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THE FACTORS OF SATISFACTION ON E-LEARNING USAGE AMONG UNIVERSITI MALAYSIA KELANTAN STUDENTS

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Abstract: *With the development of information and communication technology, E-Learning has been become one of the modern educations in a student's life in term of academic. E-learning is a computer-based learning environment that allows learners and teachers to interact virtually through an open system. This research attempts to examine the factors that influence the student E-Learning satisfaction in Universiti Malaysia Kelantan. Independent variables included in this study are student factor, instructor factor, design factor, course factor, technical factor and student e-learning satisfaction as dependent variable. Literature reviews were provided to better understanding on this proposed conceptual framework. An aggregate of 368 responses of students in Universiti Malaysia Kelantan is collected in this survey. The research adopts a quantitative approach to examine critical factors that influence e-learning satisfaction. The data collected by survey questionnaire and data analysed by Statistical Package for Social Science (SPSS).*

Keywords: *Critical Factors, Education, E-Learning, Satisfaction, Students, Technology*

Introduction

In this globalized world, the widespread use of internet has contributed significantly in various fields, especially business, government affairs, transactions and also education. With the popularity of the Internet and mobile technology, people can learn or instruct through a variety of online platforms. The process of learning and teaching is supportive by educational technologies which is used in educational environment either in traditional face to face classrooms or online learning platform which is e-learning (Rodrigues, Isotani, & Zárate, 2018).

The method of increasing the percentage of student e-learning satisfaction rates is identifying the critical success factors. The purpose of this research is to examine the factors that influence the e-learning satisfaction among students in Universiti Malaysia Kelantan (UMK) to verify the relationship between the key factors e-learning satisfaction among UMK students. Malaysian Higher Education Institutions can access to the critical factors to promote the niche e-learning system with this analysis and finding results.

Literature Review

E-Learning in Malaysia

E-Learning has been used in Malaysia's IPT as early as 2000 but the development and contribution of e-learning in Malaysia started at 2011. The application of e-learning will make Malaysian Higher Education Institutions (HEIs) in high global competitive for educate students and provide the best of teaching and learning approach.

Student E-Learning Satisfaction

E-Learning is a system which able to be interpreted in various ways such as computer based education delivery system which is provided through the internet or an educational method that is able to provide opportunities for the needed people at the right place with the right contents and the right time (Lee & Lee, 2008). In this study, five factors that influencing student satisfaction in e- learning (student factor, instructor factor, design factor, course factor and technical factor) was chosen to be measured.

Student Factor

The success of E-Learning satisfaction need identify the student factor such as self-efficacy, attitudes, computer anxiety and skills, and student's intention can help to improve e-learning satisfaction (Taha, 2009). The scholars Compeau & Higgins (1995) pointed out the computer self-efficacy refers to an individual's perceptions of his or her ability to use computers in the achievement of a task. In the view of student attitude, Kenan (2015) stated that positive attitudes toward intention to utilize e-learning may reinforce students' to bolster and make them feel more satisfaction.

Instructor Factor

An instructor is the one who can best predict as far as course satisfaction concerned. The instructor interaction happens when an instructor delivers content knowledge, provides appropriate, clarifies misunderstanding and increases student motivation (Bhuasiri, Xaymoungkhoun, Zo, Jeung, & Ciganek, 2012). That is why, the performance of instructor found highly correlated with student satisfaction found that the levels of student expectation are at average (Liaw & Chen, 2007).

Design Factor

The content is including of the accuracy, authenticity, accessibility, the design and the appropriateness of outputs (Sun, Tsai, Finger, Chen, & Yeh, 2008). The design and the content may attract the students to use the E-Learning platform in their study because it attracts them to explore the content served for the subjects or coursework (Bhuasiri, Xaymoungkhoun, Zo, Jeung, & Ciganek, 2012).

