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Antecedents and consequences of service quality in a higher education context
A qualitative research approach

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Abstract
Purpose – The purpose of the paper is to report on the perception of students in regard to critical antecedents, dimensions and consequences of service quality with an aim to develop a theoretical model in the context of a university in Australia.

Design/methodology/approach – This research used focus group discussions with 19 students who had been studying in undergraduate and postgraduate level programs at an Australian university.

Findings – The findings show that the critical antecedents to perceived service quality are information and past experience. There are three aspects of perceived service quality, namely, academic, administrative and facilities. Student satisfaction and student trust are found to have direct and positive relationships with perceived service quality as consequences; and brand performance and behavioural intention are found to have indirect relationships with perceived service quality mediated through satisfaction and trust.

Originality/value – This paper found three separate themes and their relationships with service quality in the context of a university. These themes are: information, past experience and brand performance. Perceived service quality was found playing an important role in this theoretical model. The model provides a good explanation of university brand performance and students’ behavioural intentions.

Keywords – Higher education, Service quality, Information, Past experience, Satisfaction, Trust, Brand performance, Behavioural intention, Australia, Students

Paper type Research paper

Introduction
A number of studies in service quality have enriched the services marketing domain over the last three decades. Most of these studies have concentrated their findings on the dimensions of service quality across industries, cultures and firms. These studies developed scales to gauge quality. Amongst these, the widely used scales are the SERVQUAL conceptualised on the expectancy-disconfirmation paradigm (Parasuraman et al., 1985, 1988) and the SERVPERF conceptualised on the
perception-only concept (Cronin and Taylor, 1992, 1994). Only a few studies (Dabholkar et al., 2000; Gounaris et al., 2003) have focused attention on the antecedents of service quality. In terms of consequences of service quality in commercial enterprises, several models have been developed in the service quality literature (Cassel and Eklo¨f, 2001; Cronin et al., 2000; Fornell et al., 1996).

The dimensions of service quality have varied according to the thought of two different schools, the Nordic (Gro¨nroos, 1982, 1984) school and the American school (Parasuraman et al., 1985, 1988), by industries (Lee et al., 2000), by service types (Babakus and Boller, 1992), by culture (Furrer et al., 2000) or even by providers or firms in the same industry (Abdullah, 2005; Sureshchandar et al., 2001; Zeithaml et al., 1993).

The dimensional approach of service quality provided an understanding of quality dimensions and their relevant attributes. The antecedent framework, in contrast, provided insights into how consumers viewed service quality as a whole and how this view contributed in predicting their behaviour (Dabholkar et al., 2000). Consequences of service quality vary across study perspectives. For example, economic value may play a significant role as a consequence of service quality for a commercial product. However, this might have little significance as a consequence of service quality for emergency services when compared to emotional value.

Although universities and commercial enterprises are located in two different sectors, a number of studies (see, for example, Brown and Mazzarol, 2009; Chitty and Soutar, 2004) used the European Customer Satisfaction Index (ECSI) model in the context of higher education. These studies did not find cause and effect relationships of some of the variables in the context of the higher education sector. One of the reasons for this was that the ECSI model was developed for testing nationwide customer satisfaction levels across commercial industries.

As higher education provision is a service and students are expected to fund their educational expenses, it would seem appropriate that universities make a shift from being product-led, i.e. relying on the product to sell, towards a more “customer-led” approach (Angell et al., 2008). It was found in the current literature that, when making an uncertain and high-risk decision choosing a university, the student looked for evidence of service quality (Donaldson and McNicholas, 2004). This confirms the importance of service quality in a university context. The institution will ultimately be at a disadvantage due to ignorance of the competitive nature of attracting students and measuring service quality (Angell et al., 2008). Therefore, a marketing approach to the higher education domain may provide an important outcome. The present paper explores student perceptions of antecedents, dimensions and consequences of service quality in the context of a university in Australia with the aim of establishing a theoretical model. The paper is organised as follows. The next section presents a review of current literature. This is followed by the methodology, discussion, and research hypotheses sections. The final part of this paper discusses conclusion, and some implications, limitations and future research directions.

**Literature review**

Most of the service quality literature in the last few decades focused on the dimensional approach. As a result, a number of measures evolved; namely the Gro¨nroos model (Gro¨nroos, 1982, 1984), the SERVQUAL model and the SERVPERF model. These models were developed based on commercial
services. The SERVQUAL scale defines quality as perception-minus-expectation. It consists of 22 items for each of expectation and perception. These items are classified into five categories:

1. reliability;
2. assurance;
3. tangibles;
4. empathy; and
5. responsiveness.

The SERVPERF scale, in contrast, is known as a perception-only scale. The items and dimensions are similar to that of the SERVQUAL scale. The only difference in the SERVPERF scale is that it only considers perception.

Previously reported studies show a little consensus as to which measure is universally suitable (Angell et al., 2008) and which of the definitions of service quality was regarded as more appropriate (Seth et al., 2005; Wicks and Roethlein, 2009). Empirical studies on service quality in terms of the relative superiority between the SERVQUAL scale and the SERVPERF scale have been examined. On the one hand, some studies found that the SERVPERF scale is a better alternative than the SERVQUAL scale (Babakus and Boller, 1992; Brady et al., 2002; Brown et al., 1993; Jain and Gupta, 2004; Zhou, 2004; Sultan and Tarafder, 2007a, b; Chowdhury and Sultan, 2005). On the other hand, SERVQUAL has received much attention as a measure of service quality (Chebat et al., 1995; Furrer et al., 2000; Zeithaml and Bitner, 2003). One study, in this context, suggested that both scales were adequate and equally valid predictors of overall service quality (Carrillat et al., 2007).

