Advances in Intelligent Systems and Computing*, 845, 469–480. https://doi.org/10.1007/978-3-319-99010-1_43
- Samsudeen, S. N., & Mohamed, R. (2019). University students' intention to use e-learning systems: A study of higher educational institutions in Sri Lanka. *Interactive Technology and Smart Education*, 16(3), 219–238. <https://doi.org/10.1108/ITSE-11-2018-0092>
- Weerathunga, P. R., Samarathunga, W. H. M. S., Rathnayake, H. N., Agampodi, S. B., Nurunnabi, M., & Madhunimasha, M. M. S. C. (2021). The Covid-19 pandemic and the acceptance of e-learning among university students: The role of precipitating events. *Education Sciences*, 11(8). <https://doi.org/10.3390/educsci11080436>
- Zuhairi, A., Karthikeyan, N., & Priyadarshana, S. T. (2019). Supporting students to succeed in open and distance learning in the Open University of Sri Lanka and Universities Terbuka Indonesia. *Asian Association of Open Universities Journal*, 15(1), 13–35. <https://doi.org/10.1108/aaouj-09-2019-0038>