

Quality Approaches in Higher Education



Understanding students' changing needs by determining how students' satisfaction changes as they progress through the curriculum.

Graduate Marketing Students' Satisfaction in the Caribbean: A Longitudinal Case Study

Nazareen Muhammad, Raghava Rao Gundala, Mandeep Singh, and Jessica Harriger

Abstract

Domestic and international competition has increased pressure on business schools to provide consistent quality service to keep existing students, as well as to recruit new students. Therefore, higher education providers must be aware of students' expectations and implement strategies to meet and exceed these expectations. This research study seeks to determine the satisfaction levels of master's of marketing students in a Caribbean business school through the duration of their program of study. Several statistical techniques were used in the study. The study found that while overall student satisfaction decreases over time, the factors that contribute to satisfaction change as the students' progress through the curriculum. The results of this study will help business schools in understanding the changing needs of students at each stage in the educational process.

Keywords

Business Schools, Education, Student Satisfaction, Gap Analysis, Competitive Advantage

Introduction

Higher education environments have become increasingly competitive (Maringe, 2006); therefore, the key to competitive advantage lies in delivering high-quality service that will result in satisfied customers (Shemwell, Yavas, & Bilgin, 1998). Service quality is "regarded as a driver of corporate marketing and financial performance" (Buttle, 1996). It is also a critical determinant of competitiveness (Lewis, 1989), a source of lasting competitive advantage, and service differentiation (Moore, 1987). Further, service quality affects the repurchase intents of customers (Ghobadian, Speller, & Jones, 1994).

Intensive competition (Ford, Joseph, & Joseph, 1999), internalization, higher expectations (Marzo-Navarro, Redraja-Iglesias, & Rivera-Torres, 2005), more full-fee-payment students (Oldfield & Baron, 2000), and recognition of education as a marketable service (Cuthbert, 1996; Mazarrol, 1998), have compelled educational institutions to pay closer attention to assessing the overall perceived service quality. Hill (1995) suggests that greater efforts should be made to understand the needs of students throughout their time in school. This study tries to determine the levels of student satisfaction over time for those pursuing master's of marketing (MM) degrees. The study identifies components of the service delivery process and determines the factors that are most important in the educational service consumption.

Service Quality Versus Customer Satisfaction

Service quality is "the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs" (Johnson & Winchell, 1988). On the other hand, customer satisfaction represents the difference between consumers' prior expectations and their perception on purchase outcomes (Yi, 1990). An experience that surpasses customers' expectations increases the propensity to build loyalty. While the terms quality and satisfaction appear similar, researchers have found differences when comparing the two.

While there is a lack of consensus about the specifics of the service quality—satisfaction relationship—the dominant conceptualization suggests service quality is an antecedent of the superordinate satisfaction construct. A study conducted by Brady, Cronin, and Brand

(2002) supports the conceptualization of service quality as an antecedent to customer satisfaction. Further, consumer satisfaction is found to be the superordinate construct based on its ability to explain a greater portion of the variance in consumers' purchase intentions.

Iacobucci and Ostrom (1995) find no difference between perceived quality and customer satisfaction on kept promises, customization, friendliness, or purchase intentions. Their results support the quality and satisfaction literature, as they find that it is the relative judgment of experiences versus expectations that influence purchase intentions. They, therefore, find several distinctions between service quality and customer satisfaction. Service quality is influenced by the purchase attributes of the price, background operations, and expertise. However, customer satisfaction is influenced by service timeliness, recovery, and physical environment.

The causal order of the relationship between service quality and customer satisfaction has been widely debated. Cronin and Taylor (1992) found that service quality is an antecedent to customer satisfaction. Alternatively, some researchers argue that satisfaction precedes service quality (Oliver, 1980). The third conceptualization of the service quality—satisfaction relationship—suggests that satisfaction and service quality are simultaneously determined (Dabholkar & Thorpe, 1994).

Failure to understand and deliver services in keeping with customers' expectations leads to reduced satisfaction, negative word-of-mouth, and eventually a decline in revenue and market share (Horovitz, 1990). High-quality service delivery leads to positive lasting effects on both the student population and the institution. Therefore, a business school must continually review and improve its offerings to remain competitive.

