

# The Mediating Role of Delight between Trust, Commitment and Loyalty: A Study on Online Distance Learning Higher Education Institutions

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## Abstract

This study explores the mediating role of student delight in the relationship between trust, commitment and student loyalty among online distance learning students in Malaysian higher education institutions. An online survey was conducted among Malaysian students from various online distance learning institutions, which yielded 241 clean data points for data analysis. Structural equation model method was used to analyse the data. The model was developed based on conceptual frameworks and analysed using the Partial Least Square technique. The results show that trust and commitment have a positive and significant direct relationship with student loyalty. In addition, student delight significantly mediates the relationship between trust, commitment, and loyalty among Malaysian online distance learning students. This study emphasises the important role of student delight in fostering student loyalty in an online distance learning environment. It also provides valuable insights for online distance learning institutions, lecturers, and students by exploring the importance of trust and commitment among online students. The findings contribute significantly to understanding the dynamics between trust, commitment, delight, and loyalty in the online distance learning environment. In addition, the study offers practical recommendations for institutions to improve student experiences to ensure long-term loyalty in higher education landscape.

*Keywords:* commitment, higher education, online distance learning, student delight, student loyalty, trust

## 1. Introduction

Higher educational institutions (HEIs) are increasingly seen as commercial enterprises in today. The higher education system must be seen as a service industry in which HEIs act as service providers. Consequently, HEIs should prioritise the needs and wishes of all stakeholders, especially students as their most important external stakeholders. Student loyalty is one of the most important factors contributing to the sustainability of a university. The demands and expectations of students have become increasingly demanding. Students today expect not only high-quality education, but also satisfaction with facilities, infrastructure, and other aspects of the university experience.

Therefore, it is important to understand their desires, needs, and underlying motivations in order to maintain a strong relationship.

A solid student-university relationship can reduce the likelihood of dropping out and promote strong commitment. Students will only express their delight if they are satisfied with and confident in the education they receiving. This delight fosters trust and commitment, which in turn leads to loyalty benefits. Student delight leads to engagement and loyalty, which increase sales, improve product quality, increases customer satisfaction, minimises costs and risks, and increases competitive advantage (Kahn, 2014; Zepke & Leach, 2010). The success of the education sector depends not only on quality of teaching, learning and research, but also on universities utilising these values to meet and exceed student expectations. In addition, one of the strategic goals of sustainability is to attract and retain students through effective practices and meaningful engagements.

## 2. Literature Review

Anderson et al. (1994) mentioned that the student's loyalty results from encounters with and impression of university services. Services include those from of academic staff, course content and acquired skills acquired, which are evaluated and ultimately influence student loyalty. A study by Nettet et al. (2021) also shows that the students' loyalty is also influenced by their perceptions of the university itself. Consequently, universities need to value their good relationship with students in order to improve student loyalty. In contrast, a study by Milliken et al. (2007) found that the declining loyalty of student-customers to education system is worsening the chances of survival for many universities. Since globalisation and the constant battle between all universities, more attention has been paid to this problem. Behr et al. (2020) has also clearly described how the dropout epidemic has become a problem that affects both the national education system, the university and the students themselves. Apart from this, issues such as criminal behaviour, financial hardship and other personal problems are also seen as increasing problems at universities. Therefore, universities must maintain the loyalty of students and fulfil their aspirations in order to remain sustainable among universities.

Trust is the extent to which a student is willing to rely on the institution to take reasonable steps that will benefit them and help them achieve their learning and career goals (Ghosh et al. 2001). Indeed, trust is considered a critical success factor for higher education institutions in an extremely competitive environment (Yousaf, Mishra, & Bashir, 2020). In educational research, trust has been as a unidimensional construct that indicates students' belief in brand attributes and is studied as a process for assessing students' expectations of a brand's reliability in delivering on its promises (Chaudhuri & Holbrook, 2001). Trust and commitment in the student-university relationship create sufficient value (Moreira and Silva, 2015) that maintains competitiveness. Students' trust in higher education institutions' commitment to providing them with the best education leads them to continue using and recommending the brand later (Lim et al., 2020).

