



Regression Analysis on Factors Influencing Satisfaction towards e-Module using Canva App

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KEYWORDS

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ABSTRACT

The objective of the research is to identify the factors that contribute to student satisfaction towards e-module using Canva app. A questionnaire is distributed among 76 undergraduate UC TATI students. Pearson correlation and regression analysis are used to examine the data. The dependent variable is students' satisfaction towards e-module using Canva App, while the independent variables are effectiveness on independent learning and attitude towards use. The value of Cronbach's Alpha is greater than 0.6 and all the independent variables are significant. The final model is 87.7%, which be explained by the independent variable. These results indicate a strong relationship between the predictors and the overall user experience within the digital learning interface. Furthermore, the different demographic backgrounds of the student may influence their individual expectations and perceptions of the learning experience. This study demonstrates that the implementation of interactive e-module elements sustains student interest, thereby fostering increased motivation and active engagement within independent learning frameworks.

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1.0 INTRODUCTION

The potential of mobile devices and applications to improve educational results and learning experiences has led to a surge in interest in integrating them into learning environments. Mobile learning applications in higher education enhance collaboration, skill development and self-assessment. Their success relies on effective use by instructors and students, positive user attitudes toward technology and the integration of technological and pedagogical supports into learning processes [1]. Students' satisfaction is valuable input for institutions and instructors to enhance the quality of blended learning in the future to optimize students' learning experience [2]. Thus, studies about factors influencing student satisfaction towards online learning have emerged as a critical area of inquiry due to the rapid expansion of online learning platforms and the increasing reliance on digital education.

Gozaly & Yulianti [3] investigated student satisfaction with Maranatha Online Learning (Morning), a Moodle-based Learning Management System (LMS) and identified factors influencing this satisfaction with data processed using Multiple Linear Regression and Descriptive Statistics. The study revealed that dashboard attractiveness, login ease and attendance filling ease significantly give a satisfaction impact for better engagement in online learning. In addition, Yap et al. [4] conducted a Pearson correlation analysis to examine the relationships between instructors, course design, technology, environment and student satisfaction. The results found that course design, technology, instructors and the learning environment are all significant positive predictors of university students' satisfaction with online learning in Malaysia during the COVID-19 pandemic, with course design being the most influential factor.

Meanwhile, Al-Khatib et al. [5] identified interactions, services and technology as the main factors positively influencing online learning satisfaction. The regression analysis discovered that students' satisfaction is significantly dependent on the availability and quality of online learning services, assessment and interaction tools and technology. Furthermore, Thanh et al. [6] utilized the PLS-SEM statistical approach to analyze several variables related to student satisfaction in online learning during the COVID-19 pandemic. They emphasized the critical factors of technology, communication, course structure, learning outcomes and student motivation in fostering satisfaction with online learning among Vietnamese students during the COVID-19 pandemic, while suggesting that instructor attitude and the sudden shift to online learning were not primary drivers of satisfaction.

Azmi et al. [7] employed the Technology Acceptance Model (TAM) to explore student perceptions of e-learning with regression analysis being the chosen method for data interpretation. The regression analysis conducted in this study revealed that perceived usefulness, perceived ease of use, behavioral intention and system usage are key determinants of student satisfaction with digital learning platforms. The overall sentiment towards the e-learning application was positive, with recommendations for improving interaction and attractiveness to boost student engagement. Besides that, Umar et al. [8] investigated the factors influence user's satisfaction on the Unity Hub Web-Based Systems using regression analysis. The results of this research indicated a positive association between perceived usefulness and ease of use in relation to satisfaction in using the system.

Recognizing the importance of course design and visual engagement, this study introduces the factors influencing satisfaction towards e-module using Canva app. This e-module designed attractively and innovatively with visual examples and solutions that explain step by step, as in face-to-face interactions to improve the students' independent learning.

2.0 METHODOLOGY

2.1 Participant Selection and Sampling

The study employed a quantitative research design, focusing on a cohort of 76 undergraduate students from three distinct academic levels: Foundation, Diploma and Bachelor's degree. A convenience sampling technique was employed to select participants based on their accessibility and willingness to participate in the study. This approach allowed for efficient recruitment of respondents who were actively engaged with the educational materials, ensuring a relevant sample for assessing the immediate impact of the e-module (Canva app).

2.2 Research Instrumentation

Data were collected using a structured questionnaire to evaluate the interaction between independent learning and user experience. The instrument was divided into three core dimensions:

Effectiveness of Independent Learning, Satisfaction with Product (E-module Content) and Attitude Towards Use.

