Students' Acceptance of Online Courses: A test of UTAUT with Eco friendliness in the context of Sri Lankan Higher Education

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Abstract: The study systematically assessed the validity of unified theory of acceptance and use of technology (UTAUT) with independent construct Eco-friendliness in a voluntary environment with respect to Sri Lankan higher education. State university students, who are partaking online learning experience, have considered, as the target population of the research and the model tested with a sample of 348 respondents. A questionnaire with 5-point likert scale has used to obtain data. The regression analysis emphasized the relationships demarcated in the theoretical model of the study. Consequently, the hypotheses substantiated, by highlighting the relationship among antecedents and dependent variable acceptance. The variables, which are greatly influential to augment the level of acceptance of online courses, were filtered, in order to take management decisions.

Keywords: Technology Acceptance, UTAUT, Online Courses, Information Systems, Eco-friendliness

1. Introduction

Online courses are in the middle of the latest teaching and learning trends. The virtual and intangible nature of the online course platform enables students to quickly learn and interconnect academic context by achieving a great degree of knowledge and information coverage, disregarding time limitation and geographical proximity (UUK, 2012a). At the same time, online courses, cost ominously less than the conventional pedagogical method since the need for resources is abridged (HEA, 2012b). Features such as tracking abilities, review competences, costless learning and teaching opportunities and self-paced learning capabilities have made online courses much more advantageous (Marcum, 2014). Regardless of the benefits of online courses, the acceptance of online courses in Sri Lankan state universities, as not as anticipated (Budget Estimation 2016 and 2017). Furthermore, the attrition rates are relatively high in online courses (Abeysekera, and Perera, 2015; Crompton et al. 2016; Hung, 2012). In addition, only insufficient amount of studies on online courses have conducted in Sri Lankan university context. For that reason, the research attempted to classify the critical factors influencing the acceptance of online courses by considering parsimony and giving more attention to external factors.

2. Theoretical background and research model

The Unified Theory of Acceptance and Use of Technology model has considered as the conceptual foundation of the study. Validated constructs, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation and Habit are rooted to the study. In addition, the independent variable eco-friendliness added to the study. The extent of apprehension about the eco-friendly nature of the system has defined as the eco-friendliness (EF; Isaacs, 2015). Performance Expectancy (PE) defines the degree to which the individuals believe that the use of the technologies will results in performance gains. The Effort Expectancy (EE) delineates the degree of ease associated with the use of the system. Facilitation Conditions (FC) explain the students' judgment about the resources, which are offered to use the system. The Social Influence (SI) outlines the level to which students perceive that important others believe that they should do an online course. Hedonic Motivation (HM) describes the satisfaction gained from operating the system, while Habit (HT) states the level that users operate the system automatically, owing to experience. Acceptance or Behavioural Intention (BI) can expresses the extent of the intention to use the facility (Venkatesh et al. 2012).There are eight variables in the theoretical framework including PE, EE, SI, FC, HM, HT, EF and BI. The theoretical model of study releases seven hypotheses in total. First six Hypotheses have proposed based on Venkatesh et al. (2012). The seventh hypothesis is according to Ha & Stoel (2012).

H1: Performance Expectancy arouses the behavioural intention to use online courses.

H2: Effort Expectancy boosts the behavioural intention to use online courses.

H3: Social Influence induces the students' intentions to accept online courses.

H4: Facilitating Conditions positively related to students' intentions to accept online courses.

H5: Hedonic Motivation positively influence on students' intentions to accept online courses.

H6: Habit positively impact on students' intentions to accept online courses.

H7: Students with higher Eco-friendliness are more willing to accept online courses.

