**Journal of Marketing & Social Research**

**ISSN (Online): 3008-0711**

**Volume: 02 | Issue 09 | 2025**

Journal homepage: https://jmsr-online.com/

**Research Article**

# Rethinking Quality Signals: How Service Quality Components Shape Image, Value, and Alumni Loyalty in Indian B-Schools

**Kusuma Bathula[1] and Dr P. Umamaheswari Devi[2]**

[1]Associate Professor, Department of Management Science, Sasi Institute of Technology& Engineering, Tadepalligudem- 534101

[2]Research Supervisor, DCMS, Adikavi Nannaya University, Rajamahendravaram, Andhrapradesh - 533296

**Received: 10/09/2025; Revision: 25/09/2025; Accepted: 18/10/2025; Published: 06/11/2025**

***Corresponding author: Kusuma Bathula *(battulakusuma@gmail.com)***

**Abstract**: This study examines how service quality dimensions in Indian business schools influence institutional image, perceived value, student satisfaction, and alumni give-back intentions. Using PLS-SEM analysis of data from 536 management students across South Indian states like Telangana, Tamilnadu, Karnataka. The research tests an integrated model linking five service quality dimensions—academic aspects, infrastructure, technology, placements, and industry collaborations—to behavioral outcomes through the Stimulus-Organism-Response framework. Results reveal asymmetric effects: academic aspects, infrastructure, technology, and placements significantly enhance institutional image, while infrastructure, technology, placements, and industry collaborations drive perceived value. Notably, academic quality influences image but not perceived value, whereas industry collaborations show the reverse pattern. Student satisfaction emerges as a crucial mediator, translating institutional image (β=0.167) and perceived value (β=0.091) into give-back intentions. The findings demonstrate that contemporary management students evaluate educational value primarily through employability outcomes and technological sophistication rather than traditional academic metrics alone.

**Keywords**: service quality, institutional image, perceived value, student satisfaction, alumni engagement, give-back intentions, business education, PLS-SEM, India, higher education.

## INTRODUCTION

Business schools today operate not merely as academic institutions but as competitive service organizations navigating globalized, market-driven, and digitally transformed environments (Valencia-Arias et al., 2023). In this context, higher education performance is increasingly evaluated not only through academic excellence but also through the overall value delivered to students and other stakeholders (Kamakoty & Singh, 2023). Globally, research underscores the close interdependence between educational service quality and alumni engagement. High-quality learning experiences, supportive administrative systems, and visible employability outcomes contribute to perceived institutional value, which in turn fosters affective commitment and loyalty (Brown & Mazzarol, 2009). Institutional image—the collective perception of an institution's credibility and social standing—acts as a mediating bridge connecting service quality to behavioral outcomes such as donations and advocacy (Ali et al., 2018). Existing studies in higher education service quality have predominantly drawn on SERVQUAL and SERVPERF frameworks (Parasuraman et al., 1988; Cronin & Taylor, 1992), focusing largely on Western or Southeast Asian contexts. These models have illuminated how service quality dimensions affect satisfaction and retention, but they remain insufficiently contextualized for India's management education ecosystem, which is marked by heterogeneous ownership structures, variable accreditation standards, and highly competitive placement expectations (Kamakoty & Singh, 2023; Venkatesh et al., 2023).

The present study develops an integrated model that links service quality, perceived value, institutional image, and satisfaction to explain alumni give-back intentions among Indian management graduates. By embedding these constructs within a single empirical framework, the study aims to clarify how service experiences during the academic phase shape post-graduation engagement and advocacy. Specifically, the investigation explores how distinct dimensions of service quality—academic rigor, infrastructure, technology, placements, and industry collaboration—affect perceived value and institutional image, how satisfaction mediates these relationships, and how delivery modes (traditional versus digital) contextualize these dynamics.

The study makes three key contributions.Theoritically, it integrates cognitive, affective and behavioral dimensions into a unified framework linking student experience to alumni engagement.Methodically, it applies structural modeling to test direct and mediating relationships, ensuring replicable results. Practically it offers insights for institutional to enhance service quality, value, image and satisfaction to strengthen alumni loyalty and financial commitment.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### 2.1 Service Quality in Business Schools

Service quality in higher education has evolved from early gap-based models (e.g., SERVQUAL) to context-specific

frameworks such as HEdPERF and HESQUAL that better capture academic environments. In business schools, service quality is increasingly viewed as a multidimensional construct encompassing both academic and non-academic elements. Studies reveal that while dimensions such as faculty competence, curriculum relevance, technology, infrastructure, and placement support consistently predict satisfaction and loyalty, the antecedents of these perceptions remain underexplored (Sohail & Shaikh, 2004; Bagur-Femenias et al., 2020). In particular, external factors such as pre-enrolment experiences, institutional image, and the university's societal orientation—especially sustainability and social responsibility—have been insufficiently examined. Recent evidence underscores that business school students interpret service quality primarily through employability, technological readiness, and engagement with industry, aligning quality with tangible career outcomes (Kamakoty & Singh, 2023; Valencia-Arias et al., 2023). Accordingly, this study identifies academic aspects, infrastructure, technology, placements, and industry collaborations as the key dimensions shaping service quality in business education and aligns these dimensions are critically important as how management graduates perceive these facets as components of educational excellence.

### 2.1.1 Academic aspects

The academic dimension denotes the core pedagogical elements that constitute the learning offer: curriculum content and relevance, teaching competence, assessment practices, and the quality of student–faculty interactions. Research consistently shows that these components influence both cognitive appraisals (perceptions of value and employability) and affective responses (emotional attachment and trust). High-quality instruction and industry-aligned curricula signal intellectual rigor and practical utility, enhancing students' confidence in the institution and raising perceived return on investment (Sharif & Lemine, 2021; Singh & Jasial, 2020; Karanjekar et al., 2019). However, cross-national evidence indicates boundary conditions: in some contexts institutional reputation or non-academic facilities can temporarily outweigh pedagogy in shaping satisfaction, underscoring that academic quality operates within a broader ecosystem of signals and expectations (Ahmad & Kawtharani, 2021; Kardoyo et al., 2019).