To maintain service quality, business schools need to understand the factors that drive customer satisfaction. One approach to service quality management is to align institutional priorities with market and student expectations (Hill, 1995). It is, therefore, important that schools gather and disseminate information about their students' changing needs and tailor processes to meet these needs through the duration of the study. Further, business schools should take appropriate steps to manage students' expectations proactively (Berry, Zeithaml, & Parasuraman, 1985). Aiello, Czepiel, and Rosenberg (1977) find the gap between actual experiences and client expectations determines consumer satisfaction or dissatisfaction. The study examines the differences between student expectations and their realized experiences.

Parasuraman, Zeithaml, and Berry (1986) distinguish between service quality and satisfaction. Service quality represents a global judgment or attitude, related to excellence of the service while satisfaction relates to a particular transaction. The

two are related since over time the incidents of satisfaction result in customers' perceptions of quality (Oliver, 1981). Therefore, the satisfaction soon transcends their attitudes toward the quality of services. Since students attend classes regularly over many years and, therefore, have many data points with professional service providers (institutional interactions), student satisfaction is treated as a proxy for their evaluation of service quality.

In an exploratory study of service quality in a business educational setting, LeBlank and Nguyen (1997) identify seven service quality factors as critical to business schools: contact with faculty, school reputation, physical environment, contact with administration, curriculum, school responsiveness, and access to facilities. Swartz and Brown (1989) contend the delivery of a professional service is interactive. Since professionals need advanced degrees in higher education, investigators must examine the perceptions of both parties (professional and student).

This research attempts to examine which of the service quality constructs are most important in delivering service quality, while also defining the constructs with the greatest room for improvement. The service quality gaps identified should inform future service development and represent the basis of continuing monitoring and improvement.

Method

Seventy marketing students were surveyed at different stages in the MM program. Students were classified based on the number of months in the program—those with less than eight months as the beginning stage, nine to 12 months of study as a middle stage, and more than 12 months as the end stage. The survey used the seven service factors identified by LeBlanc and Nguyen (1997). The questionnaire contained 40 variables related to different aspects of the business school's offerings, such as the faculty's expertise, school's image, available facilities, program offerings, as well as the administration's responsiveness. The questionnaire also used items that corresponded to the five dimensions on the SERVQUAL scale of quality as developed by Parasuraman, Zeithaml, and Berry (1988, 1991). The items on the satisfaction side of the survey were measured on a seven-point Likert scale, which ranged from 1 (totally dissatisfied) to 7 (totally satisfied) with unlabeled midpoints. A similar scale was used for perceived importance dimension, although, for these questions, 1 represented "not at all important" and 7 indicated the factor was "very important" to the student.

As in the case with LeBlanc and Nguyen, it is hypothesized that student satisfaction is a function of school reputation, contact with faculty, physical environment, contact with administration, curriculum, responsiveness, and access to facilities. The survey instrument consisted of two parts. Section one focused on

the students' responses to each of the seven variables to ascertain students' satisfaction levels and the importance of the constructs to them. The expectations and perceptions were captured in a single measure of perception-expectation differences, consistent with the approach suggested by Carman (1990). The second part focused on respondent demographics. A breakdown of the survey population is provided in Table 1. For student convenience, all questionnaires were administered in person, on campus, at a scheduled time between September and November 2011. Of the 63 respondents who completed the entire questionnaire, 71% of the respondents were between the ages of 21 and 29, and female respondents outnumbered the males.

Table 1: Respondent Attributes. Of the 70 respondents, only 63 students completed both part one and part two of the survey

	Number of Respondents	Percent of Sample
Age of Respondent		
21-24 years	14	22%
25-29 years	31	49%
30-34 years	4	6%
35-39 years	31	8%
40-44 years	3	5%
45-49	4	6%
50 and over	2	1%
Gender		
Male	19	30%
Female	44	70%
Highest Qualification Upon Program Entry		
Postgraduate award	5	5%
Degree or equivalent	54	84%
Professional qualification	5	8%
Other	2	3%

Analysis and Results

Factor Analysis Results

Several statistical methods were used to analyze the survey data. To reduce the survey data into critical factors, an exploratory factor analysis with varimax rotation was used. This technique yielded 35 items over seven factors. Following Tabachnick and Fidell (1989), some variables included in the factor, based on factor loadings greater than 0.75 and eigenvalues greater than one. To assess the reliability of measures, Cronbach's

alpha is calculated for the variables retained for each factor and coefficients greater than or equal to 0.70 are considered a good indication of construct reliability (Nunnally, 1978).

