



An Investigation on Philippine Graduate Students Satisfaction With E- Learning During the Pandemic

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ABSTRACT

The purpose of this paper is to measure the satisfaction and the factors of Philippine graduate students with E-Learning during the pandemic. The dependent variable of this paper is perceived challenges of E-Learning, perceived learner motivation and interaction. The dependent variable is perceived satisfaction. The result shows the Philippine graduate students have high satisfaction with E-Learning. The perceived challenges of E-Learning and perceived learner motivation have significant impact on perceived satisfaction, and interaction has no correlation with perceived satisfaction.

Keywords: Perceived Challenges Of E-Learning, Perceived Learner Motivation, Interaction, Perceived Satisfaction, E-Learning.

I. INTRODUCTION

Student satisfaction encompasses the feeling of pleasure that the students get when their learning needs are covered by an educational institution (Allen, Bourhis, Burrell, & Mabry, 2002; Shehab, 2007; Wang, 2003).

Since the global pandemic outbreak in 2020, many countries have adopted online teaching. All schools in the Philippines have also implemented online teaching, and even two years later, face to face teaching in the Philippines has not fully resumed, most of graduate students are still taking online class at this time. This is the first time that online teaching has been implemented for such a long time. And online teaching has a stigma of lower quality compared to traditional face-to-face teaching (Hodges, Moore, Lockee, Trust & Bond, 2020). Although online teaching and face-to-face teaching can achieve the same output results, student satisfaction with online teaching still exists (Cole, Shelly & Swartz, 2014). This is an important problem, because students' satisfaction will affect school's student enrollment and revenue. Learners' satisfaction can have repercussions on whether learners like to use systems or not, how learners work together, and whether there is a good working atmosphere among learners (Guaawardena, Nola, Wilson, Lopez-Islas, Ramirez-Angel, & Megchun-Alpizar, 2001). And there are many researchers already pointed out the importance of student satisfaction (Green, Hood, & Neumann, 2015; Douglas, Douglas, McClelland, & Davies, 2015) and faculties (Dhaqane & Afrah, 2016; Rothman, Romeo, Brennan & Mitchell, 2011). So, it is important to measure students' satisfaction with E-Learning during the pandemic, and to find the factors that affect student satisfaction with E-Learning.

This research is based on the theoretical framework developed by Hettiarachchi, Damayanthi, Heenkenda, Dissanayake, Ranagalage and Ananda, (2021).

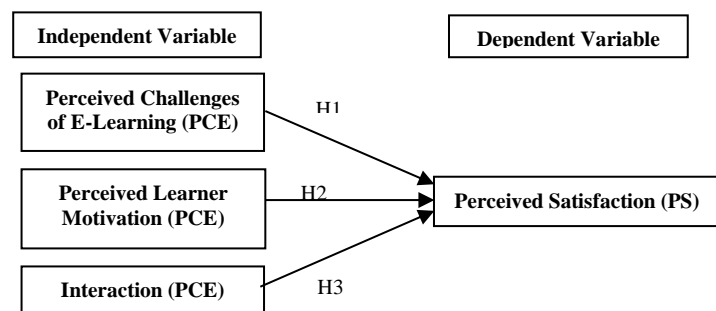


Figure 1. Conceptual Framework.

1.1 Hypothesis

- H1: The perceived challenges of E- Learning affect perceived satisfaction of students during online learning.
- H2: The perceived learner motivation affects the perceived satisfaction of students during online learning.
- H3: The Interaction affect perceived satisfaction of students during online learning.

II. RESEARCH METHOD

This study is quantitative research, there are 16 question items in questionnaire, the researcher distributed 150 set online questionnaire to the respondents through Email and WeChat, and 74 respondents answered the questionnaire. This research was conducted in the Philippines due to the researcher is also a student in the Philippines. The population is the students who are studying with E- Learning in the Philippines during pandemic.

III. DISCUSSION

This study made a descriptive analysis of the collected data to find out the satisfaction of college students in the Philippines with online courses, and then carried out inference analysis on the collected data, namely validity analysis, reliability analysis, correlation analysis and regression analysis.

3.1 Descriptive Analysis

Table 1. Descriptive statistics for each variable

	N	Minimum	Maximum	Mean	Std. Deviation
LM	74	1.00	5.00	3.7905	.82763
PC	74	1.00	5.00	3.0304	.76744
INT	74	1.00	5.00	3.0946	1.04178
SAT	74	1.00	5.00	4.0243	.78055

From the table 1, the mean of job satisfaction is 4.0243, indicating that the student satisfaction among on the students who are studying through E-Learning in the Philippines is high.

3.2 Reliability

Table 2. Reliability Analysis of Each Scale

Factor	Items	CITC	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Perceived Satisfaction	Sat1	.876	.911	0.935
	Sat2	.878	.910	
	Sat3	.856	.916	
	Sat4	.803	.925	
	Sat5	.729	.938	
Learner Motivation	LM1	.886	.846	0.908
	LM2	.750	.895	
	LM4	.771	.888	
	LM5	.763	.891	
Perceived Challenges of E-Learning	PC1	.683	.770	0.828
	PC3	.714	.750	
	PC4	.680	.772	
Interaction	INT1	.863	.888	0.928
	INT2	.868	.884	
	INT3	.829	.914	

From the above table 2, the Cronbach's Alpha coefficients of the variables Student Satisfaction, Learner Motivation, Perceived Challenges of E-Learning, and Interaction studied in this paper are 0.935, 0.908, 0.828, and 0.928, which are all values of each variable are greater than the standard of 0.7, indicating that the variables have good reliability. CITC is greater than the standard of 0.5, indicating that the measurement items meet the research requirements. From "deleting the Cronbach's Alpha value of this item", deleting any item will not cause the Cronbach's Alpha value to increase, which also shows that each scale has good reliability.