The antecedent approach to study service quality has received a little attention in the academic literature. One study, in this context, demonstrated that service quality is influenced by four of its dimensions, namely: reliability, personal attention, comfort and features (Dabholkar et al., 2000). This study referred to these dimensions as the antecedents to service quality. Dabholkar et al.’s (2000) study recommended that, if the objective of the study is to predict service quality or to gauge its determinants, the perception-only measure should be used. Research on customer-specific antecedents of service quality also received a little attention (Gounaris et al., 2003). The antecedent approach starts from customers. Customer perception of service quality is affected by factors such as communications from salespeople, social referrals, various types of information collected, and the credence consumers develop towards a service organisation (Gounaris et al., 2003; Kangis and Passa, 1997). Service quality research in the higher education sector is new, at least, compared to that of commercial sector. Most of the quality models commonly deployed in the business sector have been adapted and used in the education sector (Chua, 2004).

Service quality research in higher education developed relevant scales conceptualising either SERVQUAL or SERVPERF. One such study reported that the SERVQUAL scale is reliable and valid when it is applied to a particular classroom environment (Stodnick and Rogers, 2008). However, a number of studies (see, for example, Cuthbert, 1996a, b; O’Neill, 2003; Oldfield and Baron, 2000; Sahney et al., 2004) examined the SERVQUAL scale in the university environment and none of those studies were able to replicate the five-factor structure of the SERVQUAL scale. Similarly, findings from studies of commercial enterprises, Li and Kaye (1998) found that the SERVPERF scale outperforms its counterpart, the SERVQUAL scale, in the context of higher education.

The dimensional measures of service quality in the higher education sector, the HEdPERF measure (Abdollah, 2005, 2006a, b, c) and the PHeD measure (Sultan and Wong, 2010a), may be considered comprehensive scales as these measures included a broad range of service attributes in the context of higher education. The HEdPERF measure and the PHeD measure were conceptualised on the
perception-only scale. The findings of these studies showed that the dimensions of service quality measures in the context of higher education depend on study perspectives. Although the dimensional study of service quality dominates the current literature (please see Appendix 1 for a brief summary of the dimensions of service quality research in the higher education), the antecedent approach to study service quality is a recent development in the academic literature. There are a number of differences between dimensional and antecedent approaches to studying service quality (please see Appendix 2), and both of these approaches can advance our understanding of service quality in the higher education context.

Service quality and its predictability in terms of student satisfaction in the higher education context have been examined in some studies. A number of studies used the ECSI model in the higher education domain (Alves and Raposo, 2007; Brown and Mazzarol, 2009; Chitty and Soutar, 2004; Martensen et al., 2000). The findings of these studies were inconclusive in that the replication of the ECSI model does not produce any decisive results in the context of higher education. The reason for this was that the interrelationships among a number of constructs of the ECSI model, in the context of higher education, appear statistically insignificant and negative. In addition, these empirical studies hypothesised that “the university image” was in-built in a university and demonstrated that image affects value, satisfaction and loyalty. A number of studies argued that the image was developed mainly by quality (Groˇrroos, 1984), and was a consequence of value, quality (Nguyen and LeBlanc, 1998) and satisfaction (Johnson et al., 2001). Johnson et al. (2001) stated that the effect of customer satisfaction on image reflects both the degree to which the consumption experience enhanced image and the consistency of customers’ experiences over time. Higher education institutions are distinctive service organisations, and thus implementing the ECSI model in the context of higher education needed separate attention.

In summary, this study found that the current literature provided an inadequate understanding about antecedents, dimensions and consequences of service quality in the context of higher education. A number of recent studies underlined the importance of developing a comprehensive model of service quality in the context of higher education (Gallifa and Batalle, 2010; Sultan and Wong, 2010b). The present study addresses this research gap with empirical qualitative evidence in the context of a university in Australia.

Research method
The aim of this study was to develop a theoretical model consisting of antecedents, dimensions and consequences of perceived service quality in a higher education context. This research adopted an exploratory qualitative method and employed the focus group technique for data collection.

The focus group
The participants for focus group discussions were the students of the sample institution. The participants were divided into distinct segments based on their level of study. For example, undergraduate and postgraduate including masters and doctoral level students participated. This was done in order to minimise the dominance of senior students over junior students, and to ensure interactive participation among the group members.

There are varied suggestions about the number of participants for a qualitative study. For example, Brown et al.’s (2009) study included 22 students as focus group participants to examine student choice processes of a university’s course selection. James et al.’s (1999) study examined influencing factors for selecting a particular university and used a case study method with 12 prospective undergraduates. Although there is no rule-of-thumb about the number of members in a focus group,
one study suggested that “a group consisting of 5-10 respondents is appropriate” (Krueger and Casey, 2000, p. 10). A number of studies also suggested that several (3-4) focus groups should be convened, depending on distinct population segments (see, for example, Morgan, 1988; Stewart et al., 2007). Thus, the present study included five, eight and six undergraduate, masters and doctoral level students in three focus group discussions, respectively. The participants for focus group discussions were chosen by following convenience and purposive sampling techniques (Babbie, 2007; Brown et al., 2009; Gatfield et al., 1999; Punch, 2005).