Under these guidelines, seven variables were removed over four of the factors. Factor 1, contact with faculty, consists of five items related to the performance of the faculty members and their ability to inspire trust and confidence. Reputation, factor 2, relates to the business school's ability to position itself in the minds of its customers and is, therefore, closely associated with the image projected by the organization. This factor was only reduced by one variable. Factor 3, physical environment, maintains four variables that describe the tangible cues associated with the business school's service delivery system and its facilities. Factors 4 and 5 kept all of their original variables in the analysis. Factor 4 represents contact with administration and concerns the dimensions linked to management's ability to provide personal attention to students in a professional and caring manner. Factor 5, the curriculum, is related to management and faculty's capacity to plan and deliver learning experiences that meet student needs. Factor 6, responsiveness, measures the school's ability to provide service in a prompt and timely manner. All variables were retained in factor 7, student access to facilities, which considers the accessibility and availability of convenient, comfortable, and equipped spaces for study, parking, research, and learning. Overall after the analysis, factor loadings on the variables retained ranged from 0.71 to 0.92. A breakdown of the variables maintained in each factor grouping is provided in Table 2.

Stepwise Regression Results

After establishing seven primary factors, a backward elimination was conducted by stepwise regression of overall student satisfaction. It was determined the model was statistically significant (F-value = 0.000) and accounted for 49.8% of the variance in overall satisfaction. A closer examination of the model revealed that school reputation alone accounts for 30.5% (p-value = .000) of the variance in overall satisfaction. When reputation and responsiveness were included in the model together, the variance accounted for is 35.7% (p-value = 0.016). When only reputation was excluded, the other significant factors were responsiveness (p-value = 0.016), curriculum (p-value = 0.022), and personal contact with faculty (p-value = 0.033). Table 3 provides a breakdown of the factor correlations for the 66 valid observations of the regression. P-values following a 1-tailed sigma test are reported in parentheses. Factor 1 represents contact with faculty, factor 2 school reputation, factor 3 physical environment, factor 4 contact with administration, factor 5 curriculum, factor 6 responsiveness, and factor 7 represents access to facilities.

Means Testing Results

To observe the gaps between students' expectations and satisfaction a series of t-tests were conducted in which the null hypothesis was that the students' expectations match their satisfaction. The t-tests yielded significance on all seven factors, allowing the rejection of the null hypothesis and showing a significant relationship

between satisfaction levels and expectations on all service quality dimensions (Table 4) at the 10% significance level. While all mean scores on the satisfaction dimensions ranged from neutral to very satisfied (4.15 to 5.91 on the survey), the expectations (importance) dimension superseded these ratings on all factors. On every factor, respondents rated the importance from 6.10 to 6.41.

Table 2: Variables Retained Following Factor Analysis

Factor Name	Variables	Factor Loading	Percent of Variance Explained	Cronbach's Reliability Coefficient
1. Contact personnel faculty	• Teaching ability of faculty	0.85	60.7	0.83
	• Professors are friendly and courteous	0.79		
	• Knowledge and skills base of faculty	0.77		
	• Appearance of professors	0.75		
	• Helpfulness of teaching staff	0.72		
2. Reputation	• Organizational culture, beliefs, and values	0.92	66.8	0.82
	• Administration has students' best interest at heart	0.79		
	• Business school is innovative	0.78		
	• Business school's involvement in community	0.77		
3. Physical evidence	• Degree to which classrooms and study rooms are comfortable	0.88	64.3	0.82
	• Décor and atmosphere	0.84		
	• Overall cleanliness	0.75		
	• Layout of classroom	0.73		
4. Contact personnel administration	• Capacity to solve problems when they arise	0.88	68.7	0.88
	• Availability of personnel	0.86		
	• Personnel has a good knowledge of rules and procedures	0.84		
	• Friendly and courteous personnel	0.79		
	• Appearance of personnel	0.78		
5. Curriculum	• Degree to which objectives of programs are explained	0.86	66.8	0.75
	• Orientation of programs and course content	0.80		
	• Number of courses offered	0.79		
6. Responsiveness	• Timely feedback on examination results	0.81	58.1	0.85
	• Class schedule received at least one month in advance	0.78		
	• Orientation covers concerns and expectations	0.76		
	• Records are kept accurately	0.76		
	• Registration is timely and error free	0.74		
	• Students are informed promptly of changes	0.72		
7. Access to facilities	• Restaurant availability	0.84	63.6	0.85
	• Efficiency of IT staff	0.83		
	• Access to computer facilities	0.81		
	• Access to study rooms	0.79		
	• Availability of parking	0.71		