### 2.1.2 Infrastructure

Infrastructure comprises the physical and organizational resources that enable the educational process—classrooms and laboratories, libraries, learning support, administrative services, and campus amenities—as well as the institutional processes that govern their use. Empirical work identifies infrastructure as a visible cue of institutional commitment and a practical enabler of learning; superior facilities reduce transactional friction, support student resilience, and improve day-to-day engagement (Valencia-Arias et al., 2023b; Kamakoty & Singh, 2023). Studies from diverse settings link infrastructure quality to higher satisfaction and reduced switching intentions, particularly where alternatives are plentiful and price competition is intense (Pekkaya et al., 2023; Agu, 2022).

### 2.1.3 Up-to-date technology

Technology refers to the suite of digital platforms, system quality, information flows, and user-facing services that support instruction, assessment, communication, and institutional branding. Post-pandemic studies emphasise that technological robustness (system stability, usability, information quality) is a precondition for effective hybrid or online modalities and a determinant of student satisfaction and persistence (Idkhan & Idris, 2023; Zaidi et al., 2023; Drwish et al., 2023). Beyond functionality, technology shapes institutional image: well-designed websites, interactive learning environments, and AI-enabled services signal modernity and responsiveness, strengthening perceived credibility (Afif, 2023; Popli et al., 2022).

### 2.1.4 Placements

Placement outcomes capture the degree to which an institution converts educational inputs into tangible labour-market returns—job offers, salary premiums, and career progression. In management education, placement performance is often the dominant signal of institutional effectiveness and return on investment, strongly shaping prospective and current students' choice and satisfaction (Venkatesh et al., 2023; Kamakoty & Singh, 2023). Placements also materialize the psychological contract between students and institutions: effective placement support fulfils an implicit promise of employability, thereby building trust and loyalty (Kaushal & Goyal, 2020; Crawford et al., 2020).

### 2.1.5 Industry collaboration

Industry collaboration encompasses formal and informal linkages with firms—guest lectures, joint curriculum design, internships, sponsored research, and technology transfer—that embed practice-relevance into academic programmes. Such partnerships serve multiple functions: they enhance curriculum currency, create experiential learning opportunities, and provide direct pipelines to employers, thereby improving employability and institutional legitimacy (Klafke et al., 2023; Soam et al., 2023). Research indicates that well-structured collaborations not only upskill students but also generate reputational spillovers—firms' innovation gains reflect positively on partner universities (Yin et al., 2023; Kalnbalkite et al., 2023).

## 2.2 Hypothesis Development

This study develops an integrative model linking key service-quality factors—academic aspects, infrastructure, technology, placements, and industry collaborations—to institutional image, perceived value, student satisfaction, and give-back intentions in business schools.

### 2.2.1 Service Quality Factors and Institutional Image

H1: Academic aspects positively influence the institutional image of higher education institutions.
H2: Infrastructure positively influences the institutional image of higher education institutions.
H3: Up-to-date technology positively influences the institutional image of higher education institutions.
H4: Placement performance positively influences the

institutional image of higher education institutions. H5: Industry collaborations positively influence the institutional image of higher education institutions.

### 2.2.2 Service Quality Factors and Perceived Value

- H6: Academic aspects positively influence students' perceived value of higher education institutions.
- H7: Infrastructure positively influences students' perceived value of higher education institutions.
- H8: Up-to-date technology positively influences students' perceived value of higher education institutions.
- H9: Placement performance positively influences students' perceived value of higher education institutions.
- H10: Industry collaborations positively influence students' perceived value of higher education institutions.

### 2.2.3 Institutional Image, Student Satisfaction, and Give-Back Intentions

- H11: University/Institute image has a positive relationship with student satisfaction.
- H12: University/Institute image has a positive relationship with students' give-back intentions.

### 2.2.4 Perceived Value, Student Satisfaction, and Give-Back Intentions

- H13: Perceived value has a positive relationship with student satisfaction.
- H14: Perceived value has a positive relationship with students' give-back intentions.

### 2.2.5 Student Satisfaction and Give-Back Intentions

- H15: Student satisfaction positively influences give-back intentions.

### 2.2.6 Mediating Role of Student Satisfaction

- H16: Student satisfaction mediates the relationship between institutional image and give-back intentions.
- H17: Student satisfaction mediates the relationship between perceived value and give-back intentions.

## METHODOLOGY

### 3.1 Study Area: South India( Hyderabad, Chennai, Banglore)

The study was conducted in south India three major educational hubs of India, all characterized by diverse management institutions and strong linkages with industry. South India, houses a concentration of UGC- recognized and AICTE- approved universities, encompassing public, private, and autonomous B-schools. Its institutional diversity makes it ideal for analyzing varied student expectations, academic experiences, and placement outcomes.

### 3.2 Study Measures

All items were assessed on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) to capture respondents' evaluations. Nine components made up the questionnaire. The key research constructs: Academic Aspects was measured using 11 items adapted from Abdullah (2006) and Binh et al. (2025), infrastructure was measured using six items modified from the original scale items of Abdullah (2006) and De Carvalho et al. (2023), Up-to-Date Technology was measured using five items taken from De Carvalho et al. (2023) and Baig et al. (2023), Placements was measured with five items; Venkatesh et al., 2023), Industry Collaborations was measured using four items from Arredondo-Soto et al. (2020), University/Institute Image was measured using five items taken from Sunaryo et al. (2022), Perceived Value was measured by taking six items from Al-Abdullatif (2023), Student Satisfaction was measured using five items from Binh et al. (2025) and Masa'deh et al. (2022), and Give-Back Intentions was measured using six items from Masa'deh et al. (2022).

A pilot survey was conducted by involving 43 management students to confirm the reliability and comprehensibility of the instrument, following the recommendations of Sarstedt et al. (2021).

### 3.3 Sampling

The present study covers 536 valid responses comfortably exceeded the recommended thresholds, ensuring adequate statistical power and model stability for the proposed structural analysis.

## RESULTS

### 4.1 Common Method Bias and Robustness Checks

Before drawing our conclusions, we ensured the robustness of our results by testing them under various conditions as given by Newbert et al. (2022). To validate our findings, two robustness checks were conducted.