The focus group participants had at least six months experience of studying at the sample institution. The focus group discussions were exploratory in nature. Using a facilitator or moderator for this type of investigation may bias the findings, in that the cues provided by the moderator, knowingly or unknowingly, inform the group what information is desired, and can get group consensus on a particular issue (Stewart et al., 2007). In addition, hiring a moderator is time-consuming and increases the cost of the research project substantially (Morgan, 1997). Thus, the focus groups were conducted by the principal researcher in a non-directive and unstructured fashion. Broad questions were presented to each of these groups (Zeithaml et al., 1993). First, the respondents were provided with an explanation of the research aims, and the tasks they would perform during focus group discussion. Second, broad and open-ended questions were posed; including what affects quality of services in terms of the sample institution prior to enrolment? How did they evaluate service quality in terms of their university? What were the critical quality aspects of this university? What were the critical consequences in terms of quality evaluation in the context of their university? Third, to facilitate the discussion and to keep it compact within the aims of this study, the researcher summarised the discussion during each of the focus group sessions. This facilitated participants to focus on the content of discussions. The discussions were recorded using an electronic device, and the duration for each of the discussions was about one hour.

Data analysis and interpretation
The analysis of focus group data required a great deal of judgment and care, and they depended on the research questions and the purpose of the focus group discussion (Morgan, 1988). For the purpose of this study, a thorough content analysis was employed. Krippendorff (2004, pp. 3-11) stated that “content analysis entails a systematic reading of a body of texts, images and symbolic matters, not necessary from an author’s or user’s perspective [. . .] it is used when verbal data are gathered in the form of answers to open ended interview questions, focus group conversation . . .”.

The content analysis was conducted using manual procedures. The first stage included identifying the recorded information that was important for developing themes and interrelationships following theoretical and conceptual suggestions (Krippendorff, 2004; Neuendorf, 2005). In this stage of the analysis, transcripts were prepared from the recorded focus group discussions. The manuscript was cleaned and edited by eliminating typographical errors and contradictions in the text that were irrelevant to the central issue of the study. The second stage followed coding and categorising that included assigning key words suitable for a section of text, giving a particular meaning to or labelling a section of the material (Sarantakos, 1997). Thus, the texts were classified or categorised. The coding process not only involved categorising the chunks of texts but also included sending the data via memo. Memo is the notes, backgrounds, ideas or thoughts about coding data (Babbie, 2007; Sarantakos, 1997). The third stage was concept mapping. Concept mapping is the display of concepts and their interrelations to formulate a theory (Babbie, 2007). It also helps in strengthening the theoretical model. The theoretical model was purified following a two-step procedures. First, each researcher independently reviewed the transcripts and developed a list of constructs, and formulated interrelationships among them. Second, the researchers shared their inferences and finally developed the theoretical model and key hypotheses.
Discussions and research hypotheses

Demography of the respondents
Demography of the respondents is important in qualitative analyses. This is because it validates the responses collected to achieve the research objective. The ages of the undergraduate and postgraduate students were 19-21 and 26-38, respectively; and total female to male ratio was 5:14 (please see Appendix 3 for detail demographics of the respondents).

Antecedents, dimensions and consequences of service quality
Antecedents to service quality. The focus group findings revealed that students considered information as a prime source for the formation of perceptions of service quality about a university prior to enrolment. Information plays a critical role to inform students about the key attributes of a university. In turn, this may help students in selecting a particular university and course or program (James et al., 1999). The focus group findings also revealed that students consider promises and information communicated through promotional tools and their genuineness, when forming perceptions and evaluating service quality. Information affects quality evaluation in that students evaluate stated or implied promises and information provided during or after a service encounter. As stated by two participants:

[... ] delivered promise must be equal to the delivered service (R5).

Quality is affected, among other things, by the promise that would have been provided by the supplier (R14).

Previous studies have found that formal communications from various sources, including advertisements, leaflets, and related articles in magazines and newspapers, affect the way customers interpret ambiguous evidence concerning quality (Deighton, 1984; Devlin et al., 2002; Mathews, 1994). Adequate information accelerates students’ learning in terms of attributes of the product or service. This study defined information as explicit and implicit messages that students receive directly and indirectly from the sample institution before enrolment. Information alone cannot provide a complete view of the world around us. To get a complete view about a particular phenomenon, one needs to integrate his/her imagination and experience along with information (Blythe, 1997; O’Neill and Palmer, 2003).

Customers tend to evaluate perceived quality negatively if they accumulate negative experiences (Hoch and Deighton, 1989). In other words, consumers’ perceptions of service quality are influenced by the degree of prior experience (O’Neill and Palmer, 2003). The focus group findings for this study were also aligned with the current literature. The following are two quotes that support the current literature.

I will compare my past experience, for example, the experience with my previous university and present university (R6).

[... ] definitely past experience has a role to play and evaluate quality of university services (R17).

The findings suggested that past experience was one of the key issues that play a vital role in forming perception of quality. The reason for this is that students recalled and compared their past experience of receiving the same service with the present one during service encounters. The current literature defined past experience as customers’ experience with the service organisation
and service personnel (Devlin et al., 2002), and previous exposure to the firm, to similar firms in the same industry or to any service firms (Zeithaml et al., 1993). The present study defined past experience as students’ previous educational experience before enrolling at the sample institution, previous experience of service encounters and subsequent treatment provided by the sample institution. In summary, this discussion led us to learn that perceived quality evaluation is affected by student’s perception of information (or marketing communications) and their previous experience of service encounters.

