Service Quality Dimensions and Students’ Satisfaction: A study of Saudi Arabian Private Higher Education Institutions

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Abstract
Students’ satisfaction and their intentions are recognized as rather important aspects in higher education institution’s strategy in a competitive private higher education sector. However, what drives students’ satisfaction and retention is the service quality, and this quality comes from the combination of excellent learning and non-learning process. Building on service quality dimension literature, this study aims to investigate the antecedents of students’ intention to choose and stay with private higher education institutes. Through an adapted questionnaire survey, students’ response was measured on a 5-point likert scale. The results suggested that perceived service quality is positively correlated to satisfaction; perceived service quality and satisfaction are positively correlated to students’ retention. Limitations of the study are also presented at the end of the paper.

Keywords: Academic Services, Administrative Services, Private Higher Education Institutes, Physical Evidence, Service Quality Dimensions, Students’ Satisfaction, Students’ Retention

Introduction
In today’s competitive academic environment where students have many options available to them, factors that enable educational institutions to attract and retain students should be seriously studied. Higher education institutions, which want to gain competitive edge in the future, may need to begin searching for effective and creative ways to attract, retain and foster stronger relationships with students. As a private organization, it has to depend on the interaction and mechanism of the market. As a result, competition to woo as many students as possible or so-called “potential customer” may become more and more intense. To make the matter harder, as a private institution, it does not have the “privilege” to receive any subsidies or financial assistances from the government (Teo, 2001).

Customer satisfaction is a very important element in the formation of customers’ desires for future purchase (Lai et al., 2011). In addition to that, satisfied customers will probably talk to others about their good experience which is regarded as positive word of mouth. This practice is common in the Middle Eastern cultures, where the social life has been shaped in a way that social communication with other people improves the society (Jamal & Naser, 2002). This is also generally practice in other societies before purchasing or experiencing a product or service.

There are many stakeholders of educational institutions ranging from internal to external stakeholders. Out of all these, students are considered to be one of the most important stakeholders. They are important as all the process of quality implications i.e. input, process and output are applied on them. They are also considered important as they bridge the relationship between academic institutions and other stakeholders i.e. parents, employers, society and satisfaction of all these stakeholders is dependent on the satisfaction of students.
Considering the strategic importance of students, studying students’ satisfaction has been prime interest of many researchers using SERVQUAL model. The objective of the study was to investigate the impact of service quality on customer satisfaction in education sector and try to get to know that what are the main priorities for what a student looking for while getting admission in any education institution including private universities that how much quality is matter for a student to stay with particular university.

Conceptual Framework
Service Quality and Satisfaction

The service quality in the field of education and higher learning particularly is not only essential and important, but it is also an important parameter of educational excellence. It has been found that positive perceptions of service quality has a significant influence on student satisfaction and thus satisfied student would attract more students through word-of-mouth communications (Alves & Raposo, 2010). The students can be motivated or inspired from both academic performance as well as the administrative efficiency of their institution. Ahmed & Nawaz (2010) mentioned that service quality is a key performance measure in educational excellence and is a main strategic variable for universities to create a strong perception in consumer’s mind.

Basically most of the models of satisfaction often compares students’ expectations to the observed service quality encounter that are referred as service quality gap but evidence has made certain that in application of performance only paradigm minus the expectation has given positive effect to students’ perceptions of service quality and with that, satisfaction directly affects students intention to evaluate the education institution favorably (Alnaser & Al-Alak, 2012). Regardless of which focus is applied, higher education institution seek to provide high service quality in every part of its process in order to be in favor of student as primary consumer’s fulfillment response; reason being satisfaction is indicated as the consumer’s fulfillment response and service quality is considered as the key performance measurement for excellence in the education industry (Talmacean & Domnica, 2013). Overall perceived service quality is an antecedent to satisfaction and it is also a major prerequisite for establishing and sustaining students’ satisfaction and retention and also students’ future referrals (Talmacean & Domnica, 2013).