Commitment as the perception by one party that the relationship with another is crucial, resulting in every effort being made to maintain it (Morgan & Hunt, 1994). To develop commitment, online distance learning (ODL) colleges should be able to provide the promised quality services and students should appreciate them. This endeavour will indirectly lead to a positive perception of the service and generate customer satisfaction (Bunce et al., 2017). ODL colleges' commitment to the overall quality of services is considered essential to solving students' problems, ensuring similar student retention, and building long-term relationships (Li & Miniard, 2006). Indeed, this commitment provides a strong relationship bond that encourages students to continue their relationship (Ali et al., 2016). If there is a positive trust on the part of the student and a commitment on the part of the higher education institution, both will benefit sufficiently from this relationship (Moreira and Silva, 2015).

This study aims to evaluate the relationship between trust and commitment if fostering student delight and ultimately maintaining student loyalty among Malaysian ODL higher education institutions.

The following hypotheses presented in this study were formulated on the basis of the development outlined above:

- H1: There is a relationship between commitment (COMM) and delight (DEL) of online distance learning higher education institution students.
- H2: There is a relationship between trust (TRU) and delight (DEL) of online distance learning higher education institution students.
- H3: There is a relationship between commitment (COMM) and loyalty (LOY) of online distance learning higher education institution students.
- H4: There is a relationship between trust (TRU) and loyalty (LOY) of online distance learning higher education institution students.
- H5: There is a relationship between delight (DEL) and loyalty (LOY) of online distance learning higher education institution students.
- H6: There is a mediating effect of delight (DEL) on the relationship between commitment (COMM) and loyalty (LOY) of online distance learning higher education institution students.
- H7: There is a mediating effect of delight (DEL) on the relationship between trust (TRU) and loyalty (LOY) of online distance learning higher education institution students.

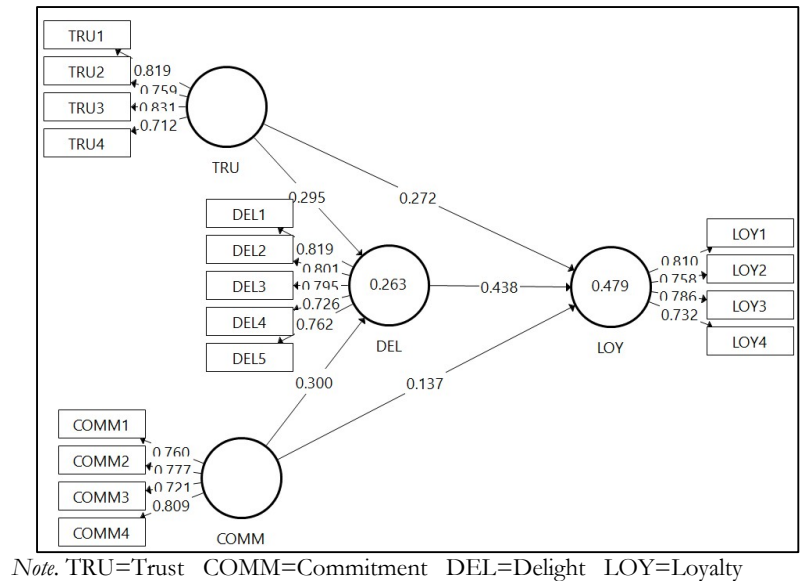


Figure 1. Research Model

### 3. Research Method

This study focussed on students from online distance learning institutes who were selected as survey participants. Primary data was collected using survey instruments. The questionnaires used in the study were carefully designed based on previous studies to ensure reliability and validity. A non-probabilistic snowball method was used and participants received the questionnaire by email. This study included 17 observable variables, including exogenous and endogenous measures. The endogenous variables included the constructs of four-level trust (Zeithaml et al., 1996) and four-level commitment (Kwan, & Ng, 1999). The mediating variable was 5-item enthusiasm (Yang & Lee, 2016) and the dependent variable was 4-item loyalty (Agrawal et al., 2009). Using a 5-point Likert scale ranging from "strongly disagree" to "strongly agree" on the item. 241 were collected of 315 questionnaires were distributed, which corresponds to a response rate of 76.5%. After checking the data and removing outliers, 227 questionnaires remained to be analysed. Smartpls4 software, which uses structural equation modelling (SEM) techniques, was used to analyse the data and test the hypotheses. This choice was made due to the analytical capabilities of the software and its suitability for multivariate data analysis. In addition, the method of model measurements and structural model validation followed the method described by Ringle et al. (2022). With Smartpls4,

researchers can now perform comprehensive multivariate data analysis and effectively test the proposed hypotheses. The software's capabilities enable comprehensive evaluation of measurement and structural models for research purposes.