Dimensions (or aspects) of service quality. Service quality is defined as the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs (Johnson and Winchell, 1988). Sultan and Wong (2010a) stated that perceived service quality is based on one’s experience and is a function of attitude. Service quality has also been viewed as a critical determinant of competitiveness (Lewis, 1989), as a source of lasting competitive advantage through service differentiation (Moore, 1987), and as a driver of corporate financial and marketing performance (Buttle, 1996).

As revealed by focus group findings, the assessment of service quality was a cognitive process, meaning that service quality assessment was a psychological result of perception, learning, reasoning and understanding of the service attributes. In this context, one respondent stated that:

I think we add-up the issues like recent experience, present performance and our interests in a subconscious manner [...] (R12).

In regard to critical service quality aspects, the focus group findings revealed three critical aspects, namely academic, administrative and facilities. The academic service quality refers to those service attributes that provide core academic values including teaching quality and ability, course development and teacher-student relationships. The following are some specific quotes:

To me the delivery of lecture should be good and lecturers to be interactive, so that I can understand what I am learning (R4).

I think the most important is the quality of lecturers and how entertaining they are. The lecture should not be boring and after lecture availability is also important (R2).

[... ] they should have research expertise and intellectual capacity to conduct research and supervise the research students (R14).

The academic activities in a university context are the core values. The academic aspect of perceived service quality as evidenced from focus group findings was consistent with the current literature (Angell et al., 2008; Abdullah, 2005, 2006a, b, 2c; Gatfield et al., 1999). The current empirical support further intensified the essential role of the academic aspects in a value-laden university context.

Administrative service quality was found to have similar importance in the overall assessment of service quality in the context of a higher education. Administrative service quality refers to those service attributes that provide support services for smooth functioning of academic activities. This may include skills and abilities of the administrative and support staff and their relationships with students. A shortfall in administrative service quality may result in poor evaluation of overall service quality assessment. As stated by one respondent:

Sometimes staff take time to reply to our query, and send us the common web links to search instead of addressing the queries. They should know what they are doing (R1).
[. . .] student recruitment procedures, overall people and process of delivery are also vital as quality aspects (R17).

The findings revealed that a customised and timely reply to a query, and assistance in regard to admission and relevant administrative activities could play a positive role in perceived quality evaluation. In the higher education service quality literature, most studies find aspects (or dimensions) concerning academic activities (see, for example, Rojas-Mendez et al., 2009; Angell et al., 2008; Gatfield et al., 1999). Although some studies (Abdullah, 2005, 2006a, b, c) found non-academic aspects of perceived service quality, the non-academic aspects in those studies combined administrative and academic support. The current study found a separate aspect, namely an administrative aspect, which is one of the core aspects of perceived quality evaluation. The empirical findings of this study stated that administrative support service quality was equally important for the overall assessment of service quality.

Facilities service quality refers to those service attributes that are required to create a competitive higher education environment. Students refer to facilities service quality as library facilities, entertainment facilities, career counselling, transport facilities, dining facilities, access to computer and other facilities including access to workshops, seminars and conferences. The following are some direct quotes:

[. . .] of course the critical aspects are library facilities and then is career counselling (R9).

I face specific problems with transport services (R4).

We do not have a good dining facility here (R5).

The other important issues are whether the university holds workshops and invites renowned people to deliver speeches (R2).

[. . .] accessibility of entertainment centres and resources (R6).

The current literature (LeBlanc and Nguyen, 1997; Kwan and Ng, 1999) found the “access to facilities” dimension of perceived service quality using factor analysis. Thus, the focus group findings of this study are also consistent with the current literature.

Overall, the three critical aspects of service quality, academic, administrative and facilities are related to specific service attributes of a university that students encounter during their study. These findings revealed that antecedents to service quality and dimensions of service quality are distinct. The antecedent to service quality mainly involved those issues that students considered prior to interacting with the service. In contrast, the dimensions of service quality were related to specific features of services during service encounters.

Critical consequences of service quality. A favourable perception of service quality is most desirable for any organisation. This is because it not only reflected their efficiencies and effectiveness but also it helped to retain and attract new customers. Customer satisfaction is the centre of all marketing activities, and the most powerful base that retains and attracts customers. Current studies (see, for example, Alves and Raposo, 2007; Brown and Mazzarol, 2009; Chitty and Soutar, 2004; Martensen et al., 2000) examined the ECSI model in the context of higher education and found a number of consequences of perceived service quality, including value, satisfaction and loyalty. Based on the findings of these studies it was hard to draw any conclusions in regard to the consequences of service quality in the context of higher education, since some of these relationships were found to
be negative and insignificant. To gain more insights, the focus groups were asked to discuss the consequences of service quality evaluation in the context of their university in the long run. The following are some specific quotes in regard to the consequences of perceived service quality:

[. . .] if the university provides quality services the obvious outcome is our satisfaction and the next is our understanding that the University can satisfy us in future (R2). Satisfaction and brand plays a pivotal role. The employers never see whether you have HD or D. What they see is which university you have attended. So, satisfaction and brand play pivotal roles (R11).

If the students have very good experience they will recommend others to come and they can come again for higher studies as well (R10).