Table 3: Factor Pearson Correlations

	Overall Satisfaction	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Overall Satisfaction	1.000	0.428	0.562	0.225	0.316	0.507	0.519	0.419
		(0.000)	(0.000)	(0.035)	(0.005)	(0.000)	(0.000)	(0.000)
Factor 1	0.428	1.000	0.406	0.283	0.367	0.435	0.373	0.265
	(0.000)		(0.000)	(0.011)	(0.001)	(0.000)	(0.001)	(0.016)
Factor 2	0.562	0.406	1.000	0.330	0.497	0.555	0.559	0.476
	(0.000)	(0.000)		(0.003)	(0.000)	(0.000)	(0.000)	(0.000)
Factor 3	0.225	0.283	0.330	1.000	0.331	0.315	0.567	0.417
	(0.035)	(0.011)	(0.003)		(0.003)	(0.005)	(0.000)	(0.000)
Factor 4	0.316	0.367	0.497	0.331	1.000	0.342	0.466	0.278
	(0.005)	(0.001)	(0.000)	(0.003)		(0.002)	(0.000)	(0.012)
Factor 5	0.507	0.435	0.555	0.315	0.342	1.000	0.590	0.432
	(0.000)	(0.000)	(0.000)	(0.005)	(0.002)		(0.000)	(0.000)
Factor 6	0.519	0.373	0.559	0.567	0.466	0.590	1.000	0.602
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)
Factor 7	0.419	0.265	0.476	0.417	0.278	0.432	0.602	1.000
	(0.000)	(0.016)	(0.000)	(0.000)	(0.012)	(0.000)	(0.000)	

Table 4: Factor Means and Paired Differences Between Dimensions

Factor Number	Factor	Satisfaction Mean Score	Importance Mean Score	Paired Difference
1	Contact personnel faculty	5.81	6.27	-0.461
2	Reputation	4.69	6.10	-1.41
3	Physical evidence	5.77	6.30	-0.493
4	Contact personnel administration	5.40	6.36	-0.971
5	Curriculum	5.19	6.41	-1.22
6	Responsiveness	4.83	6.41	-1.66
7	Access to facilities	4.15	6.39	-2.25

Students reported the widest gaps in perceived satisfaction and importance on access to facilities, responsiveness, and reputation. The gaps ranged from -2.25 to 1.41 on these three factors, while the narrowest gaps were on contact with faculty and physical environment: -0.461 and -0.493.

Overall, the MM students' perceived satisfaction levels were lower than their expectations on each factor. Despite this failure to meet student expectations, the findings infer the service quality delivered was good, as none of the mean ratings fell in the dissatisfied range, which is 1 to 3 on the survey. This information is critical as delivering quality service means conforming to customer expectations on a consistent basis (Lewis & Booms, 1983).

ANOVA Results

Student Satisfaction

To determine the variations in satisfaction levels across time, as well as the changes in perceived importance for each factor, a univariate analysis of variance

on each factor for each phase was conducted. This provided both a regression analysis and a variance analysis for one dependent variable (satisfaction) by one or more factor and/or variable. Given the boundaries of this study, the ANOVA method was suitable for these purposes. The sample was balanced, and there was no reason to disregard the statistical assumptions (homogeneity in variance, normally distributed errors, and independent observations) in the model. As this study explored student satisfaction across three different time periods, the ANOVA means testing was preferable over a simple t-test. Although there are more sophisticated methods of analysis, such as nonparametric tests like the Kruskal-Wallis test, the ANOVA remains the most robust and powerful.