To measure respondent perceptions, a 5-point Likert scale was used which range from 1 (Strongly Disagree) to 5 (Strongly Agree). Figure 1 shows the conceptual framework specifically examines two primary independent variables to determine their influence on the dependent variable, satisfaction of product.

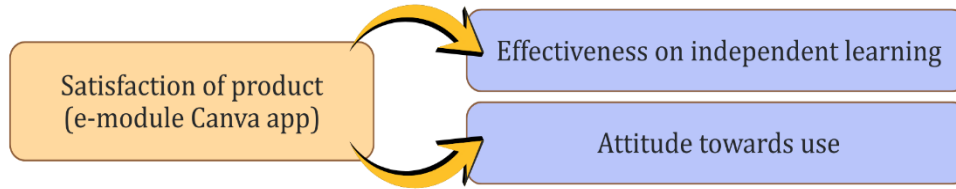


Figure 1: Conceptual Framework

2.3 Data Analysis and Statistical Modelling

The analytical phase was conducted using the Statistical Package for the Social Sciences (SPSS) software. Initial procedures involved a reliability analysis to ensure the internal consistency of the research instrument. Following validation, the data were subjected to Pearson correlation and regression analysis to investigate the relationship and measure the significance between the identified independent factors and the dependent variable, satisfaction of product. This approach aligns with the methodology established by Zakaria et al. [9], who utilized regression analysis to determine the weight of various factors influencing student satisfaction within academic programs.

The predictive relationship derived from the survey data is represented by the following linear model as follows:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 \quad (1)$$

Based on Equation (1), y represents the satisfaction of product, x_1 and x_2 represents the effectiveness on independent learning and attitude towards use, respectively.

3.0 RESULTS AND DISCUSSION

Prior to further data collection in the pilot study, the reliability coefficient Alpha was used to measure the reliability of the construct. The sample for the pilot study comprised of 76 respondents. Table 1 shows the items and Cronbach's Alpha of each item respectively. The value of Cronbach's Alpha value is greater than 0.6 and it is important to note here that all reliability measures exceed the minimum value of 0.6. Therefore, the scale questions are constantly and thus reliable for this research.

Table 1: Cronbach's alpha on reliability test

Factors	No of Items	Cronbach's Alpha
Effectiveness of Independent Learning	5	0.969
Attitude towards use	8	0.971
Satisfaction of product	7	0.963

To investigate the relationship between the dependent variable, satisfaction of product and the following two predictors variable were tested. The variables are effectiveness of independent learning and attitudes towards use. The data were subjected to regression and correlation analysis.

The result is shown in Table 2 which clearly demonstrates that there is a significant relationship between the independent and the dependent variable.

Table 2: Satisfaction of product

Effectiveness on Independent Learning	Pearson Correlation	0.933
	Sig. (2-tailed)	0.000
Attitude Towards Use	Pearson Correlation	0.749
	Sig. (2-tailed)	0.000

N = 76, Note: **Correlation is significant at 0.01 level (2-tailed)

Table 3 shows the coefficient value together with the t-value and the significant value. The result indicated that both variables are significant. Entirely, the model is significant where the significant F is 0.00 that is less than 0.05. The value R-square indicates that 87.7% of the model is being explained by the predictor variable.

Table 3: Regression analysis

Independent Variables	Beta	t-value	Sig.
Constant	0.324	1.740	0.086
Effectiveness on Independent Learning	0.806	13.64	0.000
Attitude Towards Use	0.112	1.866	0.066

N = 76, R-square = 0.877, Adjusted R-square = 0.874, F = 260.268, Significance F = 0.000,
Dependent variable = Satisfaction of Product

Based on the result obtained, the model for the students' satisfaction data were:

$$y = 0.324 + 0.806x_1 + 0.112x_2$$

4.0 CONCLUSION

The result shows that the effectiveness of independent learning and attitude towards use has a high level of satisfaction of product (Canva app). It is also shows that this product contributed positively to students' satisfaction. This is due to the interactive elements of the e-module to motivate their interest. The sufficient activities in the e-module help them to understand the concept better. The e-module materials improved students' ability to retain and recall the information. Students have easy access every day, everywhere and every time using this e-module.

Studies about students' satisfaction have received much attention in past studies. Each study varies from time to time and produces different factors due to the different backgrounds of students. Both factors which is effectiveness on independent learning and attitude towards use are significant. There are limitations to this study. The small sample may not completely represent the majority of students on this campus. Additionally, this study was done at one of the private universities, which may not be representative of all private universities.

Author Contribution

Rozila, Amiratul, Wan Farah, Nur Zahidah, Noor Julailah, Nor Azhariah: Conceptualization, methodology, visualisation and editing.

Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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