First, we assessed the normality of the data, as extreme non-normality can distort results despite PLS-SEM being robust to such deviations (Hair et al., 2017; Sarstedt et al., 2022). According to guidelines by Hair et al. (2017), skewness values for all items ranged from -0.712 to 0.008, and kurtosis values ranged from -0.742 to 0.355. These values fall within the acceptable range of −2 to +2, suggesting no significant departures from normality.

Then, the potential issue of common method bias (CMB), which may occur when data is collected from a single source using a uniform instrument, was addressed. To assess the presence of CMB, multicollinearity diagnostics were conducted. The variance inflation factor (VIF) values for all items ranged from 1.494 to 3.021, which is well below the recommended threshold of 3.3 proposed by Kock (2015). These results indicate that common method bias is not a significant concern in this study.

### 4.2 Result of Measurement Model

Prior to testing the hypothesized structural relationships, the measurement model (see Table 2) was evaluated to ensure the reliability and validity of the reflective constructs. The first step involved assessing indicator reliability by examining the outer loadings, which indicate the standardized strength of association between each observed item and its latent construct (Henseler et al., 2015). Outer loadings are essential for determining how well indicators represent their underlying constructs. According to Hair et al. (2017), a loading of 0.70 or higher is considered satisfactory, indicating that more than 50% of the indicator's variance is explained by the construct. Items with loadings between 0.40 and 0.70 may be retained based on theoretical justification, while those below 0.40 are generally removed (Hair et al., 2012).

In this study, outer loadings ranged from 0.465 to 0.873 across constructs, with most items exceeding the 0.70 threshold, confirming strong indicator reliability. A few items, namely PV5 (0.465), IN5 (0.569), IN6 (0.552), UT4 (0.646), SS5 (0.638), and AA8 (0.683), recorded slightly lower lodgings. However, these were retained as their removal did not substantially enhance composite reliability or convergent validity, and they were conceptually important for maintaining content validity. Overall, the measurement model demonstrated satisfactory indicator reliability, warranting the inclusion of all items for subsequent analyses. Next, internal consistency reliability and convergent validity were assessed. Internal consistency was evaluated using Cronbach's Alpha and Composite Reliability (CR), which reflect the degree to which indicators consistently measure the same construct. Cronbach's Alpha assumes equal item loadings and is thus more conservative, while CR offers a more accurate estimation in PLS-SEM contexts (Hair et al., 2021). Recommended threshold values of 0.70 and above indicate acceptable reliability, with values exceeding 0.80 and 0.90 signifying good and excellent reliability, respectively (Hair et al., 2017). In this study, Cronbach's Alpha values ranged from 0.819 to 0.931 and CR values from 0.870 to 0.941, confirming strong internal consistency across all constructs.

Convergent validity, assessed using the Average Variance Extracted (AVE), indicates the extent to which indicators share a high proportion of common variance. An AVE value of 0.50 or higher demonstrates acceptable convergent validity (Fornell & Larcker, 1981). The AVE values in this study ranged from 0.534 to 0.686, establishing that each construct explained more than half of the variance in its observed variables. Collectively, these results affirm that the measurement model exhibits both reliable and valid indicators, ensuring robust construct measurement and supporting its suitability for further structural analysis.

Following this, as shown in Table 3 and Table 4, discriminant validity was tested to confirm that each construct was empirically distinct and captured unique dimensions of the model. Establishing discriminant validity ensures that latent variables are more strongly related to their own indicators than to other constructs (Fornell & Larcker, 1981; Hair et al., 2017). Two standard approaches—the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio—were applied (Henseler et al., 2015). Under the Fornell–Larcker criterion, the square root of each construct's AVE exceeded its inter-construct correlations, indicating that each construct shared more variance with its indicators than with other constructs. Similarly, all HTMT values were below the conservative threshold of 0.85, confirming discriminant validity.

**Table 1. Measurement Model**

| Factors | Items | Loadings | Cronbach's Alpha | CR (rho_c) | AVE |
|---|---|---|---|---|---|
| **Academic Aspects (AA)** | AA1 | 0.832 | 0.931 | 0.941 | 0.594 |
| | AA2 | 0.757 | | | |
| | AA3 | 0.795 | | | |
| | AA4 | 0.804 | | | |
| | AA5 | 0.771 | | | |
| | AA6 | 0.809 | | | |
| | AA7 | 0.811 | | | |
| | AA8 | 0.683 | | | |
| | AA9 | 0.789 | | | |
| | AA10 | 0.704 | | | |
| | AA11 | 0.703 | | | |
| **Infrastructure (IN)** | IN1 | 0.806 | 0.819 | 0.87 | 0.534 |
| | IN2 | 0.851 | | | |
| | IN3 | 0.794 | | | |
| | IN4 | 0.758 | | | |
| | IN5 | 0.569 | | | |
| | IN6 | 0.552 | | | |
| **Up to Date Technology (UT)** | UT1 | 0.836 | 0.851 | 0.894 | 0.63 |
| | UT2 | 0.837 | | | |
| | UT3 | 0.797 | | | |
| | UT4 | 0.646 | | | |
| | UT5 | 0.836 | | | |
| **Placements (PL)** | PL1 | 0.845 | 0.848 | 0.897 | 0.686 |

| | | | | | |
|---|---|---|---|---|---|
| | PL3 | 0.826 | | | |
| | PL4 | 0.837 | | | |
| | PL5 | 0.805 | | | |
| **Industry Collaborations (INC)** | INC1 | 0.807 | 0.826 | 0.884 | 0.656 |
| | INC2 | 0.826 | | | |
| | INC3 | 0.833 | | | |
| | INC4 | 0.772 | | | |
| **University/Institute Image (IMG)** | IMG1 | 0.873 | 0.865 | 0.903 | 0.652 |
| | IMG2 | 0.791 | | | |
| | IMG3 | 0.811 | | | |
| | IMG4 | 0.72 | | | |
| | IMG5 | 0.835 | | | |
| **Perceived Value (PV)** | PV1 | 0.776 | 0.827 | 0.875 | 0.545 |
| | PV2 | 0.824 | | | |
| | PV3 | 0.781 | | | |
| | PV4 | 0.73 | | | |
| | PV5 | 0.465 | | | |
| | PV6 | 0.795 | | | |
| **Students Satisfaction (SS)** | SS1 | 0.839 | 0.819 | 0.874 | 0.584 |
| | SS2 | 0.801 | | | |
| | SS3 | 0.808 | | | |
| | SS4 | 0.718 | | | |
| | SS5 | 0.638 | | | |
| **Give Back Intentions (GBI)** | GBI1 | 0.834 | 0.87 | 0.906 | 0.658 |
| | GBI2 | 0.811 | | | |
| | GBI3 | 0.832 | | | |
| | GBI4 | 0.776 | | | |
| | GBI5 | 0.801 | | | |