The results in Table 5 show a significant difference in student satisfaction with faculty contact over time. The ANOVA results indicated there are differences in student satisfaction. However, the ANOVA is only able to suggest that a difference exists. To prove the comparisons between groups, the Bonferroni Post Hoc test was used. This testing method is believed to be the most conservative post-hoc test and, therefore, the most likely to rule out “false rejections.” Since the study focused on three time periods, the Bonferroni Post Hoc test reduced to a simple t-test, in which the null hypothesis assumed there were no differences between the time periods. For at least a 10% level, it was found the students’ satisfaction was significantly higher at the start of the program. It determined reputation declined significantly over time (at least a 10% significance level). The scores for reputation began at 5.22 and then fell to 5.04 (mid stage) and lastly to 4.02 (end stage). This change represented a 23% decline in satisfaction with the school’s reputation. No significant difference was found in perceived satisfaction levels on the factors of physical environment and contact with administration. For overall satisfaction, significant variations were found between the start and end phases of the program. The overall satisfaction means ranged from 5.52 (very satisfied) at the starting stage to 5.42 (satisfied) at the mid stage, and then to 4.26 (neutral) at the end stage. Overall satisfaction levels decreased by 22.8% from the beginning to the end stage.

Perceived Factor Importance

On the importance, the ANOVA test showed significant differences between groups on four of the seven factors at the 5% significance level, as shown in Table 6. Responsiveness had the most significant variations between groups, followed by

Table 5: Means Test for Student Satisfaction

Factor	Beginning	Midpoint	End	F-value	P-value
Contact with faculty	6.23	5.72	5.53	5.72	0.005
Reputation	5.22	5.04	4.02	8.09	0.001
Physical environment	6.02	5.68	5.63	1.10	0.342
Contact with administration	5.78	5.16	5.23	2.30	0.108
Curriculum	5.81	5.12	4.74	6.42	0.003
Responsiveness	5.31	4.74	4.50	3.30	0.043
Access to facilities	4.67	4.45	3.52	9.63	0.006
Overall satisfaction	5.52	5.42	4.26	10.14	0.000

Table 6: Perceived Factor Importance

Factor	Beginning	Midpoint	End	P-value
Contact with faculty	6.17	6.24	6.36	0.584
Reputation	5.99	5.78	6.40	0.050
Physical environment	6.35	5.83	6.48	0.026
Contact with administration	6.48	6.13	6.43	0.151
Curriculum	6.49	6.04	6.60	0.017
Responsiveness	6.55	6.08	6.72	0.004
Access to facilities	6.39	6.15	6.56	0.131

curriculum. Significant variations were found in the importance for the physical environment and the school’s reputation. Surprisingly, no significant variations were found for access to facilities and contact with administration and faculty. In the beginning stages of the program, students’ importance ratings on all factors ranged from 5.99 (important) to 6.55 (very important). In this phase the most important factors were responsiveness, curriculum, and contact with administration. On the other hand, reputation, contact with faculty, and the physical environment were the least important.

Discussion and Conclusions

Educators have a unique task in providing service quality given the duration of service and its interactive nature. Delivering satisfaction is driven by service quality that meets or exceeds student expectations throughout the duration of their study. The gap analysis clearly shows room for improvement on all constructs. Service quality gap scores were negative in all dimensions of service, with high perception scores in all areas matched with even higher expectations. The paired differences ranged from -2.25 to -0.461. The areas of concern included: access to facilities, responsiveness, school's reputation, and curriculum.

Looking at the gaps over time, it was found that in the early stages efforts should be focused on improving service quality in responsiveness. Further, it was found that new students need timely and accurate information to understand their progress in the program. Students need a practical orientation to the objectives behind the curriculum. Management should spend time with new students addressing questions on the curriculum. Active contact with administration is necessary to help new students navigate the program successfully and bring relief to the problems associated with the introduction to a new environment.

