



## Student engagement, brand image and loyalty relationships: The mediating role of student satisfaction

Abu Rashed Osman<sup>1</sup>

Mohd Hasanur Raihan Joarder<sup>2</sup>

Md. Kazimul Hoque<sup>3</sup>

Jakowan<sup>4</sup>



(✉ Corresponding Author)

<sup>1</sup>Faculty of Business, Sohar University, Sohar, Oman.

<sup>1</sup>Email: [aosman@su.edu.om](mailto:aosman@su.edu.om)

<sup>2,3,4</sup>School of Business & Economics, United International University, Bangladesh.

<sup>2</sup>Email: [Raihan.joarder@bus.uui.ac.bd](mailto:Raihan.joarder@bus.uui.ac.bd)

<sup>3</sup>Email: [kazimul@bus.uui.ac.bd](mailto:kazimul@bus.uui.ac.bd)

<sup>4</sup>Email: [jakowan@bus.uui.ac.bd](mailto:jakowan@bus.uui.ac.bd)

### Abstract

The aim of this study is to explore the relationship between student engagement, brand image, student satisfaction and loyalty. Furthermore, the study intends to explore the mediating role of student satisfaction in the relationship between engagement and loyalty as well as brand image and loyalty in the context of higher education. A representative sample of 296 students from the three best private universities in Dhaka has been gathered in order to test the hypotheses. The study demonstrates that brand image has a favorable impact on student satisfaction while student engagement has no influence on student satisfaction. The results show that loyalty is heavily influenced by the student satisfaction construct. When there is no mediation between student engagement and loyalty, a complete mediation is recognized when student satisfaction is a mediator between brand image and student loyalty. The study also reveals that there is a negative correlation between student engagement and satisfaction. The results of the research definitely improve brand perception which keeps students engaged to their higher education.

**Keywords:** Brand image and loyalty, Student engagement, Student satisfaction.

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### Contents

1. Introduction .....	312
2. Literature Review .....	313
3. Conceptual Framework and Theoretical Base .....	314
4. Research Methodology .....	314
5. Results .....	315
6. Discussion .....	317
7. Conclusion .....	318
References .....	318

### Contribution of this paper to the literature

The mediating role of student satisfaction is a pragmatic initiative in the relationship between engagement and loyalty and brand image and loyalty. Thus, it contributes to some extent to the current literature. Additionally, the present study's results will offer valuable perspectives on how students' views of satisfaction are statistically influencing the relationship between brand image and loyalty.

## 1. Introduction

Academics have examined customer loyalty in great depth as a way to increase customer satisfaction in the service industry and as a strategic objective for businesses (Shin, Hwang, Lee, & Cho, 2015). According to Kang, Song, and Hwang (2013) the behavioral intention of a student such as pride in their university, actively promoting their classes and recommendations from friends is referred to as loyalty. As a result, universities that want to hold onto their students through graduation could consider student loyalty to be a crucial success indicator for their business. According to earlier research, factors including engagement (Cynthia, 2018) student satisfaction (Hartono & Tjahjadh, 2019; Rik & Sudeepta, 2019) service quality, motivation, satisfaction, trust and commitment are all precursors of loyalty (Lee & Lee, 2018; Rodríguez-Ardura & Meseguer-Artola, 2017; Song & Kim, 2012).

Academic engagement comes when students become so involved in their studies that they become emotionally and mentally engaged in the material. Engagement in the classroom extends beyond "surface learning" (Hattie, 2003). Engagement is not merely connected to memorizing the course materials and completing the requirements to earn a passing grade. It engages students in challenging cognitive tasks such as idea analysis and comprehension, justification of processes and meaning inference. It involves social engagement with peers and the teacher whereby ideas, opinions and support are shared. Students are more satisfied with their whole educational experience when they assess their personal pleasure as high (and have an internal locus of control). According to Dean and Gibbs (2015), satisfied students spend more time studying on their own and outside of scheduled classes. In this context, student engagement in the learning process can be linked to higher levels of student satisfaction which is a substantial contributor to profound happiness.

Student satisfaction is heavily dependent on fostering a sense of community and belonging. Developing the message in a way that highlights the institution's support of achievement by students and value for each individual student (Leece, 2014). First-year students in particular become upset and apprehensive due to a number of processes and systems in the campus's brand-new setting. These problems can be resolved by forging close, long-term bonds with the school and its professors (Bowden, 2013). A student's enthusiasm for studying is boosted by strong relationships which also make learning more pleasurable. According to Bowden (2013) a crucial element in keeping students in school after their first year is having a sense of belonging. Recently, Christopher et al. (2016) stated that there was no statistically significant relationship between student engagement and overall satisfaction. This unfavorable finding inspires us to explore this relationship further. Moreover, the research failed to confirm the considerable influence of engagement on student loyalty and satisfaction (Zandivuta, Ngwira, Sepula, & Kapute, 2023).