**Table 2. Discriminant validity: Heterotrait-Monotrait (HTMT) ratio**

| Constructs | AA | IN | UT | PL | INC | IMG | PV | SS | GBI |
|---|---|---|---|---|---|---|---|---|---|
| **AA** | | | | | | | | | |
| **IN** | 0.522 | | | | | | | | |
| **UT** | 0.561 | 0.533 | | | | | | | |
| **PL** | 0.649 | 0.583 | 0.718 | | | | | | |
| **INC** | 0.588 | 0.5 | 0.673 | 0.818 | | | | | |
| **IMG** | 0.74 | 0.648 | 0.848 | 0.76 | 0.635 | | | | |
| **PV** | 0.421 | 0.59 | 0.581 | 0.681 | 0.652 | 0.487 | | | |
| **SS** | 0.508 | 0.482 | 0.625 | 0.588 | 0.595 | 0.742 | 0.595 | | |
| **GBI** | 0.583 | 0.633 | 0.686 | 0.726 | 0.869 | 0.66 | 0.659 | 0.74 | |

*Note: AA: Academic Aspects; In: Infrastructure; UT: Up to Date Technology; PL: Placements; INC: Industry Collaborations; IMG: University/Institute Image; PV: Perceived Value; SS: Students Satisfaction; GBI: Give Back Intentions*

**Table 3. Discriminant validity: Fornell-Larker Criterion**

| Constructs | AA | IN | UT | PL | INC | IMG | PV | SS | GBI |
|---|---|---|---|---|---|---|---|---|---|
| **AA** | 0.77 | | | | | | | | |
| **IN** | 0.463 | 0.731 | | | | | | | |
| **UT** | 0.503 | 0.46 | 0.794 | | | | | | |
| **PL** | 0.578 | 0.501 | 0.61 | 0.828 | | | | | |
| **INC** | 0.520 | 0.425 | 0.567 | 0.685 | 0.81 | | | | |
| **IMG** | 0.665 | 0.56 | 0.731 | 0.651 | 0.54 | 0.808 | | | |
| **PV** | 0.377 | 0.5 | 0.493 | 0.584 | 0.549 | 0.409 | 0.739 | | |
| **SS** | 0.446 | 0.406 | 0.52 | 0.493 | 0.492 | 0.625 | 0.488 | 0.764 | |
| **GBI** | 0.530 | 0.549 | 0.592 | 0.624 | 0.738 | 0.573 | 0.567 | 0.629 | 0.811 |

*Note: AA: Academic Aspects; In: Infrastructure; UT: Up to Date Technology; PL: Placements; INC: Industry Collaborations; IMG: University/Institute Image; PV: Perceived Value; SS: Students Satisfaction; GBI: Give Back Intentions*

### 4.3 Result of Structural Model

Following the validation of the measurement model, the structural model was examined to assess the hypothesized relationships among latent constructs. Table 5 highlights both the direction and strength of causal paths between variables as well as the

model's explanatory and predictive power (Sarstedt et al., 2019). The analysis employed a bootstrapping procedure with 5,000 resamples to estimate path coefficients (β), standard errors, and confidence intervals, allowing robust inference of mediation and direct effects (Henseler et al., 2015). Bootstrapping, a non-parametric resampling technique, provides stable estimates without assuming data normality, which is particularly suitable for PLS-SEM-based studies.

Model evaluation also incorporated key fit and predictive metrics. The $R^2$ values indicated the proportion of variance explained in each endogenous construct, reflecting the explanatory strength of the model (Hair et al., 2017). Similarly, $Q^2$ values assessed the model's predictive accuracy for unseen data, confirming its generalizability. The Standardized Root Mean Square Residual (SRMR), used as a global fit index, was below the recommended threshold of 0.08 (Browne et al., 1998), suggesting that the structural model adequately represented the observed data.

The analysis revealed that Academic Aspects, Infrastructure, Up-to-Date Technology, and Placements significantly influenced University/Institute Image, while Industry Collaborations did not show a significant effect. Specifically, Academic Aspects ($\beta = 0.302$, $p < 0.001$), Infrastructure ($\beta = 0.158$, $p < 0.001$), Up-to-Date Technology ($\beta = 0.430$, $p < 0.001$), and Placements ($\beta = 0.161$, $p = 0.007$) were all positively related to Institutional Image, whereas Industry Collaborations exhibited a non-significant negative relationship ($\beta = –0.039$, $p = 0.395$).

For Perceived Value, four of the five service-quality dimensions showed significant positive effects. Infrastructure ($\beta = 0.245$, $p < 0.001$), Up-to-Date Technology ($\beta = 0.122$, $p = 0.020$), Placements ($\beta = 0.276$, $p < 0.001$), and Industry Collaborations ($\beta = 0.225$, $p < 0.001$) were positively associated with Perceived Value, while Academic Aspects ($\beta = –0.075$, $p = 0.096$) demonstrated a non-significant negative effect.

In the second stage of analysis, University/Institute Image was found to significantly influence both Student Satisfaction ($\beta = 0.511$, $p < 0.001$) and Give-Back Intentions ($\beta = 0.243$, $p < 0.001$). Similarly, Perceived Value significantly affected Student Satisfaction ($\beta = 0.279$, $p < 0.001$) and Give-Back Intentions ($\beta = 0.308$, $p < 0.001$). Finally, Student Satisfaction exhibited a strong positive relationship with Give-Back Intentions ($\beta = 0.327$, $p < 0.001$). Overall, these findings confirm that institutional service-quality dimensions—particularly technological innovation, placements, and infrastructure—play a pivotal role in shaping students' perceived institutional image and value. Moreover, institutional image and perceived value substantially drive student satisfaction and willingness to contribute back, validating the hypothesized relationships across the structural model.