At the midpoint of the program, the gaps between perceived importance and satisfaction improved. On faculty contact, the average satisfaction exceeds the perceived importance. However, urgent work is still needed to improve access to facilities as it falls short. Students clearly value personal contact with faculty and administrators and easy access to facilities. At this point students

have a clearer understanding of class scheduling and examination timetables and are now more interested in faculty feedback on their performance. They expect appropriate study spaces with access to current technology. Also, they expect minimal bureaucracies such as unnecessary paperwork and delays in registration.

As students approach the end of the program, they are interested in the overall quality of the education and relevance to the real world. As Figure 1 shows, there is a significant disconnect in understanding student priorities and resulting satisfaction. This is consistent with the findings of Hall, Swart, and Duncan (2012). There is much room for improvement in bridging this gap. This becomes critical from the institutional vantage point as these students are the best representatives of the institution's product in the market area. Further, they can be a vital source for recruitment leads, internship/placement opportunities, and institutional fundraising endeavors. In an environment of shrinking resources, alumni are being successfully tapped to participate in an expanded range of initiatives.

From an organizational perspective, monitoring and delivering on student expectations becomes a high priority as competition for student enrollment continues to increase. Organizational reputation, access, and facilities will continue to be evaluated and reported in the popular press on a competitive basis. This task becomes especially onerous in an environment where student expectations are continually growing and access to information is increasingly instantaneous. The significance of institutional reputation and transparency take on added importance in this environment.

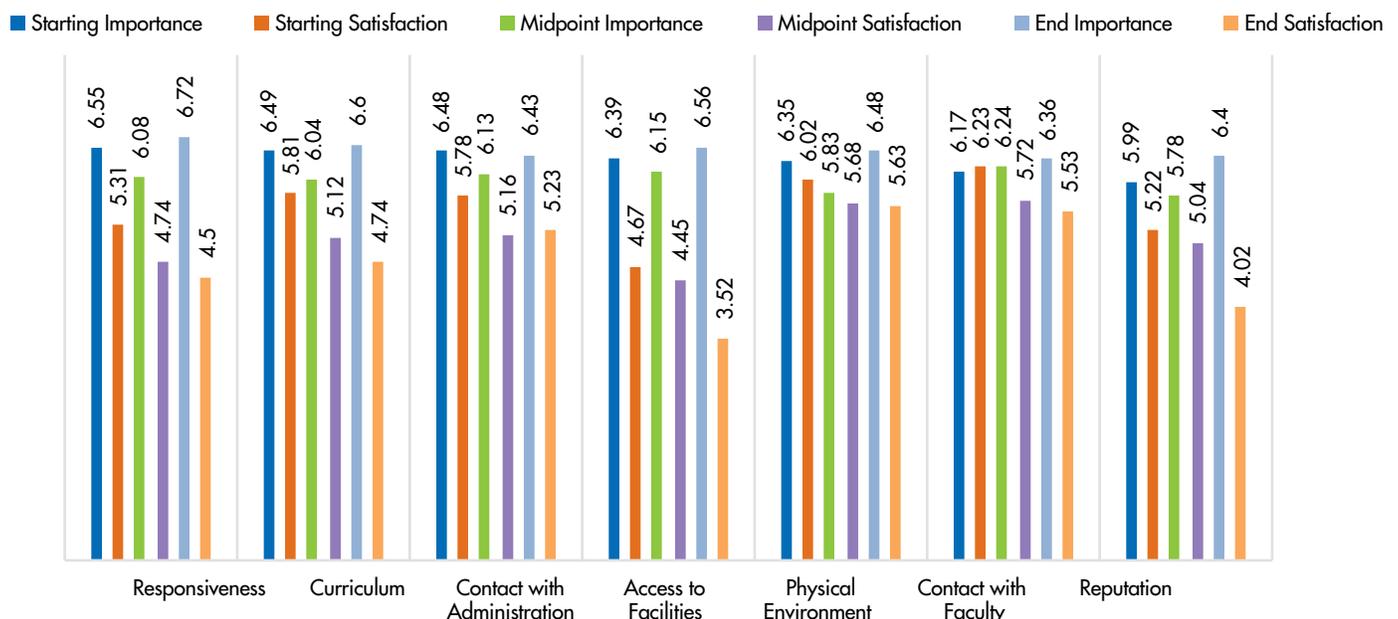


Figure 1: Perceived Importance Compared to Satisfaction

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