## 4. Findings and Discussion

This section discusses on the data analysis for this study.

### 4.1. Respondents' Profiles

In this study, 241 people were surveyed, 55.9% of whom were female and 44.1% male. The age distribution showed that 38.8% under 30 years old, 42.3% between 31 and 40 years old, 15.4% between 41 and 50 years old and 3.5% between 51 and 60 years old. In terms of year of study, respondents were fairly evenly spread across the first four years, with the second year of study having the highest percentage (22.9%), closely followed by the third year (22.5%). 64.8% of respondents had a bachelor's degree, 22.9% had a degree, 10.1% had a master and 2.2% had a doctorate. In terms of employment, 49.8% were employed in the public sector, 37.9% in the private sector, 9.7% were unemployed and 2.6% were self-employed.

### 4.2. Common Method Bias

Harman's one-factor test was used, revealing that only 41.2% of the variance was attributed to the main factor, indicating no significant common method bias in this study.

### 4.3. Outer Model Assessment

The Partial Least Square (PLS) -SEM algorithm was used to assess the reliability and validity of the constructs. Average variance extracted (AVE) for all constructs was between 0.589 and 0.611, exceeding the threshold of 0.5, confirming convergence validity. Table 1 also shows that the composite reliability of all constructs is between 0.851 and 0.887. The values of Cronbach's alpha, as suggested by Hair et al. (2017), were between 0.767 and 0.840. The discriminant validity was determined by analysing the cross-loadings of the measured variables. This showed that all items had a higher loading than their respective cross-loadings (Table 2). To further confirm the discriminant validity, the heterotrait-monotrait ratio (HTMT) was further analysed, which confirmed that all items were below the threshold value of 0.9 (Table 3). HTMT procedure is a recommended criterion for investigating discriminant validity in variance-based structural equation modelling (VB-SEM) (Henseler et al., 2015). As a result, all potential components proposed by Hair et al. (2014) were effectively tested for reliability and effectiveness in this study.

**Table 1.** Construct Reliability & Validity

	CA	CR	AVE
COMM	0.767 (0.710, 0.812)	0.851 (0.820, 0.977)	0.589 (0.533, 0.641)
DEL	0.840 (0.796, 0.876)	0.887 (0.859, 0.910)	0.610 (0.551, 0.668)
LOY	0.775 (0.715, 0.820)	0.855 (0.822, 0.881)	0.596 (0.537, 0.648)
TRU	0.787 (0.728, 0.831)	0.862 (0.828, 0.888)	0.611 (0.547, 0.664)

Note. CA=Cronbach Alpha CR=Composite Reliability AVE=Average Square Root

**Table 2.** Cross Loadings

	COMM	DEL	LOY	TRU
COMM1	<b>0.760</b>	0.338	0.305	0.251
COMM2	<b>0.777</b>	0.269	0.361	0.279
COMM3	<b>0.721</b>	0.378	0.386	0.571
COMM4	<b>0.809</b>	0.359	0.359	0.348
DEL1	0.424	<b>0.819</b>	0.535	0.423
DEL2	0.375	<b>0.801</b>	0.463	0.347
DEL3	0.314	<b>0.795</b>	0.423	0.285
DEL4	0.273	<b>0.726</b>	0.483	0.290
DEL5	0.325	<b>0.762</b>	0.499	0.352
LOY1	0.408	0.562	<b>0.810</b>	0.506
LOY2	0.392	0.378	<b>0.758</b>	0.375
LOY3	0.327	0.469	<b>0.786</b>	0.389
LOY4	0.296	0.478	<b>0.732</b>	0.347
TRU1	0.387	0.318	0.390	<b>0.819</b>
TRU2	0.381	0.340	0.364	<b>0.759</b>
TRU3	0.373	0.316	0.371	<b>0.831</b>
TRU4	0.366	0.381	0.500	<b>0.712</b>

**Table 3.** Hetrotrait-Monotrait (HTMT) Ratio

	COMM	DEL	LOY
DEL	0.540 (0.380, 0.680)		
LOY	0.593 (0.450, 0.732)	0.752 (0.637, 0.853)	
TRU	0.603 (0.489, 0.709)	0.527 (0.391, 0.646)	0.655 (0.519, 0.771)

#### 4.4. Structural Model

Both the pathway coefficients ( $\beta$ ) and the coefficient of determination ( $R^2$ ) values were assessed to evaluate the structural model. The relevant results are presented in Table 4.

