CONTINUANCE INTENTION OF LEARNING MANAGEMENT SYSTEM (LMS) AMONG LECTURERS IN NORTHERN POLYTECHNIC, MALAYSIA

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ABSTRACT

This study aims to determine the factors influencing continuance intention of LMS among lecturers in northern polytechnic, Malaysia. This study use four elements of Unified Theory of Acceptance and Use of Technology (UTAUT): Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition to determine the impact of continuance intention of LMS. One element, Self-Efficacy was also added to identify the continuance intention of LMS among lecturers in northern polytechnic, Malaysia. Furthermore, this study is intended to examine the relationship and effect between continuance intention of LMS and factors influencing the usage of LMS. A total of 248 polytechnic lecturers from three Northern Polytechnic have participated in this study. Self-administrated survey questionnaire has been used to collect all variables data. The result of Multiple Regression analysis indicated that social influence, facilitating condition, and self-efficacy significantly affect the continuance intention to use LMS among lecturers in northern polytechnic. However, performance expectancy and effort expectancy showed insignificant influence towards the continuance intention. Among all predictors, facilitating condition has the strongest influence on the continuance intention to use LMS among lecturers in northern polytechnic. This study concludes with a discussion of the research findings, theoretical and practical contribution, limitation of the study and suggestion for future research.

Keywords: *Unified Theory of Acceptance and Use of Technology (UTAUT) theory, continuance intention usage, Northern Polytechnic, Self-Efficacy, LMS*

ABSTRAK

Kajian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi kesinambungan LMS di kalangan pensyarah di politeknik utara, Malaysia. Kajian ini menggunakan empat elemen *Unified Theory of Acceptance and Use of Technology (UTAUT)*: *Performance Expectancy, Effort Expectancy, Social Influece dan Facilitating Condition* untuk menentukan kesan kesinambungan niat LMS. Salah satu elemen, *Self-Efficacy* juga ditambahkan untuk mengenal pasti tujuan LMS berterusan di kalangan pensyarah di politeknik utara, Malaysia. Selanjutnya, kajian ini bertujuan untuk mengkaji hubungan dan kesan antara kesinambungan LMS dan faktor-faktor yang mempengaruhi penggunaan LMS. Seramai 248 pensyarah politeknik dari tiga Politeknik Utara telah mengikuti kajian ini. Soal selidik tinjauan kendiri telah digunakan untuk mengumpulkan semua data pemboleh ubah. Hasil analisis *Multiple Regression* menunjukkan bahawa pengaruh sosial, keadaan pemudahcara dan keberkesanan diri mempunyai kesan yang signifikan terhadap kesinambungan niat untuk menggunakan LMS di kalangan pensyarah di politeknik utara. Walau bagaimanapun, jangkaan prestasi dan jangkaan usaha menunjukkan pengaruh yang tidak signifikan terhadap kesinambungan niat. Di antara semua peramal, keadaan pemudahcara mempunyai pengaruh paling kuat terhadap kesinambungan niat untuk menggunakan pensyarah amog LMS di politeknik utara. Kajian ini diakhiri dengan perbincangan mengenai hasil penyelidikan, sumbangan teori dan praktikal, batasan kajian dan cadangan untuk penyelidikan masa depan.

Kata kunci: Teori Penerimaan dan Penggunaan Teknologi Bersatu (UTAUT), penggunaan niat berterusan, Politeknik Utara, Efikasi Diri, LMS

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LIST OF ABBREVIATION

TVET	Technical and Vocational Education and Training
DEPAN	National e-Learning Policy
LMS	Learning Management System
CIDOS	Curriculum Information Document Online System
GOL	Globalised Online Education
HLI	Higher Level Instituion
MOOCs	Massive Open Online Courses
TAM	Technology acceptance model
MCMC	Malaysian Communications and Multimedia Commission
PE	Performance Expectancy
EE	Effort Expectancy
SI	Social Influence
FC	Facilitation Condition
SE	Self-efficacy
CI	Continuance Intention
UTAUT	Unified Theory of Acceptance and Use of Technology
H1	Hypothesis 1
H2	Hypothesis 2
H3	Hypothesis 3
H4	Hypothesis 4
H5	Hypothesis 5

Continuance Intention of Learning Management System (LMS) among lecturers in Northern Polytechnic, Malaysia

Introduction

1.0 Introduction

Chapter one explains about the fundamental information of the study. This chapter includes the background of the study, problem statement, research question, research objective, the significance of study, the scope of the study, definitions of key terms, and the study's organization.