The focus group data uncovered several facets. First, student satisfaction was found to be an important consequence of service quality. In fact, satisfaction was found to be one of the core themes relevant to the consequences of service quality. Second, “trust of students” that the academic and administrative performance will both be satisfactory in future was found to be another important consequence of service quality and satisfaction. Third, the position of the University as a Brand (UniBrand) in the market, brand performance, was found to be another consequence of service quality with a direct relationship to students’ satisfaction. Fourth, the focus group findings suggested that loyalty might not be an appropriate consequence in the context of higher education; instead, behavioural intention may play a vital role. Two respondents, in this connection state that:

I think loyalty is more related to commodity marketing but not relevant to a university. I don’t actually believe that I am loyal to a university (R8).

[. . .] it is not necessary to be loyal to a university. For example, I may not come to do PhD here even if I am satisfied. Rather, if I find that lecturers moved from this university to another, I may consider that university for my future study destination. It’s all about my belief of lecturers (R13).

While loyalty, as perceived by the students, is related to studying further at the same university, behavioural intention is perceived as recommending others to come to study at the university and their intention to come again to the university. Thus, behavioural intention is the final consequence of service quality. Therefore, the critical consequences of service quality in a higher education context are student satisfaction, their trust, university’s brand performance, and finally, behavioural intentions.

Research hypotheses
Information and service quality. Information pertaining to service quality was important as it provided a basis for evaluating service quality attributes during service encounter. The current literature does not seem to explore the nexus between information and service quality. Formal communications from various sources, including advertisements, leaflets, and related articles in magazines and newspapers, affect the way customers interpret ambiguous evidence concerning quality (Deighton, 1984; Devlin et al., 2002; Mathews, 1994). Devlin et al. (2002) stated that information provides opportunities to influence assessment of service quality and customer satisfaction. As stated by focus group participants, information available from a university should be reliable and adequate as that affects the level of quality judgment:
If the product is new and there is no set standard, in that case, the level of quality in terms of my needs would be very much influenced by whatever product related promotional materials are being discharged by the supplier (R17).

The underlying factors affecting quality are adequate information and its genuineness (R15). Quality evaluation starts from the information provided. The explicit or implicit promises embedded in information provided play a vital role in forming and evaluating quality. Therefore, favourable perceived quality is contingent upon the extent to which the institution keeps its promises and provides reliable information. This forms the first hypothesis:

H1. There is a positive and significant relationship between information received by the students and their perception of service quality.

Past experience and service quality. Past experience of service encounters helps customers to determine the standards of any future service performance, particularly, if the service is the same or similar. It provides a brief cognitive standard and helps with evaluating the standard of any future service encounter.

In the context of higher education, students’ previous educational experience, including high school experience of the undergraduate students, students’ previous experience with courses from the same or different institution(s), and their previous interactions including face-to-face and electronic communications with staff and friends affect perceptions of service quality. This is because students’ past experience affects the way they standardise their quality evaluation. In this regard, two participants stated that:

[. . .] before coming to this university, I had only high school experience. From that point, it is hard to say. But at least it tells that we would learn some advanced stuff at the university (R5).

I’ve attended three different universities in Australia. Many people would agree that out of these three . . . University is the prestigious. But why I didn’t go back to that university? So, considering . . . recent experience with staff, I’m keep going with the sample University (R13).

Past experience was regarded as vital in forming perceived quality as customers often recall and compare similar service attributes received from various providers. Thus:

H2. There is a positive and significant relationship between student past experience and their perception of service quality.

Service quality and satisfaction. The concept of satisfaction occupies a central position in marketing thought and practice. Satisfaction (or dissatisfaction) is not inherent in the product or service. Instead, it is the consumers’ perceptions of the attributes of a product or service (Boshoff and Gray, 2004). The relationship between service quality and satisfaction is well documented in the academic literature in the context of the commercial sector. These studies suggested that the critical determinant of perceived satisfaction is perceived quality (see, for example, Cronin et al., 2000; Eskildsen et al., 2004; Fornell et al., 1996). This is because both perceived quality and satisfaction are attitude driven. While perceived quality is a long run overall evaluation, satisfaction is the outcome of the overall evaluation. Two focus group participants, in this regard, stated that:
If someone is not satisfied with the performance of the university, he has to finish his
degree. He can’t just be in the middle of no way and do nothing (R7).

Everyone says . . . and . . . are big and better universities in . . . comparative to this
University. I have no experience with them . . . But to me this university fulfils my need. I
have never found anything lacking. I have access to the resources that I need (R2).

The focus group findings suggest that the students are satisfied if service attributes perform well.
Therefore:

H3. There is a positive and significant relationship between perceived service quality and
student satisfaction.

Service quality and trust. Student trust is rooted in the delivery on promises made, commitments
and the university’s overall integrity in solving academic and administrative problems that
subsequently determine the relationship strength between student and university staff. In this
regard, one focus group participant viewed trust as:

[. . .] trust is whether the university keeps promises or not (R16).

Trust has a significant role in the higher education domain as students build cumulative effects of
trust over the years with their teachers, staff and the institution. Service quality and trust have been
viewed as the centre of relationship marketing (Berry, 2002). While perceived service quality is an
experiential norm (Sultan and
Wong, 2010a), trust is an emotional norm. Perceived service quality often provides a deep credence
about the outcome of any future service encounter. One of the focus group participants, in this
regard, stated that:

[. . .] if the university provides quality services the obvious outcome is our…and the next is
our understanding that the University can satisfy us in future (R3).

Therefore,

H4. There is a positive and significant relationship between perceived service quality and
student trust.