Course Factor

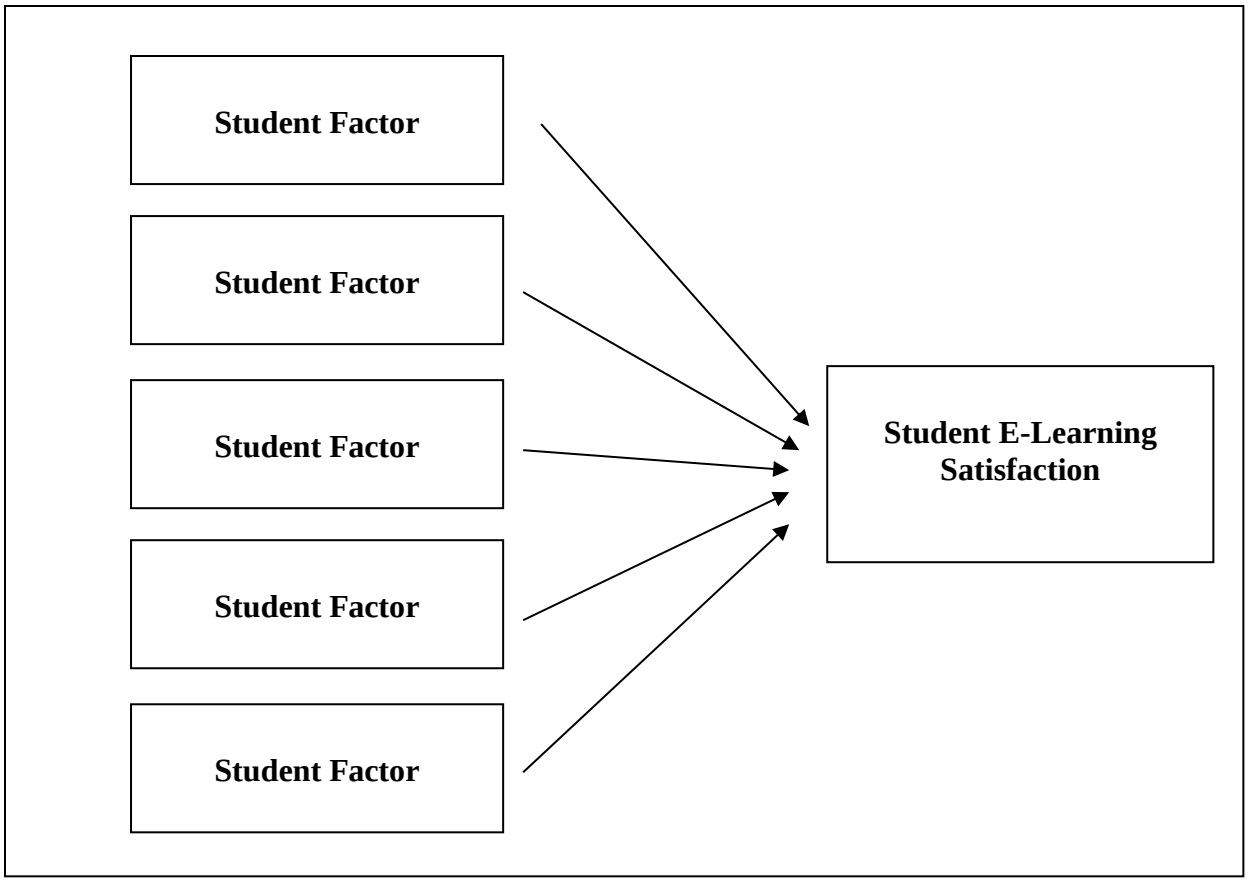
The development of e-learning that so fast also caused by the ambitious feeling of the students to get the knowledge from other resources such as e learning. The offering variety of course in

e-learning that can communicate with others members from far just by e learning (Caliskan, Suzek, & Ozcan, 2017). These courses are expected to create and will develop students' motivation to perform well in their chosen subjects (Movchan & Zarishniak, 2017).