1.1 Background of study

The challenge in 21st-century education is how educators and learners adapt and use ICT, which applies to Malaysia. The government mission for the Technical and Vocational Education and Training (TVET) is a new initiative to improve the image and quality of higher education level while elevating Malaysia's dignity towards World-Class Status Education (Minghat, M.Yasin, Subar & Noordin, 2013). In 2020, the Malaysian government estimated that 50% of the entire class at institutions in Malaysia will be delivered online. The various successes set by the national e-learning policy (DePAN) still need to be explicitly achieved in polytechnics (Malaysia Education Blueprint, 2015-2025). Therefore, the Ministry of Higher Education, Malaysia, in response to the worldwide crisis of covid outbreaks in 2020, stated that public and private universities should be ready to implement teaching and learning using various methods, including online and others (Ministry of Higher Education, 2020).

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Appendices 1: Set of Questionnaire

Universiti Utara Malaysia

CONTINUANCE INTENTION OF LEARNING MANAGEMENT SYSTEM (LMS) AMONG LECTURERS IN NORTHEN POLYTECHNIC

Survey Questionnaire

Dear Respondent,

I am the final year postgraduate students of Master in Science Management (Msc.), Universiti Utara Malaysia. The purpose of this survey is to conduct a research to investigate the continuance intention of Learning Management System (LMS) among lecturers in Northern Polytechnic, Malaysia. Please answer all questions to the best of your knowledge. There are no wrong responses to any of these statements. All responses are collected for academic research purpose and will be kept strictly confidential.

Thank you for your participation.

Instructions:

1) There are THREE (3) sections in this questionnaire. Please answer ALL questions in ALL sections.
2) Completion of this form will take you less than 5 minutes.
3) The contents of this questionnaire will be kept strictly confidential.

Voluntary Nature of the Study

Participation in this research is entirely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. There is no foreseeable risk of harm or discomfort in answering this questionnaire. This is an anonymous questionnaire; as such, it is not able to trace response back to any individual participant. All information collected is treated as strictly confidential and will be used for the purpose of this study only.

I have been informed about the purpose of the study and I give my consent to participate in this survey.

YES ( ) NO ( )

Note: *If yes, you may proceed to next page or if no, you may return the questionnaire to researchers and thanks for your time and cooperation.*

Section A: Demographic Profile

In this section, we would like you to fill in some of your personal details. Please tick "√" your answer and your answers will be kept strictly confidential.

QA1. Have you used Learning Management System (LMS) before?

□ Yes □ No

QA2. Gender:

□ Female □ Male

QA3. Age:

□ 21-30 Years Old
□ 31-40 Years Old
□ 41-50 Years Old
□ 51- 60 Years Old
□ Above 60 Years Old

QA4. Marital status:

□ Single □ Married

QA5. Highest education completed:

□ Bachelor Degree/ Professional Qualification
□ Masters
□ PhD

QA6. Working experience in this industry:

□ Less than 1 year
□ 1 to less than 5 years
□ 5 to less than 10 years
□ 10 to less than 15 years
□ 15 years or more

QA7. Current Position:

□ Tutor
□ Assistant Lecturer
□ Lecturer
□ Assistant Professor
□ Professor

Section B:

This section seeks your opinion regarding the continuance intention of Learning Management System (LMS) among lecturers in Northern Polytechnic, Malaysia. Respondents are required to indicate the extent to which they agree or disagree with each statement **using 5 point Likert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree]**

No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PE	**Performance Expectancy**					
PE 1	Using LMS helps me to teach the topic.	1	2	3	4	5
PE 2	Using LMS increases my chance of positive evaluation of my teaching capacities from students.	1	2	3	4	5
PE 3	Using LMS in teaching enables me to accomplish tasks (e.g. teach the topic, assess assignments)	1	2	3	4	5
PE 4	Using LMS in teaching increases the number of topics I can teach	1	2	3	4	5
PE 5	Using LMS enhances my efficiency in	1	2	3	4	5
PE 6	Using LMS reduces my work load considerably.	1	2	3	4	5
No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
EE	**Effort Expectancy**					
EE 1	It is easy for me to become skillful at using the LMS.	1	2	3	4	5
EE 2	My interaction with the LMS is clear and understandable.	1	2	3	4	5
EE 3	I find it easy to get LMS to do what I want it to do (e.g. teach the topic, assess assignments).	1	2	3	4	5
EE 4	I find the LMS to be easy to use.	1	2	3	4	5
No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

SI	**Social Influence**					
SI 1	People who influence my behavior think that I should use	1	2	3	4	5
SI 2	People who are important to me think that I should use	1	2	3	4	5
SI 3	Colleagues in my institution think that I should use LMS.	1	2	3	4	5
SI 4	In general, my institution will support the use of LMS.	1	2	3	4	5
No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
FC	**Facilitating Conditions**					
FC 1	I have the necessary resources to enable me to use LMS for teaching purpose.	1	2	3	4	5
FC 2	My working environment supports me to use LMS for teaching purpose.	1	2	3	4	5
FC 3	Assistance is available when I experience problems with using LMS for teaching.	1	2	3	4	5
FC 4	Using LMS for teaching is compatible with my life.	1	2	3	4	5
No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
SE	**Self-efficacy**					
SE 1	I am confident to use LMS successfully.	1	2	3	4	5
SE 2	I can use LMS successfully without others' help.	1	2	3	4	5
SE 3	I have enough knowledge to use LMS successfully.	1	2	3	4	5
SE 4	I have enough skills to use LMS successfully.	1	2	3	4	5