Student satisfaction is one of the most crucial factors that needs to be carefully considered in order to ensure both the retention of current students and the enrollment of new ones. Student loyalty is dependent on their level of satisfaction. Numerous studies have found that one of the primary elements influencing student loyalty is satisfaction (Dib & Alnazer, 2013; Kumar & Yang, 2014). According to Pop, Todea, Partenie, and Ott (2020) and Degtjarjova, Lapina, and Freidenfelds (2018) students are a university's most significant stakeholders. They choose other courses at the same university and tell others about them if they are satisfied.

Purgailis and Zaksa (2012) have suggested that when an organization has a favorable brand image, there are two factors at action: people are more willing to recommend popularizing the organization name which can draw in new students. Additionally, students who have faith in the expertise and caliber of the organization's services are inclined to return for more. According to the empirical research conducted by Alkhawaldeh, Alsaad, Taamneh, and Alhawamdeh (2020) student satisfaction is positively and significantly impacted by brand image. According to recent empirical research by Cuesta-Valiño, Gutiérrez-Rodríguez, and Núñez-Barriopedro (2022) brand image and customer pleasure are the key elements that influence loyalty. A consumer's perception of a brand helps them pinpoint their unique requirements and determine the appropriate means of expressing their satisfaction with the brand (Hsieh, Pan, & Setiono, 2004). In this context, Thomson (2002) pointed out that effective branding sends a clear message to both present and prospective students about the caliber and legitimacy of the academic institution. A school's positive reputation might also encourage student loyalty. This aligns with research conducted by Bakrie, Sujanto, and Rugaiyah (2019) as well as Shamsavar and Sudzina (2017). However, it contradicts research by Mallika and Torii (2019).

It is clear from the aforementioned discussions that a university must promote student involvement, satisfaction, brand image and loyalty in order to survive in the very competitive field of higher education. We observed extensive research about student satisfaction, school image and loyalty (Ghosh, Whipple, & Bryan, 2001), service quality, student satisfaction and student loyalty (Chandra, Ng, Chandra, & Priyono, 2018), service quality, institutional image, student satisfaction, and student loyalty (Wijaya, Junaedi, & Hocky, 2021), service quality, university image, student satisfaction, and loyalty (Chandra, Hafni, Chandra, Purwati, & Chandra, 2019), brand image, brand love, and brand loyalty (Mahothan, Laohavichien, Srivardhana, & Lertlop, 2022), image and loyalty (Hassan et al., 2020; Qomariah, Budiastuti, Sanosra, Susbani, & Budisatoto, 2020), service quality, university image and student satisfaction towards student loyalty (Cahyono, Purwanto, Azizah, & Wijoyo, 2020). Most of the above-mentioned studies showed that direct, straight-forward relationships in a single construct were scarce. An integrated model of student engagement, student satisfaction, brand image and loyalty is still scarce in the South Asian context. Moreover, the mediating role of satisfaction in student engagement and loyalty is also scarce in nature. More precisely, the study's first objective is to establish the relationships between student engagement, brand image, student satisfaction, and loyalty whereas the second objective is to determine the mediating role of satisfaction in determining engagement and loyalty and brand image and loyalty.

## 2. Literature Review

### 2.1. Loyalty

According to Yadav and Singh (2018), customer loyalty is a more or less psychological feeling that binds a customer to specific products, services or corporate organizations. It can also be seen as a promise to repurchase favorite products or services on a regular basis in the future (Fauzi & Suryani, 2019). According to Mai and Dam (2021), a brand's loyalty to a client gives it a stable or growing market share and competitive advantage because devoted customers will keep buying items. Customers that are brand loyal will pay more for that brand stick with it and refer others to it. (Hiranrithikorna, Jermisittiparsertb, & Joemsittiprasertd, 2019).

### 2.2. Customer Satisfaction

"Customer satisfaction" is the assessment of pre-buy expectations for a product and the results realized subsequent to the purchase (Lemon, White, & Winer, 2002). According to Kotler's (2000) definition, a very satisfied client is one who makes more purchases provided the company produces new products, enhances its old ones and gives positive feedback about the company and its offerings.

### 2.3. Student Engagement

According to Briggs (2015), other ways to characterize student engagement include the degree of curiosity they show, how they engage with other students in the class and how committed they are to study the material. Students are more likely to be engaged in their education when they are driven to perform well in their classes, involved in or invested in their desire to learn and prepared to put in the work required by their teachers (Mandernach, Donnelly-Sallee, & Dailey-Hebert, 2011). Several studies have highlighted that student engagement is a predictor of loyalty and students should stand out among them (Giner & Rillo, 2016; Maslowska, Malthouse, & Collinger, 2016).