Technical Factor

Technical factor is the knowledge, skills, and methods of operation that are directly applied by humans in practical activities. Al-rahmi, Othman, & Mi Yusuf (2015) investigate that the development of technical and infrastructure changes the traditional learning strategy to the online learning. Md. Aminul, Noor Azliza, Tan, & Hasina (2011) pointed out the Internet can help to produce knowledge, gathering of information, widen network in various aspects and is just a click away. With the advances of Information and Communication Technology (ICI), people can learn through a variety of online platform such as Massive Open Online Courses (MOOC). Besides, the learning management system (LMS) simplify and focus on management and process of teaching and learning courses among lectures, tutors and students through the e-learning (Rucker & Frass, 2017).

Conceptual Framework



Source: Malik (2010)

Research Methodology

The questionnaires will be pilot-tested on 30 students in Universiti Malaysia Kelantan. Based on the pilot study, the data will be analyzed using SPSS and the data analyses were undertaken using statistical approach to test its reliability in this research.

The quantitative approach which is survey strategy has been used for collecting data to help meet the main goals of this research. The target population for this study will be all students in UMK which are probably 9,000 students (Source: Academic Administration Division UMK/ BPA UMK). The sample size is taken by using sample random sampling for questionnaire is 368 respondents.

A self administre questionnaire will be incorporated as an instrument for data collection by refers to journal, thesis, and articles from Internet in general to develop each of the statement for questionnaire as shown in Table 1.

The construction of the questionnaire is coming with dual language which is English and Malay. The questionnaire are consist of seven section which are Section A, Section B, Section C, Section D, Section E, Section F, and Section G. These variables have been use the Likert Five Point scale to be measured and the data collected calculate by using SPSS software version 20.0.

Data Analysis

Demographic Profile of Respondents

Demographic profile of 368 respondents including their frequency in satisfaction of Universiti Malaysia Kelantan (UMK) students towards E-Learning usage is shown in Table 2 below.

Table 1: Resources of Questionnaire

Variable	Source	Question no.	Section no.
Student E-Learning Satisfaction	Dziuban et al. (2015)	1-8	B
Student Factors	Azizol, Mohd. (2011)	1-2 & 4	C
	Nihra, Bin, Said, & Ali (2014)	3 & 5	
Instructor Factors	Gallien & Oomen (2005)	1-3 & 6	D
	Yengin et al. (2011)	4-5 & 7	
Design Factors	Baraković & Skorin-Kapov (2017)	1,3 & 5-7	E
	Wang (2018)	2 & 4	
Course Factors	Simpson (2012)	1-4 & 6-7	F
	Parker & Martin (2010)	5	
Technical Factors	Nihra, Bin, Said, & Ali (2014)	1 & 3	G
	Azizol, Mohd. (2011)	2	

Demographic	Detail	Frequency	Percentage
Gender	Male	148	40.2
	Female	220	59.8
Ethnic	Malay	188	51.1
	Chinese	111	30.2
	Indian	61	16.6
	Others	8	2.2
Age	18-20	66	17.9
	21-25	301	81.8
	26-30	1	0.3
Faculty	Faculty of Agro Based Industry	10	2.7
	(FIAT)	4	1.1
	Faculty of Bio-engineering and Technology (FBKT)	16	4.3
	Faculty of Creative Technology and Heritage (FTKW)	2	0.5
	Faculty of Earth Science (FSB)	205	55.7
	Faculty of Entrepreneurship & Business (FKP)	120	32.6
	Faculty of Hospitality, Tourism and Wellness (FHPK)	11	3.0
	Faculty of Veterinary Medicine (FPV)		
Highest academic qualification	Degree	336	91.3
	Diploma or equivalent	32	8.7
Current education level	Year 1	58	15.8
	Year 2	90	24.5
	Year 3	70	19.0
	Year 4	145	39.4
	Year 5	5	1.4
State	Johor	49	13.3
	Kedah	29	7.9
	Kelantan	38	10.3
	Kuala Lumpur	23	6.3
	Melaka	25	6.8
	Negeri Sembilan	18	4.9
	Pahang	37	10.1
	Penang	24	6.5
	Perak	26	7.1
	Perlis	22	6.0
	Sabah	11	3.0
	Sarawak	6	1.6
	Selangor	33	9.0
	Terengganu	27	7.3
Frequency of access to internet	Yes	346	94.0
	No	22	6.0
Frequency of using E-	Yes	316	85.9
	No	52	14.1