Section C:

This section seeks your opinion regarding the level of satisfaction an academician gets from his/her job. Respondents are required to indicate the extent to which they agree or disagree with each statement **using 5-pointLikert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree]**

No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CI	**Continuance Intention**					
CI 1	I will frequently use LMS in the future.	1	2	3	4	5
CI 2	I intend to use LMS as much as possible.	1	2	3	4	5
CI 3	I will strongly recommend others to use LMS	1	2	3	4	5

- Thank you for your time and participation –

Appendix 2: Result from IBM SPSS Statistic 26

1) Reliability Analysis for each Independent and dependent Variables Items

a) Performance expectancy

Case Processing Summary

		N	%
Cases	Valid	248	100.0
	Excluded[a]	0	.0
	Total	248	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.914	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PE1	18.74	11.919	.808	.893
PE2	18.81	11.423	.836	.888
PE3	18.63	11.214	.780	.896
PE4	18.95	12.050	.688	.909
PE5	18.83	11.844	.807	.893
PE6	18.93	11.906	.662	.914

b) Effort Expectancy

Case Processing Summary

		N	%
Cases	Valid	248	100.0
	Excluded[a]	0	.0
	Total	248	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.922	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EE1	10.84	5.526	.827	.895
EE2	10.78	5.880	.846	.891
EE3	10.74	5.577	.817	.899
EE4	10.87	5.509	.794	.907

c) Social Influence

Case Processing Summary

		N	%
Cases	Valid	248	100.0
	Excluded[a]	0	.0
	Total	248	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.830	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SI1	11.43	3.606	.734	.752
SI2	11.50	3.530	.690	.771
SI3	11.33	3.552	.696	.768
SI4	11.00	4.211	.521	.843

d) Facilitating Condition

Case Processing Summary

		N	%
Cases	Valid	248	100.0
	Excluded[a]	0	.0
	Total	248	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.823	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FC1	11.29	3.302	.689	.757
FC2	11.23	3.500	.569	.814
FC3	11.13	3.598	.664	.772
FC4	11.35	3.289	.675	.764

e) Self-Efficacy

Case Processing Summary

		N	%
Cases	Valid	248	100.0
	Excluded[a]	0	.0
	Total	248	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.910	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SE1	9.95	5.750	.690	.918
SE2	10.43	4.983	.741	.905
SE3	10.28	4.875	.887	.851
SE4	10.22	4.754	.881	.852

f) Continuance Intention

Case Processing Summary

		N	%
Cases	Valid	248	100.0
	Excluded[a]	0	.0
	Total	248	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.937	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CI1	7.51	2.785	.840	.932
CI2	7.50	2.494	.919	.869
CI3	7.51	2.583	.853	.922

2) Correlation Analysis

Correlations

		PE	EE	SI	FC	SE	CI
PE	Pearson Correlation	1	.813**	.723**	.740**	.621**	.706**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	248	248	248	248	248	248
EE	Pearson Correlation	.813**	1	.656**	.691**	.681**	.684**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	248	248	248	248	248	248
SI	Pearson Correlation	.723**	.656**	1	.699**	.574**	.678**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	248	248	248	248	248	248
FC	Pearson Correlation	.740**	.691**	.699**	1	.654**	.748**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	248	248	248	248	248	248
SE	Pearson Correlation	.621**	.681**	.574**	.654**	1	.642**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	248	248	248	248	248	248
CI	Pearson Correlation	.706**	.684**	.678**	.748**	.642**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	248	248	248	248	248	248

**. Correlation is significant at the 0.01 level (2-tailed).

3) Multiple Regression Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.806[a]	.650	.642	.47655	2.016

a. Predictors: (Constant), COMPUTESE, COMPUTESI, COMPUTEEE, COMPUTEFC, COMPUTEPE

b. Dependent Variable: COMPUTECI

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.926	5	20.385	89.762	.000[a]
	Residual	54.959	242	.227		
	Total	156.885	247			

a. Predictors: (Constant), COMPUTESE, COMPUTESI, COMPUTEEE, COMPUTEFC, COMPUTEPE

b. Dependent Variable: COMPUTECI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.392	.206		-1.900	.059		
	COMPUTEPE	.155	.089	.132	1.744	.082	.253	3.954
	COMPUTEEE	.121	.073	.118	1.656	.099	.284	3.521
	COMPUTESI	.223	.076	.175	2.953	.003	.410	2.436
	COMPUTEFC	.461	.085	.346	5.422	.000	.354	2.822
	COMPUTESE	.164	.060	.152	2.737	.007	.469	2.134

a. Dependent Variable: COMPUTECI