Hypothesis 1, the statistical analysis result showed that the relationship between commitment (COMM) and delight (DEL) is strongly supported, with a significant beta coefficient of 0.300 ( $p < 0.001$ ). The high t-statistic of 3.938 further confirms the strength and statistical significance of this relationship. Hypothesis 2, the statistical analysis result showed that the relationship between trust (TRU) and delight (DEL) also receives strong support, with a significant beta coefficient of 0.295 ( $p < 0.001$ ). The t-statistic of 4.481 indicates a high level of statistical significance, highlighting the importance of trust in influencing delight outcomes. Hypothesis 3, the statistical analysis result showed that the relationship between commitment (COMM) and loyalty (LOY) shows marginal significance, with a beta coefficient of 0.137 ( $p = 0.047$ ). Although the t-statistic of 1.987 is relatively lower than the previous hypotheses, it still indicates a discernible relationship between commitment and loyalty. Hypothesis 4, the statistical analysis result showed that the relationship between trust (TRU) and loyalty (LOY) receives strong support, with a significant beta coefficient of 0.272 ( $p < 0.001$ ). The high t-statistic of 4.653 further underscores the importance of trust in fostering customer loyalty. Hypothesis 5, the statistical analysis result showed that the relationship between delight (DEL) and loyalty (LOY) is strongly supported, with a significant beta coefficient of 0.438 ( $p < 0.001$ ). The high t-statistic of 7.048 emphasizes the crucial role of delight in influencing customer loyalty. Hypothesis 6, the statistical analysis result showed that delight (DEL) mediated the relationship between commitment (COMM) and loyalty (LOY) demonstrating a significant beta coefficient of 0.131 ( $p = 0.002$ ). The t-statistic of 3.154 indicates that the mediating effect of delight on the relationship between commitment and loyalty is statistically significant. Hypothesis 7, the statistical

analysis result showed that delight (DEL) mediated the relationship between trust (TRU) and loyalty (LOY) which is strongly supported, with a significant beta coefficient of 0.129 ( $p < 0.001$ ). The t-statistic of 3.844 confirms the statistical significance of this mediating relationship. The study's analysis yielded significant findings that provided strong support for the majority of the hypotheses, confirming the relationships between the variables under investigation.

A summary of the hypothesis testing outcomes is presented in Table 4, which includes the effect size, a measure of the magnitude of an effect independent of the sample size. In this study, Cohen's criteria (1992) were employed to assess the effect sizes, categorizing them as small (0.020 to 0.150), medium (0.150 to 0.350), or large (0.350 or greater). The observed effect sizes in this study ranged from small (0.025) to large (0.272). Table 5 presents the values of the intrinsic value inflation factor (VIF), all of which were below the less strict threshold of 5. The highest VIF value observed is 1.429. This level of collinearity ensures that meaningful comparisons of sizes and interpretation of coefficients can be made in the structural model. The results of the analysis revealed a significant amount of variance explained by the endogenous construct, with an  $R^2$  value of 0.479, as shown in Figure 1.

#### 4.5. Predictive Analysis

Mediator of the model accounted for approximately 26.3% of the variance in the structure, as indicated by an  $R^2$  value of 0.263. To assess the model's ability to make inferences and provide management suggestions, an out-of-sample predictive analysis was conducted using the PLS predict method, as described by Shmueli et al. (2016, 2019). The predictions made by PLS-SEM outperformed the standard naive mean predictions, as indicated by  $Q^2$  predictions higher than 0 in Table 6. Furthermore, the root mean square error (RMSE) values of the PLS-SEM predictions were lower than those of the linear model (LM) prediction benchmark in all nine instances, demonstrating the predictive power of the proposed model (Table 6).