### 4.4Result of mediation Analysis

Mediation analysis was conducted to examine the indirect influence of University/Institute Image and Perceived Value on Give-Back Intentions through Student Satisfaction. Mediation in PLS-SEM was assessed using bootstrapping procedures, which provide robust estimates of indirect effects without assuming normality (Hair et al., 2021). The indirect effect was computed as the product of the path coefficients linking the independent variable to the mediator and the mediator to the dependent variable (see Table 6)

For H16, the total effect of University/Institute Image on Give-Back Intentions was significant ($\beta = 0.410$, $p < 0.001$). Both the direct path ($\beta = 0.243$, $p < 0.001$) and the indirect path via Student Satisfaction ($\beta = 0.167$, $p < 0.001$) were significant, confirming partial mediation. This indicates that while University/Institute Image directly enhances alumni willingness to give back, part of its effect operates indirectly through heightened student satisfaction.

For H17, the total effect of Perceived Value on Give-Back Intentions was also significant ($\beta = 0.399$, $p < 0.001$). The direct relationship ($\beta = 0.308$, $p < 0.001$) and the indirect effect mediated by Student Satisfaction ($\beta = 0.091$, $p < 0.001$) were both significant, confirming partial mediation as well. This demonstrates that students' perception of value influences their give-back intentions both directly and indirectly by enhancing their satisfaction with the institution.

Collectively, these results reinforce the mediating role of Student Satisfaction as a crucial psychological mechanism that translates students' perceptions of institutional image and value into reciprocal behavioral intentions. The findings provide empirical support for H16 and H17, highlighting satisfaction as a central pathway through which institutional experiences foster long-term student loyalty and engagement.

**Table 4. Result of the structural model**

| Hypothesis | Path | β (Path Coefficient) | 95% CI (2.5% – 97.5%) | T-value | p-value | Supported? |
|---|---|---|---|---|---|---|
| H1 | AA → IMG | 0.302 | [0.220, 0.389] | 7.055 | 0.000 | Yes |
| H2 | IN → IMG | 0.158 | [0.079, 0.239] | 3.876 | 0.000 | Yes |
| H3 | UT → IMG | 0.430 | [0.331, 0.519] | 8.995 | 0.000 | Yes |
| H4 | PL → IMG | 0.161 | [0.047, 0.277] | 2.715 | 0.007 | Yes |
| H5 | INC → IMG | –0.039 | [–0.127, 0.054] | 0.852 | 0.395 | No |
| H6 | AA → PV | –0.075 | [–0.160, 0.016] | 1.667 | 0.096 | No |

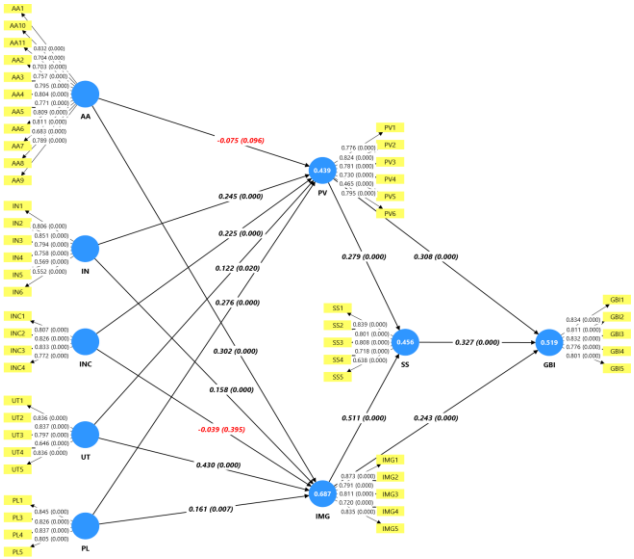
| | | | | | | |
|---|---|---|---|---|---|---|
| H7 | IN → PV | 0.245 | [0.152, 0.334] | 5.273 | 0.000 | Yes |
| H8 | UT → PV | 0.122 | [0.020, 0.224] | 2.331 | 0.02 | Yes |
| H9 | PL → PV | 0.276 | [0.159, 0.389] | 4.712 | 0.000 | Yes |
| H10 | INC → PV | 0.225 | [0.115, 0.334] | 4.089 | 0.000 | Yes |
| H11 | IMG → SS | 0.511 | [0.423, 0.595] | 11.833 | 0.000 | Yes |
| H12 | IMG → GBI | 0.243 | [0.145, 0.328] | 5.193 | 0.000 | Yes |
| H13 | PV → SS | 0.279 | [0.191, 0.366] | 6.19 | 0.000 | Yes |
| H14 | PV → GBI | 0.308 | [0.225, 0.395] | 7.061 | 0.000 | Yes |
| H15 | SS → GBI | 0.327 | [0.224, 0.435] | 6.049 | 0.000 | Yes |

*Note: Values within [ ] indicate confidence intervals at 2.50% and 97.50% levels.*
*[1] This relationship has been reported to provide context, and not a formal hypothesis for this study.*

**Table 5. Mediation Analysis**

| Relationships | β (Total Effect) | p value | β (Direct Effect) | p value | β (Specific Indirect Effect) | p value | Mediation |
|---|---|---|---|---|---|---|---|
| H16: IMG → GBI | 0.410 | 0.000 | 0.243 | 0.000 | 0.167 | 0.000 | Yes |
| H17:PV → GBI | | 0.000 | 0.308 | 0.000 | 0.091 | 0.000 | Yes |

*Note: Values within [ ] indicate confidence intervals at 2.50% and 97.50% levels*




The present investigation examined how service quality dimensions—academic aspects, infrastructure, technology, placements, and industry collaborations—influence institutional image and perceived value in business schools and, in turn, how these constructs shape student satisfaction and give-back intentions. The results reveal several convergent and divergent associations, clarifying how higher education institutions generate satisfaction and alumni loyalty. Broadly, the findings reaffirm the mediating centrality of satisfaction between evaluative constructs and behavioral intentions while challenging the presumed universality of certain academic and industrial linkages in shaping student perceptions.