### 2.4. Brand Image

The term "brand image" originated from the idea of "experiential marketing." Marliawati and Cahyaningdyah (2020) state that customer perceptions of a specific brand serve as the foundation for brand image. Furthermore, a number of studies have shown that brand image positively affects marketing structures including brand equity, brand satisfaction, brand trust, brand loyalty and willingness to pay a premium price (Jamshidi & Rousta, 2021; Munir, Humayon, Ahmed, Haider, & Jehan, 2017). In terms of customer loyalty, strong recommendations from current students are frequently enough to catch the attention of potential students at a certain school. As a result, a school's brand image has a significant impact on student identification and values as well as their willingness to enroll (Palacio, Meneses, & Pérez, 2002).

### 2.5. Student Engagement and Student Satisfaction

When students are encouraged to participate in academic activities, their grades and satisfaction improve (Smith, Lange, & Huston, 2012; Strang, 2017). Gray and DiLoreto (2016) found that student satisfaction had a statistically significant impact on student involvement ( $\beta = 0.951$  at the  $p = 0.01$  level). Several prominent authors assert that student engagement at the classroom level can lead to healthier approaches to student satisfaction (Baldwin & Koh, 2012; Budge, 2011). Student satisfaction in the classroom is inextricably linked to student engagement which affects overall student persistence indirectly but significantly (Juillerat, 1995). As a result, a hypothesis can be summarized as follows:

*H1: There is a positive relationship between student engagement and student satisfaction.*

### 2.6. Brand Image and Student Satisfaction

Students' degree of satisfaction is greatly affected by a unique brand image (Panda, Pandey, Bennett, & Tian, 2019). Private higher education institutions must have a strong brand image in order to be considered in the brand consideration set. Establishing the private university's brand is crucial to its long-term existence (Plungpongpan, Tiangsoongnern, & Speece, 2016). In this regard, Chen (2016) correctly noted that a university's brand image is essential to its survival and expansion. Nevertheless, it appears that there aren't many research discussing how important student satisfaction and brand perception are Yang, Zhang, and Zou (2015). Therefore, this revision tried to minimize this gap in higher education institutions. Recently, Alkhawaldeh et al. (2020) empirically proved that brand image positively and significantly influences student satisfaction in higher education ( $\beta = 0.656$ ,  $p \leq 0.01$  level). Thus, the hypothesis can be formulated in this manner:

*H2: There is a positive relationship between brand image and student satisfaction.*

### 2.7. Student Satisfaction and Loyalty

Customer satisfaction and service quality have been demonstrated to be positively correlated in traditional marketing research (Lee, Lee, & Kang, 2012) and both possess significance for retaining customers (Bowen & Chen, 2001; Mosahab, Mahmud, & Ramaya, 2010). According to Helgesen and Nettet (2007) findings, there exists a statistical relationship between student satisfaction and loyalty. An explicit relationship between customer pleasure and loyalty may be shown in the model constructed by Shekarchizadeh, Rasli, and Hon-Tat (2011). Studies have shown that one of the most important indicators of loyalty is customer satisfaction (Alves & Raposo, 2010; Ryu, Lee, & Kim, 2012; Vikrant & Ali, 2020). Higher education research has also demonstrated the relationship between student loyalty and satisfaction (Arif & Ilyas, 2013; Palacio et al., 2002). According to Zandivuta et al. (2023) student loyalty is strengthened by student happiness. Therefore, the hypothesis can be formulated in this manner:

*H3: There is a positive relationship between student satisfaction and loyalty.*

### 2.8. Mediating Role of Satisfaction between Student Engagement and Loyalty

Annamdevula and Bellamkonda (2016) proposed a mediation model that links service quality and student loyalty through student satisfaction in a survey of the three oldest state universities in India. Few other researchers considered student satisfaction as a mediator in different constructs such as Su, Swanson, and Chen (2016) between corporate reputation and customer loyalty and Bekk, Spörrle, Landes, and Moser (2017) between brand personality and loyalty. This study considered student satisfaction as a mediating variable in the construct of student engagement and loyalty which is a rare attempt from the perspective of higher education.