Satisfaction and trust. One of the important antecedents of trust is satisfaction (Rojas-Mendez et al.,
2009; Delgado-Ballester and Munuera-Aleman, 2001; Zboja and Voorkees, 2006). Although trust is
an emotional norm, it is often influenced by consumers’ trial and usage evaluation, and their
subsequent satisfaction (Delgado-Ballester and Munuera-Aleman, 2001). As stated by one of the focus group participants:

The students have trust in a university if it provides satisfaction in terms of value for money,
security and integrity in fulfilling promises (R10).

The trust is to provide me something for which I pay the money (R7).

[. . .] if the university provides quality services the obvious outcome is our satisfaction and
the next is our understanding that the University can satisfy us in future (R3).
While satisfaction is transaction specific (Cronin and Taylor, 1992), trust is a cognitive understanding and a thorough emotional belief of future service performance and subsequent satisfaction. Thus, trust is often enduring relative to satisfaction. Unless one experiences a service and is satisfied with its performance, it is unlikely that one would develop trust in it. Therefore:

H5. There is a positive and significant relationship between student satisfaction and their trust.

Satisfaction and brand performance. Brand performance is the success of a brand in a defined market. Wong and Merrilees’s (2007) study conceptualised brand performance from a managerial perspectives, and defined this as a set of brand awareness, brand reputation, brand loyalty and brand satisfaction. In the current literature, brand performance has been measured by considering market share, per cent of buying, purchases per buyer annually and annual switching (Ehrenberg et al., 2004). While Chaudhuri and Holbrook’s (2001) study viewed “brand performance outcomes” as greater market share and a premium price relative to the leading competitor, O’Neill et al.’s (2006) study defined brand outcome as profitability, which is measured by increased sales and price premiums. These studies conceptualised brand performance measures from managerial and brand outcome perspectives.

The current study conceptualised university brand performance (UniBrand) from students’ attitudinal perspective, and defined brand performance as the performance of the sample institution as a brand in terms of students’ perception with regard to their association, understanding and evaluation of UniBrand in the market. The focus group findings of this study stated that students perceived UniBrand as their success rate in getting employment and their perceived salary range after graduation, employers’ preference of them in the job market, students’ pride and worthiness of the degree in the market, reputation of the university and the university’s international standing in terms of its reliable performance. In this context, the following quotes were retrieved from focus group data:

[... ] the University’s standing in terms of popularity and by its employment rates (R4).

Employers’ choice of the graduates, students’ perception of the degree that the degree is valuable, employers’ understanding that the university provided solid foundations, determining how successful the Uni is in providing its students with job facilities (R9).

[... ] students’ employment rates; Nobel prize; previous students of the university contributing to society as a political leader, government officer or highly recognized person; whether students are proud to be a student of the university, and salary range of the graduates (R11).

Thus, the focus group data underpinned the importance of UniBrand in a higher education context, and delimited its key features. In summary, UniBrand is referred to as the students’ perception in regard to their association, understanding and evaluation of the university as a brand in the market.

O’Neill et al.’s (2006) study demonstrated that customer satisfaction affects brand outcome in the context of the hotel industry. The focus group data also revealed that UniBrand is one of the important consequences of student satisfaction, and plays a pivotal role in the market. In this regard, two specific quotes state:
I think student satisfaction plays a vital role in building a brand in the market. I am more concerned about how successful the Uni is in terms of providing job opportunities and whether employers prefer the graduates of this Uni (R3).

[..] the University claims that the graduates of this University receive high pay in Australia. As a student, I believe it is true (R5).

Student satisfaction was one of the major sources of UniBrand’s relative success in the market in that satisfaction results in increased market share, low switching and improved brand perception. Thus, student satisfaction results in UniBrand in three ways: reputation of the brand, retention of existing students and registration of new students (or 3Rs). Therefore:

H6. There is a positive and significant relationship between student satisfaction and university brand performance.

Trust and brand performance. Chaudhuri and Holbrook’s (2001) study examined the mediating role of brand loyalty between brand trust and brand outcome within commercial settings. Customer trust in a brand increases brand reputation (Jøsang et al., 2007), which is a close representation of brand performance (Harris and de Chernatony, 2001). This implies that customer trust may have an influence on brand performance. For the purpose of this study, brand performance was conceptualised as an attitudinal measure. Trust, in contrast, was conceptualised as a thorough emotional belief backed by students’ experience, perception and satisfaction.

Delgado-Ballester and Munuera-Aleman (2001, p. 1243) stated that “the process by which an individual attributes a trust image to the brand is based on his/her experience with that brand”. In this regard, two specific quotes state:

Everyone says . . . and . . . are big and better universities in...comparative to this University. ...But to me this university fulfils my need. I have never found anything lacking. I have access to the resources that I need (R2).

[..] the University claims that the graduates of this University receive high pay in Australia. As a student, I believe it is true (R5).

Thus, student trust summarised their knowledge and experience relating to the UniBrand. Student perception is important as it summarised their insights of the standing of the UniBrand in a market. Their trust also determined the value of the programs or courses. As students developed the cumulative effects of trust over the years with their academic and administrative staff, and with the institution, they felt proud of having an association with the UniBrand, which in turn upholds the UniBrand in the market. Therefore:

H7. There is a positive and significant relationship between student trust and university brand performance.