3.3 Validity

Table 3. Validity Analysis of Each Variable

Factors	Items	Component	KMO	Approx. Chi-Square	Cumulative %	Sig
Perceived Satisfaction	Sat1	.925	0.872	315.599	79.637	0.000
	Sat2	.927				
	Sat3	.911				
	Sat4	.875				
	Sat5	.819				
Learner Motivation	LM1	.942	0.767	212.677	78.44	0.000
	LM2	.861				
	LM4	.871				
	LM5	.866				
Perceived Challenges of E-Learning	PC1	.861	0.723	82.37	75.028	0.000
	PC3	.878				
	PC4	.859				
Interaction	INT1	.940	0.761	170.999	87.444	0.000
	INT2	.942				
	INT3	.923				

From the above table, it can be known that the KMOs of the variables perceived satisfaction, learner motivation, perceived challenges of E-Learning, and interaction studied in this paper are: 0.872, 0.767, 0.723, and 0.761, respectively, which are greater than 0.7, and the Bartlett's sphericity test value is significant (Sig.<0.05), indicating that the questionnaire data meet the premise requirements of factor analysis.

And the Cumulative values of these four variables were 79.637%, 78.440%, 75.028%, and 87.444%, respectively, all of which were greater than 50%, indicating that the selected four factors were well representative. The factor loadings of each measurement item are all greater than 0.5, and the cross-loading is less than 0.4. Each item falls into the corresponding factor, which indicates that the scale has good construct validity.

3.4 Correlation Analysis

Table 4. Correlation Analysis

	Learner Motivation	Perceived Challenges of E-Learning	Interaction	Perceived Satisfaction
Learner Motivation	1			
Perceived Challenges of E-Learning	.296*	1		
Interaction	.037	.666**	1	
Perceived Satisfaction	.804**	.458**	.130	1

*. Correlation is significant at the 0.05 level (2-tailed).

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

From the table 4, the correlation coefficients of learner motivation, perceived challenges of E-Learning, Interaction and perceived satisfaction are 0.804, 0.458, and 0.130, among which the correlation coefficient of learner motivation, perceived challenges of E-Learning and perceived satisfaction reaches 0.01 Significant level, indicating that there is a significant positive correlation between learner motivation, perceived challenges of E-Learning and perceived satisfaction; while the correlation coefficient between interaction and perceived satisfaction does not reach a significant level, so it can be shown that there is no significant relationship between interaction and perceived Satisfaction.

3.5 Regression Analysis

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.840 ^a	.706	.694	.43190

As shown in the table above, the R is 0.840, and the R-square is 0.706, indicating a good fit, indicating that these variables can explain 70.6% of the student satisfaction variation.

Table 6. Variance Analysis

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	31.418	3	10.473	56.142	.000 ^b
	Residual	13.058	70	.187		
	Total	44.476	73			

From the table 5, the value of the F is 56.142, and P value is 0.000. According to the results of this table, the significance test of the regression equation can be carried out. In this study, the significance level is 0.05. Since the P value is less than 0.05, it can be considered that the regression coefficients are different at the same time as 0, and the linear relationship between the variables is significant, and a linear model can be established.

Table 7. Regression Coefficient Table

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	.741	.281		2.632	.010		
	LM	.673	.066	.713	10.252	.000	.866	1.155
	PC	.326	.095	.320	3.437	.001	.483	2.072
	INT	-.082	.067	-.110	-1.232	.222	.528	1.893

From the table 6, the standardized coefficient β of learner motivation on perceived satisfaction is 0.713, and $P < 0.05$, indicating that learner motivation has a significant positive correlation effect on perceived satisfaction; and the standardized coefficient β of perceived challenges of E-Learning on perceived satisfaction is 0.320, and $P < 0.05$, indicating that perceived challenges of E-Learning has a significant positive correlation effect on perceived satisfaction; the standardized coefficient β of interaction on student satisfaction is -0.110, and $P > 0.05$, indicating that interaction has no significant positive correlation effect on perceived satisfaction. So, hypothesis 1 and hypothesis 2 of this research are accepted, and hypothesis 3 is not accepted

IV. CONCLUSION

This research found out that graduate students in Philippine universities are generally satisfied with E-Learning during the epidemic. This study was based the model that developed by Hettiarachchi et al. (2021) for this research, but there are different results. From the analysis of the collected data, both learner motivation and perceived challenges of E-Learning have a significant positive impact on perceived satisfaction. However, the different is the interaction has no impact on perceived satisfaction. There are previous studies have indicated that students from one cultural context may have different attitudes towards educational interventions that are based on practices in another cultural context (Chang & Tsai, 2005). That is why the results of this research are different with Hettiarachchi et al. (2021). Therefore, more comparative research is needed regarding learners' interaction online and the impacts of cultural differences on student online collaboration (Kim & Bonk, 2002). So, the further research is needed if the students come from another cultural.

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