Academic Services

Parasuraman et al., (1985) identified ten determinants of service quality that could be generalized to any type of service. The ten determinants are tangibles, reliability, responsiveness, competence, access, courtesy, credibility, security, communication and understanding. These ten determinants were re-grouped by Parasuraman et al (1990) to form the well-known five dimensions of the SERVQUAL model and they are Tangibility, Assurance, Empathy, Reliability and Responsiveness. The implication is that to achieve student satisfaction higher education institutions must focus on every aspect of the students experience at the institutions must focus on every aspect of the students’ experience at the institution (Asaduzzama et al., 2013).

Khan et al. (2011) found that responsiveness, empathy and reliability are also significantly related to service quality; similarly, reliability and empathy were also found with positive relationship with customer satisfaction but according to them, responsiveness was not significantly related to customer satisfaction. Likewise, service quality is significantly related to customer satisfaction (Agbór, 2011) concludes in his findings. Furthermore, previous research indicates that there is a significant relationship between dimensions of service quality i.e. Reliability, Assurance, Responsiveness and Empathy with satisfaction of the customers while, Tangible was having an
insignificant relation with student satisfaction. Khan et al. (2011) have also observed that higher the level of students’ satisfaction greater will be their willingness to put great efforts towards their studies. Therefore, I developed the following hypothesis;

**H1:** There is a significant relationship between academic services and students satisfaction.

**Administrative Services**

Earlier studies on service quality in the higher education sector have often emphasized academic factors more than administrative factors, concentrating on effective course delivery mechanisms and the quality of courses and teaching (Athiyaman, 1997). However Kamal and Ramzi (2002) looked at the administrative side of higher education by measuring student perception of registration and academic / career advice across different facilities and other administrative services to assure positive quality of courses and teaching (Athiyaman, 1997). However Kamal and Ramzi (2002) looked at the administrative side of higher education by measuring student perception of registration and academic / career advice across different faculties and other administrative services to assure positive quality service that compliments the academic services.

According to Anantha et al (2012), student satisfaction is not limited to the lectures in class or guidance by tutors during the consultation hours but it includes the students’ experiences while interacting with the non – academic staff, the physical infrastructure and other non – academic aspects of college life such as participation in sporting activities such as football. Therefore, I developed the following hypothesis;

**H2:** There is a significant relationship between administrative services and students satisfaction.

**Physical Evidence**

Physical evidence refers to those tangible elements of university service that can be ‘seen’ and ‘touched’ by students (Saginovav & Belyansky, 2008). It therefore includes such physical elements as the aesthetic design of university buildings (Abdullah, 2006) and the extent to which university buildings and grounds are clean (Gamage, et al., 2008). Physical evidence is important because as the one tangible element of an otherwise intangible offering, it is very influential in shaping the attitudes that students ultimately form towards their university (Gamage, et al., 2008). It has also been empirically identified as an important determinant of student satisfaction (Arambewela & Hall, 2009), particularly in light of the notion that its tangible nature makes it easier for students to evaluate their service experience in this regard (Saginovav & Belyansky, 2008). Therefore, I developed the following hypothesis;

**H3:** There is a significant relationship between physical evidence and students’ satisfaction.

**Service Satisfaction**

In the higher education sector, Carney (1994) proposed nineteen variables that can be used to evaluate the image of a college. These variables include variety of courses, academic reputation, class size, student qualification (academic), student qualities (personal), faculty – student interaction, quality instruction (faculty), career preparation, athletic programs, student activities (social life) , community service, location, physical appearance (campus), on – campus residence, facilities and equipment, friendly, caring atmosphere, religious atmosphere, safe campus and cost (financial aid they posit that though the nineteen variables were developed to evaluate college image, they are also highly relevant to the measurement of service quality.

Most of empirical studies in education institutions have produced evidence that service quality leads to students” satisfaction (Long et al., 2014) but review of literature highlights that there is lack of consensus on the definition of satisfaction as a concept with service quality and generally
there are no clear accepted instrument for customer satisfaction in higher education institution (Alnaser & Al-Alak, 2012).

A literature review implies that higher education service quality is the key antecedent of students’ satisfaction, suggesting that elevated level of perceived higher education service quality tends to increase students’ satisfaction. Consequently, in a competitive higher education market, higher education institutions must strive to continuously improve the services they deliver to its students in order to meet their expectations and demands (Lee, 2013).