*H4a: There is a mediating role for student satisfaction between student engagement and loyalty.*

### 2.9. Mediating Role of Satisfaction between Brand Image and Loyalty

According to Mallika and Torii's (2019) study findings, loyalty is significantly impacted by student happiness. They also provided evidence that loyalty is indirectly influenced by image. A review of studies by Brown and Mazzarol (2009) and Helgesen and Nettet (2007) revealed that student loyalty is directly and favorably impacted by a university's reputation. Additionally, they emphasized how strongly student satisfaction mediates the association between student loyalty and university image. In this regard, Chao (2015) said that consumer loyalty is established through a variety of mediators including brand image and satisfaction. According to Barnes, Mattsson, and Sørensen (2014), loyalty is best described by integrating satisfaction with additional variables like brand image, while satisfaction alone cannot predict loyalty. As a result, hypotheses can be arranged as follows:

*H4b: There is a mediating role for student satisfaction between brand image and loyalty.*

## 3. Conceptual Framework and Theoretical Base

We created our hypothesized model based on Crosby, Evans, and Cowles's (1990) theoretical framework connecting service relationships to organizational outcomes through the perspective of social exchange theory. Building and maintaining relationships with consumers is a clear focus of the relationship and service management literature (Bowden, 2009; Grönroos, 1994; Gummesson, 1994). Relationships between the service provider and the customer are crucial in order to generate engagement and loyalty (Zeithaml, Bitner, & Gremler, 2009).

Engagement has a favorable impact on students' participation in extracurricular, social and academic activities. As a result, engagement is seen as essential for achieving successful academic outcomes like degree completion as well as for demonstrating the outcomes of positive relationships between students and their educational faculty or staff, namely, student engagement and supportive behavior outside of the classroom (Connell & Wellborn, 1991). The term "student loyalty" can also be used to describe the latter (Bowden, 2009).

Several conventional marketing variables were regularly tested in marketing research (Sureschandar, Rajendran, & Anantharaman, 2002). These variables are thought to comprise brand loyalty and include service quality (Hsu, Chang, & Chen, 2012; Van Dun, Bloemer, & Henseler, 2011), trust (Han & Jeong, 2013), brand image and student satisfaction (Nguyen & Nguyễn, 2022). Nonetheless, it is thought that the previously listed antecedents of brand loyalty have less of an influence on the formation of brand loyalty (Oliver, 1999). Its influence is limited because there are other elements that also contribute to the formation of brand loyalty (Hemsley-Brown & Alnawas, 2016; Menidjel, Benhabib, & Bilgihan, 2017).

According to the substantial literature review, student engagement and brand image are two independent latent variables that have an impact on student loyalty. Figure 1 displays the conceptual framework and linkages between the latent variables used in this study.

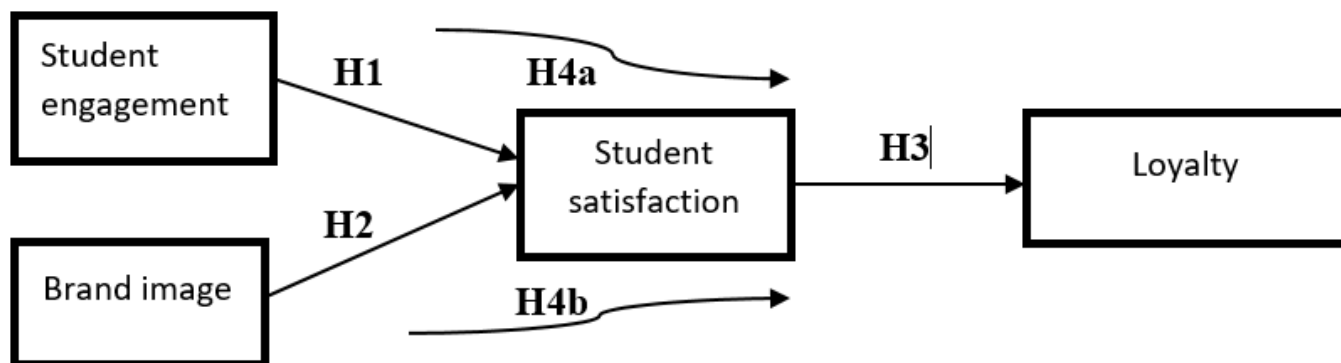


Figure 1. Conceptual model of student loyalty.

## 4. Research Methodology

### 4.1. Research Design

The study used a quantitative design methodology. The design was selected since the goal of the study is to look at the relationships between brand image, loyalty, student happiness and engagement. According to Sekaran and Bougie (2013) the research design serves as an overview for collecting, measuring and analyzing data. Since the study is quantitative, a self-designed questionnaire was given for gathering data. According to Singh, Chan, and Sidhu (2006) the questionnaire is an important and popular instrument for data collection. It is suitable to be used as a tool to extract information and responses from a particular group of people.