Learning system			
Existence of internet connection at home	Yes	289	78.5
	No	79	21.5

Table 2: Demographic Profile

Based on the data collected, 148 (40.2%) were male while 220 (59.8%) females. Most of the respondents are Malay which are 188 (51.1%), followed by Chinese, 111 (30.2%) and Indian, 61 (16.6%). All the respondents are students aged from 18 – 30 years old. Results at Table 2 shown indicate that majority respondents from FKP which is 55.7%. Respondents participated in this study were mostly bachelor's degree which are 336 respondents (91.3%) and majority of respondents are from fourth year, 145 (39.4%). The respondents mostly come from Johor Bharu which is 13.3%.

Based on the analysis of the study, most of the respondents access to internet in their daily life which are 346 with a percentage of 94.0%. Moreover, it was found that most of the respondents have a high frequency of use E-Learning system with a percentage of 85.9% of 316 respondents. The result in Table 2 shows that majority of the respondents have an internet connection at home with a percentage of 78.5% of 289 respondents.

Reliability Test

Cronbach's Alpha in SPSS means that it wants to measure the internal consistency that closely related to a set of group (Sijtsma, 2009). Based the Rules of thumb, range of alpha is between 0.6 and 0.7 means that the data obtain is acceptable measure to verify the reliability of data. Table 3 show that the strength of association of reliability analysis.

	Variables	Cronbach's Alpha	No. of Statements	Strength of Association
Independent Variables	Student Factor	0.810	5	Good
	Instructor Factor	0.887	7	Good
	Design Factor	0.862	7	Good
	Course Factor	0.884	7	Good
	Technical Factor	0.745	4	Good
Dependent Variable	Satisfaction of E-Learning usage	0.894	8	Good

Table 3: Reliability Analysis (N=368)

Pearson Correlation Analysis

Based on the table 4 below, the correlation analysis of each variable which is Student E-Learning Satisfaction, Student Factor, Instructor Factor, Design Factor, Course Factor and Technical Factor are significant at the two tailed with 0.01 level. The results indicated that all the independent variables have the moderate positive correlation affect with the dependent variable that is Student E- Learning Satisfaction.

		Student E-Learning Satisfaction	Student Factor	Instructor Factor	Design Factor	Course Factor	Technical Factor
Student E-Learning Satisfaction	Pearson Correlation	1	.765**	.684**	.657**	.742**	.648**
	N	368	368	368	368	368	368

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

Table 4: Pearson Correlation Analysis

Hypothesis Testing

The results show exact linear relationship and the result of value 0.90 to 1.00 can be interpreted as very high positively perfect uphill linear relationship between the both variables. While if the value is in negative value, this will show that there is perfectly having a negative correlation between the both variables. When the value is 0, this shows that there is no effect or correlation between both variables (Hair et al., 2011). The summary of a total of 5 hypotheses statements are construct in this research is shown in Table 5 below.

	Hypothesis	Results	
H1	There is significant effect between student factor and satisfaction on E Learning usage among Universiti Malaysia Kelantan (UMK) student.	Correlation Coefficient= 0.765	High relationship
H2	There is significant effect between instructor factor and satisfaction on E Learning usage among Universiti Malaysia Kelantan (UMK) student.	Correlation Coefficient= 0.684	Moderate relationship
H3	There is significant effect between design factor and satisfaction on E Learning usage among Universiti Malaysia Kelantan (UMK) student.	Correlation Coefficient= 0.657	Moderate relationship

H4	There is significant effect between course factor and satisfaction on E Learning usage among Universiti Malaysia Kelantan (UMK) student.	Correlation Coefficient= 0.742	High relationship
H5	There is significant effect between technical factor and satisfaction on E Learning usage among Universiti Malaysia Kelantan (UMK) student.	Correlation Coefficient= 0.648	Moderate relationship

Table 5: Summary for Hypothesis Testing

Regression Coefficient

Coefficients[a]