Satisfaction and Retention

Retention of customer is the key factor in business and it is defined as a particular firm’s capability to provide a customer not only a buying product, but together with a relationship pattern in a specific period of time (Bergamo, et al., 2012). As competition increases in the current turbulent education business environment and with the emergence of knowledge as a driver of economic development higher education institutions and business industry worldwide encounter slower growth rate, price pressures which has brought serious attention on customer satisfaction and retention (Danjuma & Rasli, 2012).

Satisfaction is the key building block which will be able to retain the firm’s customers or students in reference to education institutions (Rahman et al., 2012). Retention of customers will have strong effect on the particular education institution’s profitability (Lee, 2013). In this context Danjuma and Rasli (2012) posits that satisfaction is an essential element for customer attachment which will lead to continuity of the student in the education institution which refers to student retention.

In reference to education industry Tinto’s model which was developed in 1975 highlighted that persistence occurs when a student successfully integrates into the institution academically and socially (Bergamo, et al., 2012). Generally integration is influenced by pre-college characteristic and goals as well as interactions with peers and faculty and together with the out of classroom factors (Bergamo et al., 2012). Therefore, I developed the following hypothesis;

H4: There is a significant relationship between students’ satisfaction and customer retention.

The proposed research model is shown in fig. 1.

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**Figure 1. Proposed Research Model**
**Research Methodology**

**Respondents’ Profile**
Of the 250 completed questionnaires that were returned, 90 questionnaires were discarded because they were not completed in full. This meant that a final sample of 160 questionnaires was used for all subsequent analysis. Of the 160 respondents, 72 (45%) were males and 88 (55%) were females. Respondents are in different years of study, according to Carman (1990) a measure of service quality based on performance only, it was necessary to get respondents who had repeatedly been exposed to the service performance and who had over the years formed a composite service quality perception of the service provider. Profile shows that 30% of the respondents indicating that they were sponsored by the government while rest of 70% of students were either working or getting support from parents.

**Research Instruments**
This study examines the relationship between students’ retention, students’ satisfaction and education offerings like academic services, administrative services and physical evidence. For this purpose, responses were collected from students of different private sector universities in Saudi Arabia; the sample size consisted of 250 students from different levels and disciplines. Two methods were adopted to collect the data. The first one was administering the online survey: An e-mail was sent to the students requesting them to participate in the survey. The sample was divided in to two broad categories that were male and female. A questionnaire used to collect the information from the respondents. This questionnaire developed according to local educational environment on the basis of instruments used by Carman (1990) and Owino (2013) in their studies. The questionnaire was comprised of six sections. Section I consisted of demographic attributes like age, gender, education and discipline etc. Section 6 comprised of questions related to students retention measured on a 5-point Likert scale anchored by “very satisfied” (1) to “very dissatisfied” (5). Sections 2-5 related to satisfaction, academic services satisfaction, administrative services satisfaction, physical evidence satisfaction respondents were asked to indicate their perception on a 5-point Likert scale ranging from “strongly agree” (1) to “strongly disagree” (5).

The questionnaires were conveniently distributed among 250 students of different private universities in Saudi Arabia, out of which 250 were received and 160 questionnaires completed in all aspects were included in study for analysis. Proper instructions were written on the questionnaire to the respondents in order to fill the questionnaire properly.

**Data Analysis**

**Content validity**
To ensure content validity, a thorough review of the literature on the subject of the study was conducted. The questionnaire was also pilot tested by having a panel of experts (professors and research students) review it, after which necessary changes were made to improve both the content and clarity of the questionnaire. Then, a sample of respondents separate from those included in the pilot test was asked to check the questionnaire. These and all pilot test respondents were excluded from the main sample used for reliability testing, construct validation, and hypothesis testing.