*Brand performance and behavioural intention*. Behavioural intention indicates whether customers will remain with, or defect from, the company (Zeithaml et al., 1996). Selnes (1993) found a strong relationship between brand reputation and customer loyalty. The focus group data revealed that students were reluctant to be loyal, and instead they were more likely to show positive behavioural intentions. This in turn was contingent upon students’ positive attitudes toward UniBrand. The relationship between UniBrand and behavioural intention was found in the following quotes:
If the University is good, I’d tell others to come to this Uni and I may come to study at this Uni (R8).

It’s not that I have to come again and do my PhD, right. It’s something like recommending others to come to take the courses. But having said that like as I am paying money I may not be loyal to them. In fact it depends on the merits of the university (R4).

Therefore:

H8. There is a positive and significant relationship between university brand performance and behavioural intention.

Satisfaction and behavioural intention. It is evident in the current literature that online customer satisfaction directly affects online customer’s behavioural intention (Gounaris et al., 2010; Zeng et al., 2009). This is because satisfied customers generate high patronage frequency (Zeng et al., 2009). Thus, it is likely that a firm would receive favourable customer behavioural intention in the long run if the primary goal of the firm is customer satisfaction (Zeithaml et al., 1996).

The focus group data for this study stated that students were more aligned to show positive behavioural intentions if they were satisfied. The findings also suggested that students perceived educational services in a similar way to commercial services, and the reasons for this included tuition fees and commercial advertisements. The followings were some specific quotes:

Loyalty is something like a friendship . . . if you do something better to me, I will do something better for you. In a university they are not giving you anything except education. That’s also because we pay. So how can you put that loyalty in a university? I don’t know! (R2).

In a university setting “loyalty” is not an important issue. I can never be loyal to a university (R6).

They are selling the education, aren’t they? We are paying money for a service. I see the ads on TV. If I am not satisfied, I go and complain. So, in a sense we are customers, or clients may be (R5).

If the students have a very good experience, they will recommend others to come and they themselves can come again for higher studies as well (R9).

A satisfied student was more willing to show positive behavioural intentions, at least, by word-of-mouth recommendations. A satisfied student was highly prone to say positive words to others about services, products and brand, and may be likely to study with the same university without much concern. Therefore:

H9. There is a positive and significant relationship between student satisfaction and behavioural intention.

Figure 1 shows the theoretical model. The model development process followed the suggestions of Jaccard and Jacoby (2010), especially, in regard to mediating and moderating effects of variables in the model. The model shows that information and past experience have direct causal and predictive
relationships with perceived service quality. The model also showed that satisfaction and trust were the direct consequences of service quality, and the mediators between perceived service quality and brand performance. Student satisfaction was found to have a direct causal relationship with student trust and their behavioural intentions, and brand performance of the university. In this model, perceived service quality had indirect causal relationships with behavioural intentions through several mediating variables including student satisfaction and their trust, and brand performance. Thus, the model had seven constructs and nine hypothesised relationships. The hypotheses developed for this study were for testing these causal and predictive relationships in a university context.

Figure 1. The theoretical model

Implications

This study found “information” (in the form of marketing communications) to be one of the important antecedents of perceived service quality. James et al.’s (1999) study suggested that university applicants should be encouraged to have adequate information about the selection of a field of study and/or institution. The findings of this study were also aligned with the current literature. This suggests that the information designed for the students should be adequate and trustworthy. A gimmick or exaggeration of information through marketing communication channels may adversely affect service quality evaluation. Thus, one of the potential implications of “information” is to use the marketing communication channels including word-of-mouth in order to enhance knowledge about higher education service quality to prospective students.

Students’ previous experience of study and interaction with the institution was found to be another important antecedent to service quality evaluation in the context of the sample institution. This implies the importance of open day, high school visits, university visits, careers fair, electronic communication and similar interactive activities that a university could maintain in order to improve students’ cognitive judgment prior to enrolment. A university should develop and maintain long-term relationships with the students, and local and regional high schools. One such an attempt may include arranging regular symposiums and visits of schoolteachers, parents and students, and publicising their word-of-mouth and certification using various communication channels.

This study found three core aspects of service quality evaluation namely, academic, administrative and facilities in the context of the sample institution. Students preferred the lecture to be interactive, understandable, practical and entertaining. The consultations provided by the lecturers were also important to the students. Thus, after lecture availability, responding through e-mail or phone may prove to be caring. The design of each lecture should be such that it proved to be new in
knowledge, and effective for the students each day they attend the lecture. The research expertise and supervision capacity, and a record of research publications of the lecturer were judged to be vital for an effective postgraduate research program. One of the strategies could include setting different goals each for research active and teaching active academics. In addition, the administrative staff should be skilled and be able to answer student queries effectively. Avoiding one’s responsibilities and tasks may result unfavourable overall assessment of service quality of a university. Further, the current practice of conducting a student satisfaction survey at the end of a term provides an indication of students’ attitudes toward the unit/course and the lecturer, only. A broader perspective of this survey could provide important insights for a university.

Another important implication of this study was that student satisfaction had a direct and causal relationship with student trust, UniBrand and students’ behavioural intentions. As institutional reputation played an important role for tertiary applicants about which university and/or course to attend (James et al., 1999), a university should link student trust, UniBrand and behavioural intentions with student satisfaction and perceived quality, and estimate their relationships. While higher education institutions are trying to increase student numbers each year, a university should regularly monitor the extent of service performance, student satisfaction and their trust, current and relative position of the UniBrand and students’ behavioural intentions. This in turn could increase student enrolment, improve brand performance and enhance marketability of the university program and courses.