Academic quality exerted a significant positive influence on institutional image ($\beta = 0.302$, $p < 0.001$), confirming that pedagogy, curriculum design, and faculty engagement remain the foundation of institutional reputation. Prior studies (Sharif & Lemine, 2021; Mohammed et al., 2023; Singh & Jasial, 2020) similarly show that academic competence enhances credibility and emotional attachment. Business schools are judged largely through academic credibility—faculty expertise, research productivity, and pedagogical rigor—which signal intellectual excellence and institutional reliability (Karanjekar et al., 2019). Despite growing attention to market-driven outcomes, the current findings reaffirm that academic strength continues to anchor institutional image formation.

Infrastructure showed a positive relationship with institutional image ($\beta = 0.158$, $p < 0.001$), echoing Pekkaya et al. (2023) and Valencia-Arias et al. (2023b). Campus facilities and physical environments act as visible indicators of quality and managerial capability. Adequate infrastructure, such as digital libraries and collaborative learning spaces, not only supports functionality but also symbolizes institutional prestige (Bello & Abdullah, 2022).

Consequently, infrastructure serves as both a utilitarian and symbolic component of image-building.

Among all dimensions, technology had one of the strongest effects on institutional image ($\beta = 0.430$, $p < 0.001$). This underscores the importance of digital readiness in representing modernity and excellence. Studies (Idkhan & Idris, 2023; Zaidi et al., 2023) confirm that technology integration enhances perceptions of service continuity and innovation. Digital sophistication communicates competitiveness and student-centricity (Popli et al., 2022), particularly in management education where technological competence aligns closely with employability. Thus, technology functions as a decisive differentiator in contemporary higher education branding.

Placement outcomes significantly enhanced institutional image ($\beta = 0.161$, $p = 0.007$), consistent with Venkatesh et al. (2023) and Khatun et al. (2022). Placement performance operates as tangible proof of institutional effectiveness and serves as reputational currency in translating educational promises into career outcomes. Satisfied placement records not only attract future students but also strengthen alumni pride, confirming placements as an enduring pillar of institutional reputation.

Unexpectedly, industry collaborations showed a negative and insignificant relationship with institutional image ($\beta = -0.039$, $p = 0.395$). This contrasts earlier findings (Soam et al., 2023; Yin et al., 2023) suggesting such collaborations enhance reputation. The weak relationship may reflect limited visibility or superficial partnerships. As Rizal et al. (2023) noted, misalignment between curricula and industry expectations weakens perceived relevance. In many cases, collaborations exist more in form than in function, offering little experiential value to students. B-schools therefore need strategically designed and transparently communicated partnerships that demonstrate tangible employability outcomes.

Contrary to expectations, academic aspects showed a negative, insignificant relationship with perceived value ($\beta = -0.075$, $p = 0.096$). While earlier studies (Sharif & Lemine, 2021; Damaris et al., 2019) emphasize academic quality as central to value perception, contemporary students increasingly judge value by outcome-oriented metrics such as placements and return on investment (Mehra et al., 2023). Academic excellence may now be viewed as a baseline expectation rather than a differentiating factor, reducing its direct contribution to perceived value even while sustaining institutional image.
Infrastructure exhibited a strong positive effect on perceived value ($\beta = 0.245$, $p < 0.001$). Tangible facilities communicate fairness between cost and benefits, enhancing trust and satisfaction (Leonnard, 2021). Modern classrooms and digital resources not only improve functionality but also convey institutional investment in student success. For management students, such infrastructure also signals employability readiness, strengthening perceived value.

Technology positively influenced perceived value ($\beta = 0.122$, $p = 0.020$), though its effect was weaker than on image. Once basic digital infrastructure becomes standard, additional enhancements yield diminishing returns (Afif, 2023). Students treat technology as a functional necessity rather than a premium benefit. Consequently, while technology strongly enhances institutional prestige, its marginal impact on perceived value reflects shifting evaluative priorities in business education.

Placement performance had one of the strongest effects on perceived value ($\beta = 0.276$, $p < 0.001$). Students regard successful placements as direct evidence of educational worth and return on investment (Ghosh & Jhamb, 2022). By linking academic effort with tangible career rewards, placements affirm that tuition expenditure produces meaningful outcomes. Hence, placement success is both a reputational driver and the primary determinant of perceived value in B-schools.

Unlike its weak impact on image, industry collaboration significantly improved perceived value ($\beta = 0.225$, $p < 0.001$). This indicates that students perceive immediate personal benefits—internships, live projects, and networking—from such collaborations (Soam et al., 2023; Klafke et al., 2023). When partnerships generate experiential learning and employability advantages, they heighten perceived value even if they contribute little to overall image formation. This finding highlights that collaboration effects are better captured through their utilitarian rather than symbolic benefits.

Institutional image strongly influenced satisfaction ($\beta = 0.511$, $p < 0.001$), consistent with Alwi et al. (2019) and Nguyen et al. (2022). Image integrates cognitive and affective judgments that reassure students of the institution's credibility and prestige. For business students, a favorable image validates their enrollment decision, aligning expectations with experience and thereby elevating satisfaction.

Image also positively affected give-back intentions ($\beta = 0.243$, $p < 0.001$), supporting Manzoor et al. (2020). When students internalize institutional prestige, they develop identity-based attachment, leading to advocacy, mentorship, and philanthropic behavior. Thus, image-driven loyalty forms a critical intangible resource for alumni relations and institutional sustainability.