		B	Sig.
1	(Constant)	.519	.000
	STUDENT FACTOR	.774	.000
	INSTRUCTOR FACTOR	.680	.000
	DESIGN FACTOR	.624	.000
	COURSE FACTOR	.719	.000
	TECHNICAL FACTOR	.630	.000

a. Dependent Variable: Student E- Learning Satisfaction

Table 6: Table of Coefficient Analysis

According to Table 6 above, the results have pointed out that independent variables which are student factor, instructor factor, design factor, course factor and technical factor are significantly related to the student E-learning satisfaction because the significant value is 0.000 and all the p-value of independent variables is less than 0.05.

The unstandardized beta (B) value represents the slope of the line between independent variable and dependent variable. The unstandardized beta (B) value indicates that all the independent variables have positive relationship towards satisfaction of E-Learning usage among students. The following equation:

Student E- Learning Satisfaction =	0.519 + 0.774(Student Factor) + 0.68(Instructor Factor) + 0.624(Design Factor) + 0.719(Course Factor) + 0.630(Technical Factor)

Discussion and Conclusion

In thus chapter it will discuss on the summary of the statistical analysis and findings from the data analysis. The recommendation and conclusion of this study are discussed in the last of the topic.

Research Objectives	Hypothesis	Results	
To test the relationship between student factor and satisfaction on E-Learning usage among UMK students	There is significant effect between student factor and satisfaction on E-Learning usage among Universiti Malaysia Kelantan (UMK) student.	P= 0.000	Supported
To test the relationship between instructor factor and satisfaction on E-Learning usage among UMK students	There is significant effect between instructor factor and satisfaction on E-Learning usage among Universiti Malaysia Kelantan (UMK) student.	P= 0.000	Supported
To test the relationship between design factor and satisfaction on E-Learning usage among UMK students	There is significant effect between design factor and satisfaction on E-Learning usage among Universiti Malaysia Kelantan (UMK) student.	P= 0.000	Supported
To test the relationship between course factor and satisfaction on E-Learning usage among UMK students	There is significant effect between course factor and satisfaction on E-Learning usage among Universiti Malaysia Kelantan (UMK) student.	P= 0.000	Supported
To test the relationship between technical factor and satisfaction on E-Learning usage among UMK students	There is significant effect between technical factor and satisfaction on E-Learning usage among Universiti Malaysia Kelantan (UMK) student.	P=0.000	Supported

Table 7: Summary of Research Objective, Hypothesis and Result

Table 7 are showing the summary of the research objective, hypothesis and the results in this research study. The results obtained by the multiple regression analysis indicated that p value for the satisfaction on E-Learning usage among Universiti Malaysia Kelantan (UMK) student was less than 0.05 (p=0.000). Other than that, the Hypothesis 1 (H1), Hypothesis 2 (H2), Hypothesis 3 (H3), Hypothesis 4 (H4), Hypothesis 5 (H5), are accepted in this study as it p value are 0.000.

There are numerous recommendations that can apply for future research study. The first recommendation is that future research can be conducting an expansion of the population or sample size. The target population can be including the lecturers in the university to carry out in-depth comprehension in E-learning satisfaction. Therefore, the opinion of lecturers on e-learning satisfaction will alter the results of the research study. Secondly, the recommendation is adding on the open-ended questions to the questionnaire part. This allows the respondents the occasion to provide additional information and express their opinions and mind-set about anything else which was not included in the multiple choices via open-ended questions.

Next recommendation is targeting to the specific group of respondents. The scope of respondents can be target on the fourth-year students only in the future study. This is because

the fourth-year students have the plentiful experience in e-learning platform contrast to the first-year students who are still strange on e-learning platform in university.

As conclusion, this significant effect was indicated the Student Factor, Instructor Factor, Design Factor, Course Factor and Technical Factor was giving impact to the dependent variable which is UMK Student E- Learning Satisfaction and it was measured by the multiple regression method. This study is necessarily component that can be consider testing the satisfaction of online learning platform that leads to the user satisfaction in next research study.

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