**Reliability and Construct validity**
The assessment of the measurement model includes the estimation of internal consistency for reliability, and tests of convergent and discriminant validity for construct validity (Fornell & Larcker, 1981). Internal consistency was calculated using Cronbach's alpha and table 1 shows the descriptive statistics for the constructs, the reliability (Cronbach's alpha) of the scales, and the sources from which they were adapted.
Table 1. Composite reliability and average variance extracted

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Composite reliability</th>
<th>AVE</th>
<th>Adapted from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Service</td>
<td>0.92</td>
<td>0.75</td>
<td>Owino, 2013</td>
</tr>
<tr>
<td>Administrative Service</td>
<td>0.89</td>
<td>0.64</td>
<td>Padlee &amp; Yaakop, 2013</td>
</tr>
<tr>
<td>Physical Evidence</td>
<td>0.91</td>
<td>0.66</td>
<td>Owino, 2013</td>
</tr>
<tr>
<td>Students’ Satisfaction</td>
<td>0.87</td>
<td>0.69</td>
<td>Padlee &amp; Yaakop, 2013</td>
</tr>
<tr>
<td>Students’ Retention</td>
<td>0.85</td>
<td>0.70</td>
<td>Raghavan &amp; Ganesh, 2015</td>
</tr>
</tbody>
</table>

The Cronbach reliability coefficients of all variables were higher than the minimum cutoff score of 0.70 (Fornell & Larcker, 1981). In contrast to Cronbach's alpha, which implicitly assumes that each item carries the same weight, composite reliability relies on the actual loadings to construct the factor score and is thus a better measure of internal consistency (Fornell & Larcker, 1981). Composite reliability should be greater than the benchmark of 0.7 to be considered adequate (Fornell & Larcker, 1981). All composite reliabilities of constructs had a value higher than 0.7, indicating adequate internal consistency (Fornell & Larcker, 1981). Additionally, all Average Variance Extracted (AVE) values of constructs were higher than 0.50, the suggested minimum (Fornell & Larcker, 1981). An AVE greater than 0.5 indicates that more than 50% of the variance of the measurement items can be accounted for by the constructs.

The average variance extracted (AVE) can also be used to evaluate discriminant validity. The AVE from the construct should be higher than the variance shared between the construct and other variables in the model (Fornell & Larcker, 1981). Discriminant validity can be checked by examining whether the correlations between the variables are lower than the square root of the average variance extracted. Table 2 indicates that all the square roots of each AVE value are greater than the off-diagonal elements. This indicates discriminant validity among variables.

Table 2. Correlations of variables

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Academic Service</th>
<th>Administrative Service</th>
<th>Physical Evidence</th>
<th>Students’ Satisfaction</th>
<th>Students’ Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Service</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Service</td>
<td>0.74</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Evidence</td>
<td>0.51</td>
<td>0.39</td>
<td>0.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students’ Satisfaction</td>
<td>0.58</td>
<td>0.42</td>
<td>0.31</td>
<td>0.93</td>
<td></td>
</tr>
<tr>
<td>Students’ Retention</td>
<td>0.41</td>
<td>0.45</td>
<td>-0.51</td>
<td>0.54</td>
<td>0.79</td>
</tr>
</tbody>
</table>

_Hypothesis testing_

The four hypotheses were tested collectively using structural equation modeling (SEM). SEM can support simultaneous latent variables with multiple indicators and mediating effects hypotheses. The results of the SEM analysis revealed an acceptable fit ($\chi^2(698) = 1233.213$, GFI = 0.953, AGFI = 0.934, CFI = 0.968, IFI = 0.958, NFI = 0.954 RMSEA = 0.045). Fig 02 summarizes the results.
The variance explained ($R^2$) for the structural equations for students’ satisfaction and students’ retention is 65.0% and 70.7%, respectively. First, for academic services, the coefficients between academic services and students’ satisfaction ($\beta = 0.179$, p-value < 0.01) are significant, indicating that H1 is supported. Inspection of the antecedents of satisfaction suggests that the four academic service factors seem to have consistent influence. For the students’ satisfaction, assurance ($\beta = 0.143$, p-value < 0.01), empathy ($\beta = 0.379$, p-value < 0.01) and reliability ($\beta = 0.295$, p-value < 0.01) significantly influence satisfaction, but responsiveness fails to reach statistical significance ($\beta = 0.04$, p-value > 0.1).