Perceived value significantly influenced satisfaction ($\beta = 0.279$, $p < 0.001$), aligning with Amado et al. (2023b). According to the expectation-confirmation framework, satisfaction arises when received benefits exceed anticipated costs. In management programs, perceived value—rooted in employability and career mobility—acts as a central determinant of satisfaction. Perceived value also enhanced give-back intentions ($\beta = 0.308$, $p < 0.001$). Students who perceive strong functional and emotional returns from their education reciprocate through advocacy and alumni engagement (Chen & Hiew, 2022). In management education, value realization translates directly into long-term loyalty and contribution.
Satisfaction itself significantly influenced give-back

intentions ($\beta = 0.327$, $p < 0.001$), supporting Mulyono et al. (2020). Satisfied graduates are more likely to donate, mentor, and promote their alma mater. When satisfaction stems from tangible employment success (Venkatesh et al., 2023), it strengthens affective attachment and prosocial engagement, transforming satisfaction into an enduring relational outcome.

Mediation tests confirmed that satisfaction partially mediates the effects of both institutional image and perceived value on give-back intentions. Institutional image influenced give-back directly ($\beta = 0.243$, $p < 0.001$) and indirectly via satisfaction ($\beta = 0.167$, $p < 0.001$), while perceived value exhibited a direct ($\beta = 0.308$, $p < 0.001$) and indirect ($\beta = 0.091$, $p < 0.001$) effect. These results affirm the theoretical stance (Alwi et al., 2019; Gagliardi et al., 2021) that satisfaction acts as the psychological mechanism transforming evaluative judgments into behavioral outcomes.

Symbolic prestige and perceived benefits alone cannot ensure alumni advocacy; rather, enduring satisfaction converts these evaluations into affective commitment. In management education, reputation attracts enrollment, but experiential satisfaction determines long-term loyalty. Hence, cultivating an appealing image and strong value perception must be accompanied by consistent delivery of student- centric experiences that confirm expectations. Satisfaction thus functions as the relational bridge between institutional performance and alumni reciprocity, extending the service-marketing logic of expectation confirmation to higher education.

## 6. Implications

### 6.1 Implications for Theory

This study offers key theoritical contributions to higher education, service quality, and institutional branding research. It demonstrate how academic aspects, infrastructure, technology, placements, and industry collaborations influence perceived value( PV), Institutional image, student satisfaction(SS), and give back intentions(GBI)

Academic excellence strengthens institutional image but not PV, indicating symbolic rather than functional value. Infrastructure and technology jointly enhance PV and image, with technology serving both functional and symbolic roles, linking service quality to signaling theory. Placements emerge as the strongest drivers of PV and image, emphasizing employability as a core pathway in educational service quality models. Industry collaborations improve PV but not image, highlighting asymmetric effects between functional and reputational outcomes.

SS acts as an affective mediator between PV, image, and GBI, bridging cognitive evaluations and behavioral intentions. Overall the study refines theoritical models by recognizing asymmetric effects among service dimensions, positioning employability as central, redefined collaborations as domain- specific, and reaffirming satisfaction's mediating role in alumni engagement.

### 6.2 Implications for Practice

The findings offer clear practical insights for business schools and higher education institutions. Academic quality enhances institutional image but not perceived value, suggesting that while teaching boosts reputation, employability defines value. Institutions should thus separate academic branding from value driven marketing.
Infrastructure and technology strongly influence both PV and image, warranting continuous investment and showcasing as key branding assets. Placements remain the strongest driver of PV and image, emphasizing employability-focused training, transparent reporting, and career support.

Industry collaborations enhance PV but not image, indicating a need for better communication and integration into curriculam to build reputational impact. Student satisfaction(SS) Mediates PV, image and give back intentions(GBI), highlighting the need for continuous feedback and holistic student support.

Finally, fostering image, PV, and SS during study builds lasting alumni engagement, making early relationship-building and community involvement essential for long term loyalty and contributions.

### 6.3 Implications for Policy

At the policy level, the study calls for a balanced approach to higher education governance that integrates academic quality, employability, and relational outcomes. Academic quality enhances image but not perceived value(PV) , suggesting quality assurance should include employability and skill based metrics.

Policies must promote sustained investment in infrastructure and technology through clear benchmarks and funding for digital transformation. Given placements strong impact on PV and image, institutions should be mandated to maintain structured placements systems and transparent emplacement reporting.

Industry collaborations need policy incentives for co-created curricula, joint research, and experiential learning. Policy makers should also integrate student satisfaction(SS) And alumni engagement into evaluation frameworks through national surveys and engagement indices.

Finally recognizing SS as a mediator of a alumni loyalty, quality assurance bodies should institutionalize alumni relations via advisory councils and metrics for mentoring and contributions.

## 7. Limitations

Despite its contributions, this study faces certain methodological, contextual, and conceptual limitations that outline its scope and indicate directions for future research. The use of a cross-sectional design restricts the ability to infer causality among the constructs. Since alumni loyalty and give-back behaviors evolve over time (Manzoor et al., 2020; Nguyen et al., 2022), longitudinal studies are recommended to trace how student perceptions translate

into alumni engagement. The reliance on self-reported data also raises the risk of response bias. Incorporating objective indicators such as placement statistics or alumni donations would enhance the validity and reliability of future analyses.

The study's focus on business schools within a specific region limits the generalizability of its findings. Service quality determinants, including placements or industry collaborations, may vary in importance across disciplines such as engineering, hospitality, or agriculture (Soam et al., 2023; Rizal et al., 2023). Hence, cross-disciplinary and cross-national comparisons are needed to test the robustness of the model. Additionally, the exclusive reliance on student perceptions provides only a partial view of institutional image, which is also shaped by alumni, faculty, and recruiters (Kamakoty & Singh, 2023; Venkatesh et al., 2023).

The model emphasized five service quality dimensions—academic aspects, infrastructure, technology, placements, and industry collaborations—which may not capture the full spectrum of higher education quality. Factors such as international exposure or knowledge management could also influence perceptions (Khatun et al., 2022). Moreover, give-back intentions were treated as a single construct, although they encompass diverse forms like financial support, advocacy, and mentoring (El-Kassar et al., 2022). Future research should therefore disaggregate these dimensions and include mediators such as trust or identification (Kaushal & Goyal, 2020).