### 4.2. Data Collection Strategies

Data were collected during a regular class session at North South University, Brac University and United International University, the top three private universities in Dhaka in the presence of a faculty member and a research assistant. Students received assurances during the session on the anonymity and confidentiality of their responses as well as information about the study's aims. After that, everyone received instructions on how to fill out the questionnaires and all of the questions were addressed. Students willingly completed the paper-based

questionnaires within 10 minutes. A cross-sectional survey study was conducted in Dhaka City, Bangladesh, in June 2023. The participants were selected using the convenience sampling method. This study gathered a total of 296 responses.

4.3. Instruments

The study used four items from Eom and Ashill (2016) to examine the exogenous variable of student involvement. The study used five items from Caruana (2002) to test the loyalty variable. The seven most crucial elements for evaluating satisfaction among students were taken from Douglas, Douglas, and Barnes (2006). The present study employed the concept of brand image provided by Park, Jaworski and MacInnis (1986) and classified it into three dimensions: usefulness, experience and symbolic. The functionality dimension was adopted from Del Rio, Vazquez, and Iglesias (2001). The experiential dimension was adopted from Sweeney and Soutar (2001) and symbolism was adopted from Tsai (2005). A total of seven items were included in measuring brand image.

4.4. Data Analysis

After all the data collection, we used SPSS 22 for data analysis. Descriptive statistics and Pearson correlations were conducted. Instrument reliability was determined by the Cronbach alpha value. Tests for concept validity, multicollinearity and normality were performed before the final fit model was implemented. A bootstrapping technique was used to obtain a bias-corrected 95% confidence interval with 5,000 re-samples by using PLS-SEM (partial least squares structural equation modeling) for mediation and moderation analysis.

5. Results

5.1. Socio-Demographic Data

The survey was completed by 296 students in total, 165 of whom were men and 131 of whom were women, in June 2023. Student participation from public universities was 104 (35.1%) and student participation from private universities was 192 (64.9%). In terms of student status, 126 (42.6%) are 3<sup>rd</sup> year students and 170 (57.4%) are 4<sup>th</sup> year students. Most of the students’ majors were business (89.2%) and the rest were engineering, computer science, and others, for a total of 10.8%. GPA (grade point average)-related information discloses that less than 3.0 is 24%, between 3.0 and 3.49 is 45.6% and 3.5 and above is 30.4%. Students’ HSC (higher school certificate) background information discloses that 256 (86.1%) came from Bangla medium instruction, and the rest of the students (13.9%) came from A level, English version and Madrasa. Scholarship-related information reveals that 37.2% of students are enjoying scholarships or financial benefits. Table 1 demonstrates the demographic attributes of respondents.

Table 1. Distribution of socio-demographic variables.

Demographic traits	Item	Frequency	Percentage
Gender	Male	165	55.7
	Female	131	44.3
University type	Public	104	35.1
	Private	192	64.9
Student status	3 <sup>rd</sup> year	126	42.6
	4 <sup>th</sup> year	170	57.4
Major	Business	264	89.2
	Engineering	3	1
	Computer science	16	5.4
	Others	13	4.4
GPA	Less than 3.0	71	24
	3.0-3.49	135	45.6
	3.5 and above	90	30.4
HSC background	Bangla medium	256	86.1
	English version	8	2.7
	A level	32	10.8
	Madrasa	1	0.3
Scholarship	Enjoying	110	37.2
	Not enjoying	186	62.8

5.2. Testing Reliability and Convergent Validity

Composite reliability was used to guesstimate internal steadiness (Netemeyer, Bearden, & Sharma, 2003) and convergent validity was to be assessed by AVE (Fornell & Larcker, 1981). The lowest values were at least 0.70 for composite reliability and 0.50 for average variance extracted (Fornell & Larcker, 1981; Hair, Hult, Ringle, & Sarstedt, 2017).

The results of convergent validity and reliability were presented in Table 2. It may be inferred from Table 2 that every concept met the necessary conditions to be compelling and consistent. Cronbach alpha is used to estimate instrument trustworthiness and the minimum value as suggested by Hair et al. (2017) is 0.70, which is met by each construct of this study.

According to Hair, Anderson, Babin, and Black (2010) a few factor loadings from student happiness, brand image and loyalty were eliminated since their values were less than 0.60.