Second, for the hypotheses related to administrative services, the coefficients between administrative services and students’ satisfaction ($\beta = 0.258$, p-value < 0.01) are significant, indicating that H2 is supported. Among the variables registration process and payment process appear to be a strong predictors of students’ satisfaction ($\beta = 0.415$, p-value < 0.01) and ($\beta = 0.384$, p-value < 0.01) respectively. Information circulation ($\beta = 0.227$, p-value < 0.01) and examination procedure ($\beta = 0.240$, p-value < 0.01) are significantly related to students’ satisfaction.
Third, examining the hypotheses related to physical evidence, the coefficients between physical evidence and students’ satisfaction ($\beta = 0.018$, p-value $> 0.01$) are not statistically significant, indicating that H3 is rejected. Among the antecedents of physical evidence, only employees’ appearance shows a significant on students’ satisfaction ($\beta = 0.264$, p-value $< 0.01$). However, building design, classroom design and field for extra curriculum failed to achieve statistical significance ($\beta = 0.123$, p-value $> 0.1$), ($\beta = 0.112$, p-value $> 0.1$), and ($\beta = 0.091$, p-value $> 0.1$), respectively.

Finally, students’ satisfaction is significantly related to students’ retention ($b = 0.328$, p-value $> 0.1$), thus H4 is supported.

**Discussion and Conclusion**

This empirical study manifests the magnitude and relative importance of various antecedents for service quality dimensions toward students’ satisfaction and students’ retention. It significantly contributes to the service quality literature in several ways.

First, the findings reveal that academic service (except responsiveness) show strong association with students’ satisfaction and retention. This result confirms Khan et al. (2011) observation which postulated that models for service quality dimension that rest largely on academic services are likely to account for much in students’ satisfaction. This study further extends past research to the academic service quality and concludes that, although students consideration of the academic empathy, reliability and assurance of private higher education institutions is a necessary condition for satisfaction to occur, responsiveness has no sufficient contribution to explain students’ satisfaction.

Second, with its ability to account for a substantial variance in the dependent variable, the current study offers evidence of the significant influence of administrative service of service quality dimension in understanding students’ satisfaction and retention, and provides some useful insights. It suggests that students would consider the registration and payment process of service quality before selecting the private higher education institutions. Furthermore, the results in Fig 02 reveal that information circulation and examination procedure appear to be the important determinants of students’ satisfaction with service quality of private institutes, followed by students’ retention. This suggests that the effect of administrative task ease will be salient along with academic services ease for students’ satisfaction and retention in private institutes. This is consistent with Anantha et al. (2012) in the service quality literature.

Third, while a means of enhancing satisfaction is through the physical evidence, it is worth noting that only employees’ appearance has positive effects on consumers’ satisfaction. The feeling of satisfaction is not driven by building design, classroom design and field for extra curriculum. This is not consistence with previous research as Arambewela & Hall (2009). This shows that students in private universities were more satisfied with the service process flow in the institutions, particularly with the variable as the course content but were least satisfied with non-human elements particularly the variable building design, classroom design and field for extra curriculum.

Finally, satisfaction leads retention of students in private institutes. The results show a strong positive relationship between service quality, students’ satisfaction and students’ retention, meaning that higher levels of service quality could result in higher levels of student satisfaction; in result higher level of retention in privates’ institutes.

**Study Limitations**

The research only considered a small sample of 160 students, mix number from each year of study. In addition, the sample was based on a private universities. Accordingly, it is appreciated that

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the discussion revolves around a limited sample and it would not be appropriate to generalize the findings of the study to all universities.

Although the researcher maintained best efforts to ensure that homogeneity existed between participants, the use of a convenience sample could have introduced an element of bias to the investigation. Due to the difficulty attracting participants, especially first and second year students, convenience sampling techniques were used at the discretion of the researcher to choose students rather than randomly selecting students.

In hindsight, if the researcher had access to more time and resources, then a larger sample (i.e. more focus groups) would have been used, as well as a more detailed investigation into the relationship between different service quality characteristics and satisfaction. This may have encouraged better understanding of service quality, yielding results that are more generalizable.

References