#### 4.6. Importance-Performance Map Analysis (IPMA)

Importance Performance Analysis (IPMA) was recommended for evaluating the significance and effectiveness of latent variables in explaining acceptance by Ringle and Sarstedt (2016) as well as Hair et al. (2018).

**Table 4.** Hypotheses Testing Results &  $f^2$

Hypotheses	Beta	T Statistics	P Values	$f^2$	2.50%	97.50%	Decision
COMM -> DEL	0.300	3.938	0.000	0.093	0.142	0.437	<i>Supported</i>
TRU -> DEL	0.295	4.481	0.000	0.090	0.156	0.415	<i>Supported</i>
COMM -> LOY	0.137	1.987	0.047	0.025	0.004	0.276	<i>Supported</i>
TRU -> LOY	0.272	4.653	0.000	0.099	0.156	0.379	<i>Supported</i>
DEL -> LOY	0.438	7.048	0.000	0.272	0.312	0.557	<i>Supported</i>
COMM -> DEL -> LOY	0.131	3.154	0.002		0.059	0.218	<i>Supported</i>
TRU -> DEL -> LOY	0.129	3.844	0.000		0.068	0.201	<i>Supported</i>

**Table 5.** Collinearity Statistics (VIF Inner Value)

	DEL	LOY
COMM	1.308	1.429
DEL		1.356
TRU	1.308	1.426

**Table 6.** PLS Predicts

	PLS RMSE	LM RMSE	PLS-LM	Q <sup>2</sup> _predict
DEL1	0.6	0.604	-0.004	0.221
DEL2	0.621	0.632	-0.011	0.161
DEL3	0.693	0.701	-0.008	0.1
DEL4	0.725	0.746	-0.021	0.089
DEL5	0.611	0.628	-0.017	0.139
LOY1	0.612	0.619	-0.007	0.269
LOY2	0.614	0.623	-0.009	0.181
LOY3	0.659	0.667	-0.008	0.161
LOY4	0.72	0.734	-0.014	0.126

**Table 7.** Importance-Performance Map Analysis (IPMA)

	LOY	Perf
COMM	0.268	62.635
DEL	0.438	61.943
TRU	0.401	64.362

The results in Table 7 show that the overall impact, delight exhibited the strongest influence on loyalty (0.438), followed by trust (0.401), and commitment (0.268). These values indicate the relative importance of each latent variable within the recruitment context. Performance scores show that trust achieved the highest score (64.362), while delight had the lowest score (61.943) on a scale ranging from 0 to 100. This indicates that delight performed well of total effects but had the lowest level of performance. Despite delight being the most crucial factor for loyalty, it exhibited the lowest performance level.

Based on these findings, ODL higher education institutions should prioritise activities that enhance student delight to boost the overall performance and loyalty.

#### 4.7. Discussion

The study reveals strong relationships between key factors affecting student loyalty in ODL higher education institutions. Commitment and trust are both significantly linked to delight, which in turn has a powerful impact on loyalty. While commitment demonstrates a marginal positive effect on loyalty, trust shows strong support, highlighting the importance of building trusting relationships with students. Delight acts as a crucial mediator in these relationships, underscoring its role in enhancing loyalty. Despite delight being identified as the most influential factor for loyalty, its performance score is relatively low, indicating a need for institutions to improve student experiences. Overall, prioritizing initiatives that enhance delight can lead to improved student loyalty and institutional success.

### 5. Conclusion

This study has provided valuable insights into the factors that influence student loyalty in Malaysian online distance learning (ODL) higher education institutions. The data analysis revealed several key findings regarding the relationship between trust, commitment, delight, and loyalty among ODL students. It is evident that ODL higher education institutions should prioritise enhancing student delight to foster loyalty. By focusing on improving the aspects that contribute to student delight, institutions can significantly boost the overall performance and ensure the sustainability of their programs. Trust and commitment remain essential components, but their impact is maximised when combined with strategies aimed at increasing student delight. In conclusion, this study contributes significantly to the understanding of the dynamics between trust, commitment, delight and loyalty in the ODL environment.

It provides practical recommendations for institutions to enhance student experiences, thereby ensuring long-term loyalty and success in the competitive landscape of higher education.

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