**Table 2.** Reliability and convergent validity (based on CFA).

Factors	Items	Loadings	Cronbach alpha	CR	AVE
Student engagement	Engage1	0.868	0.905	0.933	0.778
	Engage2	0.893			
	Engage3	0.860			
	Engage4	0.905			
Student satisfaction	Sat1	0.853	0.903	0.940	0.840
	Sat2	0.948			
	Sat3	0.946			
Brand image	Func1	0.837	0.825	0.871	0.580
	Func2	0.872			
	Func3	0.831			
	Symb1	0.622			
	Symb2	0.605			
Student loyalty	SL2	0.888	0.916	0.929	0.768
	SL3	0.930			
	SL4	0.910			
	SL5	0.767			

**5.3. Testing Discriminant Validity**

Fornell-Larcker criteria were used to test the discriminant validity at the construct level. According to Hair et al. (2017) the bold diagonal values were predicted to be higher than the square root of the AVE construct indicating that the relationship to itself should be greater than the correlation between other constructs. The Fornell-Larcker values ranged from 0.762 to 0.917 and all met the discriminant validity requirements at the concept level as shown in Table 3.

**Table 3.** Fornell and Larcker discriminant validity.

Variables	Engagement	Brand image	Satisfaction	Loyalty
Engagement	<b>0.882</b>			
Brand image	0.654	<b>0.762</b>		
Satisfaction	0.497	0.738	<b>0.917</b>	
Loyalty	0.703	0.624	0.510	<b>0.876</b>

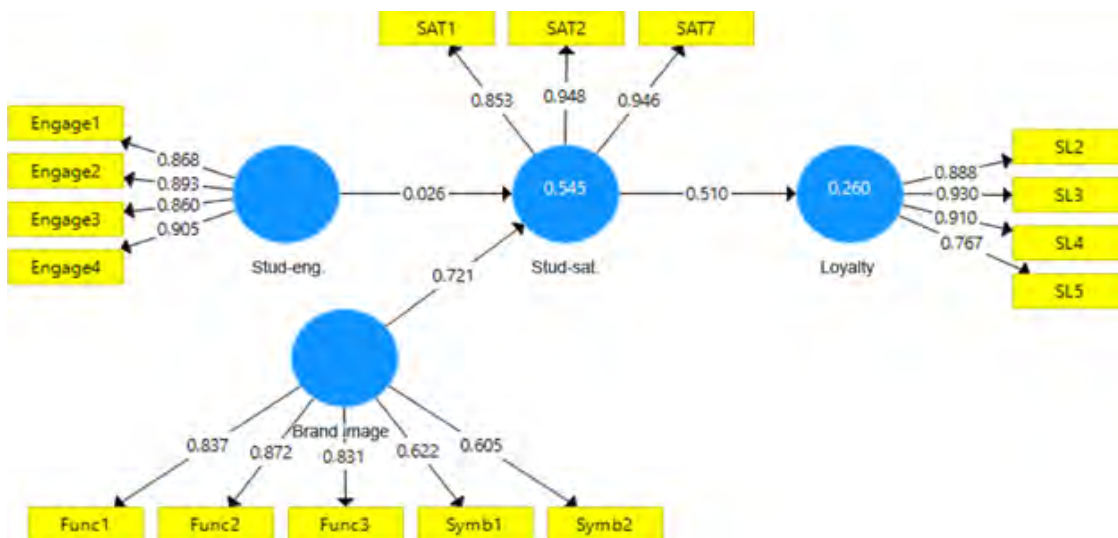
The heterotrait-monotrait ration (HTMT) which was developed by Henseler, Ringle, and Sarstedt (2015) as a novel criterion for assessing discriminant validity was defined as the average correlations of indicators in several constructs in comparison to the average correlations of indicators within the same construct. Kline (2015) suggested a maximum value of 0.85 for the HTMT cutoff point. The HTMT values shown in Table 4 therefore fell short of the cutoff.

**Table 4.** HTMT for discriminant validity.

Constructs	1	2	3	3
Student engagement	-			
Student satisfaction	0.540	-		
Student loyalty	0.780	0.560	-	
Brand image	0.772	0.797	0.774	-

**5.4. Path Analysis**

Figure 2 shows the findings of the final route analysis which were acquired using PLS-SEM software. According to a previous study by Kline (2015) the structural equation model method is popular because it can show flexible regression and correlations on a single model and test. It is also a pragmatic approach to investigating the interaction and mediation effects (Lei, Ha, & Le, 2020). Thus, this study employed structural equation modeling with maximum likelihood estimation processes to evaluate the suggested assumptions. Once the validity and reliability of the measurement model have been established, the major results for the hypotheses are depicted in Tables 2, 4, and 5.



**Figure 2.** Demonstration of the final fit model.

We now adhere to the five-step process recommended by Hair et al. (2017). We initially looked for multi-collinearity among the predictors of the client-student loyalty variable using the variance inflation factor (VIF). According to Hair et al. (2010) multi-collinearity is a problem that needs to be addressed if the VIF value of any exogenous variable is higher than 5.0. In this study, there is no multi-collinearity because all of the exogenous variables' VIF values are lower than the suggested values such as 1.748, 1.000 and 1.748.