## REFERENCES


1. Abdullah, Firdaus. "Measuring Service Quality in Higher Education: HEdPERF versus SERVPERF." *Marketing Intelligence & Planning*, vol. 24, no. 1, 2006, pp. 31–47. https://doi.org/10.1108/02634500610641543.
2. Afif, M. H. "Exploring the Quality of the Higher Educational Institution Website Using Data Mining Techniques." *Decision Science Letters*, vol. 12, no. 2, 2023, pp. 279–290. https://doi.org/10.5267/j.dsl.2023.1.007.
3. Agu, A. G. "Students' Switching Intentions for Graduate Education Services: Examining the Influence of Service Quality, Price, and Attractiveness of Alternative." *Journal of Marketing for Higher Education*, 2022, pp. 1–22. https://doi.org/10.1080/08841241.2022.2101171.
4. Ahmad, A. H. E., and A. M. Kawtharani. "Service Quality and Students' Satisfaction in Private Lebanese Higher Education Institutions: The Case of X University." *Journal of Higher Education Policy and Leadership Studies*, vol. 2, no. 3, 2021, pp. 100–118. https://doi.org/10.52547/johepal.2.3.100.
5. Al-Abdullatif, A. M. "Modeling Students' Perceptions of Chatbots in Learning: Integrating Technology Acceptance with the Value-Based Adoption Model." *Education Sciences*, vol. 13, no. 11, 2023, p. 1151. https://doi.org/10.3390/educsci13111151.
6. Ali, M., et al. "Assessing E-Learning System in Higher Education Institutes." *Interactive Technology and Smart Education*, vol. 15, no. 1, 2018, pp. 59–78. https://doi.org/10.1108/itse-02-2017-0012.
7. Alturki, U., and A. Aldraiweesh. "An Empirical Investigation into Students' Actual Use of MOOCs in Saudi Arabia Higher Education." *Sustainability*, vol. 15, no. 8, 2023, p. 6918.
8. Bagur-Femenias, L., J. Llach, and M. Buil. "BS-QUAL: Measuring Student Perceptions of Service Quality in Business Schools, an Exploratory Study." *Tertiary Education and Management*, vol. 29, no. 2, 2023, pp. 161–187. https://doi.org/10.1007/s11233-023-09118-x.
9. Baig, M. I., et al. "Identifying Determinants of Big Data Adoption in the Higher Education Sector Using a Multi-Analytical SEM-ANN Approach." *Education and Information Technologies*, vol. 28, no. 12, 2023, pp. 16457–16484. https://doi.org/10.1007/s10639-023-11875-6.
10. Bello, H., and N. A. Abdullah. "Modelling Students' Satisfaction with Computer-Based Assessment (CBA) Environments in Higher Education: The Roles of CBA Center Service Satisfaction and Perceived Trust." *The Electronic Journal of e-Learning*, vol. 20, no. 5, 2022, pp. 605–622. https://doi.org/10.34190/ejel.20.5.2595.
11. Binh, D. T., et al. "Quality Assessment of the Blended Learning in Higher Education Using the Modified HEDPERF Instrument." *Emerging Science Journal*, vol. 9, 2025, pp. 56–76. https://doi.org/10.28991/esj-2025-sied1-04.
12. Brown, R. M., and T. W. Mazzarol. "The Importance of Institutional Image to Student Satisfaction and Loyalty within Higher Education." *Higher Education*, vol. 58, no. 1, 2008, pp. 81–95. https://doi.org/10.1007/s10734-008-9183-8.
13. Chen, S. L., and C. Z. Hiew. "Online Brand Equity for Higher Education in Taiwan: Conceptualization, Scale Development, and Validation." *Journal of Marketing for Higher Education*, 2022, pp. 1–18. https://doi.org/10.1080/08841241.2022.2146255.
14. Cronin, J. J., and S. A. Taylor. "Measuring Service Quality: A Reexamination and Extension." *Journal of Marketing*, vol. 56, no. 3, 1992, pp. 55–68. https://doi.org/10.1177/002224299205600304.
15. El-Kassar, A., et al. "Doing Well by Doing Good: Why Is Investing in University Social Responsibility a Good Business for Higher Education Institutions Cross Culturally?" *Cross Cultural & Strategic Management*, vol. 30, no. 1, 2022, pp. 142–165. https://doi.org/10.1108/ccsm-12-2021-0233.
16. Faul, F., et al. "Statistical Power Analyses Using G*Power 3.1: Tests for Correlation and Regression Analyses." *Behavior Research Methods*, vol. 41, 2009, pp. 1149–1160. https://doi.org/10.3758/BRM.41.4.1149.

17. Fiati, R., W. Widowati, and D. M. K. Nugraheni. "Service Quality Model Analysis on the Acceptance of Information System Users' Behavior." *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 30, no. 1, 2023, p. 444. https://doi.org/10.11591/ijeecs.v30.i1.pp444-450.
18. Ghosh, P., and D. Jhamb. "Need of Measuring Service Quality in Hospitality Education: A Conceptual Framework." *International Journal of Business and Globalisation*, vol. 32, no. 2–3, 2022, p. 206. https://doi.org/10.1504/ijbg.2022.127360.
19. Hair, J. F., et al. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage, 2017.
20. Hair, J. F., et al. "Evaluation of Reflective Measurement Models." In *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*, Springer, 2021, pp. 75–90.
21. Hair, J. F., et al. "An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research." *Journal of the Academy of Marketing Science*, vol. 40, no. 3, 2012, pp. 414–433.
22. Idkhan, A. M., and M. M. Idris. "The Impact of User Satisfaction in the Use of E-Learning Systems in Higher Education: A CB-SEM Approach." *International Journal of Environment Engineering and Education*, vol. 5, no. 3, 2023, pp. 100–110. https://doi.org/10.55151/ijeedu.v5i3.91.
23. Kamakoty, J., and S. Singh. "PHEISQUAL: A Scale to Measure Service Quality of Professional Higher Educational Institute from Faculty Perspective." *SAGE Open*, vol. 13, no. 4, 2023. https://doi.org/10.1177/21582440231200308.
24. Parasuraman, A., V. A. Zeithaml, and L. L. Berry. "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality." *Journal of Retailing*, vol. 64, no. 1, 1988, pp. 12–40.
25. Zeithaml, V. A. "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence." *Journal of Marketing*, vol. 52, no. 3, 1988, pp. 2–22. https://doi.org/10.1177/002224298805200302