3. Data collection

The government university (State University) students currently enrolled in online diploma courses, in Sri Lanka has taken as the target population of the study. 4878 students were selected out of 25 courses among five universities. The sample size was 348 and it was determined in relation to Krejcie and Morgan (1970). The simple random sampling has selected in the study with the benefit of the higher generalizability due to more within the group differences than among group differences, in the Sri Lankan higher educational context (Silva et al., 2013). Respectively, all elements in the population have considered equally as a result of the selected sampling method (Sekaran and Bougie, 2014). The questionnaire established according to the theoretical background and objectives of the study. Prominently, Venkatesh et al. (2012), Venkatesh et al. (2003), Davis (1989) and Ha & Stoel (2012) were considered at the operationalization process. The measuring instrument has derived after the reliability and validity test of the original instrument. The finalized instrument was consisted with two parts (Part 1 and Part 2). Part 1 questions were targeted to obtain the demographic attributes of the respondents. Part 2 focused to test the conceptual framework. All the constructs belong to Part II have measured on five-point Likert-type scale.

4. Data analysis

78.4% students were within the age 20 to 40 while, 67.5 % of were female students. 83% of participants were unmarried and 92.8% were fulltime students. Most of the students (43.1%) were having 1 to 3 years online learning experience while, 64.7% were students. There were 61 workers, 59 executives and 3 top managers within the respondents. At the same time, the weighted means of the variables were scanned to distinguish the peak of the responses to the measuring instrument (questionnaire). Similarly, the mode values and median values were premeditated. Out of the theoretical model variables, all the mean values were above 3. It specifies that the

students were pleased with the services delivered by the educational institutes with related to all eight variables. The lowest mean value was for Social Influence (2.98) and highest for Performance Expectancy (3.54) out of independent variables.

According to the regression coefficient output, the independent variable Social Influence (SI) is having a P-value greater than 0.05 (.546). Therefore, it is not a significant predictor of Online Course Acceptance (BI). At the same time, P-values for PE, EE, HM, HT, FC and EF are having a P-value below 0.05. Hence, the inde-pendent variables, PE, EE, HM, HT, FC and F are significant predictors of BI. When consider the inter-correlations amongst the independent variables in the regression model, no variable represents a variance infla-tion factor (VIF) figure higher than five except UTAUT variable Habit (HT). The VIF of variable HT is slightly above five with 5.83. Mostly, the VIF values, which surpass value seven, viewed as having multicollinearity (Holmbeck, 1997). Henceforth, there is no any severe concern of multicollinearity, with related to model varia-bles. The R-squared value of the stepwise regression increased from 0.713 to 0.846 towards the addition of each independent variables. This describes that the independent constructs (HT, PE, EE, HM, FC and EF) ex-plain 84.6 % of the variation in online courses acceptance (BI). At the same time, the residual plot displays less heteroscedasticity, since the residuals evenly distributed as the prediction moves from small to large. According to the Coefficients (Stepwise Regression), the regression equation explains as follows.

Equation:
$$BI = -1.088 + .462 (PE) + .447 (HT) + .377 (EE) + .217 (HM) + .218 (FC) + .207 (EF)$$

5. Conclusions

This research intended to cultivate an UTAUT model with independent variable Eco-friendliness to predict stu-dents' behavioural intentions with regard to the acceptance of online courses, in the state university context. Most importantly, the linear model of the study explicated that the predictor variable caused 84.6% variance in the dependent variable online courses acceptance. Out of all seven independent constructs, HT, PE, EE, HM, FC and EF are significant predictors of the acceptance of online courses, while the concept SI was not signifi-cant. According to the regression outcomes, the Performance Expectancy (PE) considered as the most influen-tial independent variable, with representing 0.462 change in the acceptance. The lowermost variance triggered by the construct Eco-friendliness (EF) with only 0.207 alteration in the acceptance.

Secondly, as per the residual plot outcomes, the cantered dispersal of the plot of residuals interprets that the estimations and statistical fore-casts are reasonable. At the same time, the homogeneously scattered residuals vary from smallest to largest prediction movement illuminated the less heteroscedasticity with identical variance in the acceptance across the range of values of independent variables. In addition, the less multicollinearity showed with lesser VIF values proves that the model predators are not adversely related each other. Hence, it is possible to claim that the con-ceptual framework is parsimonious. Subsequently, the institutional repercussions based on the study outcome reveal, that the progressions of online course service features with related to performance improvement, easy procedure, facilitation conditions, more practise, motivating topographies and green marketing are imperative to intensify the online course acceptance among Sri Lankan university students.

6. References

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