Second, the statistical significance of the path coefficients was examined using the bootstrap technique with 5000 samples. Two relationships (H2 and H3) are shown to be significant at the level of  $p \leq 0.05$  in Table 4 and Figure 2, but H1 is not. H4 is not statistically significant when the indirect effect is taken into consideration; however, H5 is significant at the  $p \leq 0.01$  level.

Third, R2 values were computed to ascertain the extent to which the independent variables might explain the variance in the dependent variable. The R2 values are 0.260 for loyalty and 0.545 for satisfaction, respectively. In other words, independent variables accounted for 54.5% of the variation in satisfaction and 26% of the variation in loyalty.

Fourth, the  $f^2$  (effect size) statistic indicates whether one concept significantly influences another. According to Cohen (1988) guidelines, the following numbers indicate low, medium and large effects of an independent hidden parameter on a dependent hidden parameter: 0.02, 0.15, and 0.35. The study results indicate that the effect size of student engagement is 0.001, brand image is 0.654 and student satisfaction is 0.352. These figures fully satisfy the requirements of Cohen (1988).

The blindfolding method recommended by Henseler, Ringle, and Sinkovics (2009) was used to test the predictive relevance ( $Q^2$ ) in the end. According to academic sources, the model is guaranteed to have predictive relevance given that the value of  $Q^2$  is above zero (Hair et al., 2017). According to the outputs, the endogenous variables loyalty and satisfaction have  $Q^2$  values of 0.451 and 0.195 which are more than zero and demonstrate the model's sufficient significance.

5.5. Hypothesis Analysis: The Institute for Advanced Research at United International University, Bangladesh is acknowledged by the authors for providing financial assistance for the publication of this article.

Table 5 demonstrates that student engagement is not statistically significant over student satisfaction because  $\beta=0.026$ , and  $p=0.658$ . Thus, hypothesis (H1) is not supported by the results. Conversely, brand image is statistically influencing student satisfaction because  $\beta=0.721$  and  $p=0.000$  level. Thus, hypothesis (H2) is supported by the results.

Table 5. Summary of direct path analysis.

Hypothesis	Direct relationship	Coefficients	SE	T-statistics	P value	Status
H1	Eng → Sat	0.026	0.058	0.442 <sup>NS</sup>	0.658	Not accepted
H2	Img → Sat	0.721	0.048	14.994 <sup>**</sup>	0.000	Accepted
H3	Sat → Loyal	0.510	0.045	11.429 <sup>**</sup>	0.000	Accepted

Note: <sup>\*\*</sup>Significant at  $p \leq 0.01$ , NS = Not significant, Eng = Engagement, Img = Image, Sat = Satisfaction loyal = Loyalty.

5.6. Mediation Model

The mediation analysis was conducted using bootstrapping with 5,000 iterations and the outcomes are shown in Table 6. The mediation role of satisfaction in the relationship between student engagement and loyalty was not confirmed,  $\beta=0.013$ ,  $p=0.657$ (H4a). However, Table 6 and Figure 2 demonstrate that student satisfaction plays a mediating role between brand image and loyalty ( $\beta=0.368$ ,  $p=0.000$ (H4b).

Table 6. Summary of indirect path analysis.

Indirect path	Coefficients	SE	T-statistics	P values	Status
H4a: Eng → Sat → Loyal	0.013	0.029	0.444 <sup>NS</sup>	0.657	No mediation
H4b: Img → Sat → Loyal	0.368	0.038	9.70 <sup>**</sup>	0.000	Full mediation

Note: <sup>\*\*</sup>Significant at  $p \leq 0.01$ , NS = Not significant, Eng = Engagement, Img = Image.

6. Discussion

The path coefficient of 0.026 with a p value of 0.658 indicates that student involvement is related to satisfaction among students. Thus, there is no discernible relationship between student participation and satisfaction. This result is in line with Christopher et al.'s (2016) study. Recently, Zandivuta et al. (2023) failed to support the idea that student engagement positively influences student satisfaction. The finding is rather unusual for the researchers. One possible explanation for this might be the wide variations in how students in this country view their level of satisfaction. In this connection, students' emotional connection to the university should be explored to increase active engagement and satisfaction.

Brand image towards student satisfaction shows a path coefficient of 0.721 with a p value of 0.000. This implies that brand image is significantly influencing student satisfaction. This outcome is consistent with a study conducted by Alkhalwaleh et al. (2020) which states that brand image significantly affects student satisfaction. The study conducted by Kumar, Dalla Pozza, and Ganesh (2013) is also consistent with the current study's findings. Therefore, higher education leaders should be concerned with developing a brand image that will ensure satisfaction for learners and commercial viability. A significant point to note is that students are paying close attention to brand image and think it has some effect on satisfaction.

Student satisfaction towards loyalty shows a path coefficient of 0.510 with a p value of 0.000. This states that student satisfaction is significantly influencing loyalty which means hypothesis H3 is supported by the study. This outcome is consistent with those of a number of researchers (Lee et al., 2012; Vikrant & Ali, 2020; Zandivuta et al., 2023). This finding may imply that students consider satisfaction as a decisive point of loyalty and they are pretty pragmatic about satisfaction and loyalty.

In terms of hypothesis H4a for mediation analysis, we found that the indirect path is not significant, thus student satisfaction is not actually mediating between student engagement and loyalty. According to Table 5, the PLS-SEM output shows that the path coefficient is 0.013 with a p value of 0.657. Thus, the mediation effect is absent in this construct. This is a rare attempt to validate it; thus, more investigations are needed in the future to reject or accept the hypothesis.

The study finds that the indirect path is significant whereas the direct path is not significant when the mediation analysis is tested for hypothesis H4b. As a result, the PLS-SEM output reveals that the path coefficient is 0.368 and the p value is 0.000 indicating that the mediation is fully achieved, according to Table 5. This study confirms the earlier findings (Han, Back, & Barrett, 2009). Although brand image does not affect loyalty directly, it does affect student loyalty after it has affected student satisfaction (Brodie, Whittome, & Brush, 2009). Student satisfaction and brand image are therefore essential elements in tertiary education for ensuring loyalty.

## 7. Conclusion

The primary goal of the study is to examine the relationships between student involvement, brand image, satisfaction and loyalty. Additionally, in the context of higher education, the study aims to ascertain how student satisfaction mediates the relationships between brand image and loyalty as well as engagement and loyalty. The current study reveals that H2, H3, and H4b are statistically significant and accepted by the results of the study. In hypothesis H2, brand image is positively influencing student satisfaction, and brand image becomes the proven construct for student satisfaction. In hypothesis H3, a significant positive influence was found between student satisfaction and loyalty which has the predictive power to explain loyalty. Student satisfaction has a stronger ability to explain student loyalty with respect to hypothesis H4b, since the study suggests that satisfaction mediates the relationship between brand image and loyalty. It is pleasant to mention here that brand image is not directly influencing loyalty. Hypothesis one is not significant and it is not accepted by the study which means that student engagement is not influencing student satisfaction; thus, university leaders should investigate seriously why this variable is producing trackless findings. Why are students not enjoying their participation in various academic activities? This finding is inconsistent with the study conducted by Strang (2017). Another insignificant hypothesis is H4a. It explains that student satisfaction is incapable of mediating between student engagement and loyalty. This is also an unusual finding for future researchers, creating scope to validate the relationship. The results of this study will enable educational organizations that seek to improve student satisfaction and loyalty through brand image. In general, measures should be taken to diminish the disappointing factors of student engagement and satisfaction.

### 7.1. Suggestions

The study emphasizes the significance of comprehending students' behavior in relation to educational services. The three variables that were found to be important predictors of students' loyalty may be used by universities to create efficient marketing plans to draw in and keep the student body at the best private universities in Bangladesh. The study lends credence to the notion that a thorough comprehension of the relationships between student engagement, brand image, satisfaction and loyalty enables higher education management to implement more effective strategies for focusing on and enhancing performance. It's interesting to observe how student satisfaction greatly affects brand image and loyalty. Educational researchers and university administrators ought to classify influential factors of student satisfaction and loyalty according to how significant they are in the current environment in order to strengthen the university's position in the highly competitive higher education market and draw in more funding and students. It is crucial to recognize and satisfy their needs to make students satisfied and devoted as well as to help them become leaders in the higher education industry. Additional research is needed to look into the effects of demographic and personality traits on students in order to make sound decisions and succeed in the fiercely competitive higher education market. This study's findings are only the initial phase of the process. This study's limitation arises from the fact that it only included three private universities. Therefore, subsequent research will require applying it to other national and international higher learning institutions in order to obtain a deeper knowledge of student engagement and brand image as indicators of student happiness and loyalty. In the future, researchers can validate the relationship between student satisfaction and loyalty through the moderating impact of brand image. In this study, cross-functional research methodology has been implemented, and as a result, generalizations of the findings are doubtful. Finally, the sample used in this study could possibly hinder the generalization of the findings compared with those of studies conducted with a larger sample size and a wider scope.

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