**Conclusion, limitations and future research**

The aim of this study was to explore the perception of students with regard to the critical antecedents, dimensions and consequences of service quality in the context of a university in Australia, and subsequently to develop a theoretical model showing hypothesised relationships. For this purpose, the study used focus groups. The findings showed that the critical antecedents of service quality were information and past experience. Students perceived service quality as the performance of a set of attributes relevant to academic, administrative and support functions. As for the consequences of service quality, satisfaction and trust were found to have positive and direct relationships with service quality; and brand performance and behavioural intention were found to have indirect relationships with perceived service quality mediated through student satisfaction and their trust. Thus, the paper develops nine hypotheses.

There are several limitations in this study. This study used a single university and three focus group discussions with nineteen students. Recent literature has also used a single university and collected data from focus group discussions (see, for example, Brown et al., 2009; Douglas et al., 2008; Gatfield et al., 1999; Helgesen and Nessel, 2007; Navarro et al., 2005; Smith et al., 2007; Stodnick and Rogers, 2008; Sultan and Wong, 2010d, 2011, 2012a). Although the sample size of this study was small, it followed the suggestions of the current literature (see, for example, Brown et al., 2009; James et al., 1999; Krueger and Casey, 2000; Morgan, 1988; Stewart et al., 2007). Achieving generalisability with a small number of student participants is challenging. However, it is consistent with the current literature. Although this study does not attempt to generalise its findings to other universities (Sawyer and Thompson, 2003), this study generated valuable insights that can be used to develop empirical hypotheses for representative follow-up studies (Dolnicar, 2004). This study used undergraduate and postgraduate student samples from arts, informatics, law, business studies, accounting, and education disciplines of the sample institution. Their opinions and priorities, as reflected in the findings, may differ from engineering and nursing students.
Service quality research in higher education is ever changing (Sultan and Wong, 2012b). Future research should consider all disciplines and campuses of the sample institution. This could generate valuable insights for this institution. Future research should analyse the overall effects of program or course of study, location of study and year of study in the model. The impact of students’ culture and their nationality on service quality assessment could also generate some valuable findings. The validation of the model in the context of the higher education industry in Australia, and across various countries could also contribute to the literature. The argument of developing a service quality model in a university setting and its subsequent usability in commercial setting may be of interest to some scholars.
References


Annual Australian and New Zealand Academy of Management Conference (ANZAM), Adelaide Convention Centre, Adelaide.


Appendix 1 - Table A1. Service quality dimensions in higher education

<table>
<thead>
<tr>
<th>Author and date</th>
<th>Items</th>
<th>Dimensions</th>
<th>Country/university</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sukan and Wong (2000a)</td>
<td>67</td>
<td>Dependability, effectiveness, capability, efficiency, competencies</td>
<td>Japan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assurance, unusual situation, management and semester syllabus</td>
<td></td>
</tr>
<tr>
<td>Rojas-Mendez et al. (2009)</td>
<td>18</td>
<td>Instructors, program director, secretaries, service attitude and competence</td>
<td>Chilean University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>development.</td>
<td></td>
</tr>
<tr>
<td>Stednick and Rogers (2008)</td>
<td>18</td>
<td>Reliability, Assurance, Tangibles, Empathy and Responsiveness</td>
<td>One course, Southwestern</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University, USA</td>
<td></td>
</tr>
<tr>
<td>Angell et al. (2008)</td>
<td>18</td>
<td>Academic, leisure, industry links and cost</td>
<td>One university, UK</td>
</tr>
<tr>
<td>Smith et al. (2007)</td>
<td>22</td>
<td>Reliability, Assurance, Tangibles, Empathy and Responsiveness</td>
<td>IT Department, one</td>
</tr>
<tr>
<td></td>
<td></td>
<td>university, UK</td>
<td></td>
</tr>
<tr>
<td>Abdullah (2006c)</td>
<td>41</td>
<td>Non-academic, academic, reputation, access, program and understanding</td>
<td>Malaysia</td>
</tr>
<tr>
<td>Abdullah (2005, 2006a, b)</td>
<td>35</td>
<td>Non-academic, academic, reliability and empathy</td>
<td>Malaysia</td>
</tr>
<tr>
<td>Catfield et al. (1999)</td>
<td>26</td>
<td>Academic instruction, campus life, guidance, recognition</td>
<td>One Australian University</td>
</tr>
<tr>
<td>Kwan and Ng (1999)</td>
<td>31</td>
<td>Course content, concern for students, facilities, assessment, medium of</td>
<td>China and Hong Kong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>instruction, social activities and people.</td>
<td></td>
</tr>
<tr>
<td>Li and Kaye (1998)</td>
<td>27</td>
<td>Reliability, Assurance, Tangibles, Empathy and Responsiveness</td>
<td>One university, UK</td>
</tr>
<tr>
<td>Joseph and Joseph (1997)</td>
<td>–</td>
<td>Program, academic reputation, physical aspects, career opportunities,</td>
<td>New Zealand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>location, time and other</td>
<td></td>
</tr>
<tr>
<td>LeBlanc and Nguyen (1997)</td>
<td>38</td>
<td>Contact personnel/faculty, contact personnel/administration, responsiveness,</td>
<td>Business School, one</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reputation, reputation, curriculum, physical evidence and access to</td>
<td>university, Canada</td>
</tr>
<tr>
<td></td>
<td></td>
<td>facilities.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2 - Table AII. Differences between dimensional approach and antecedent approach of service quality

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Dimensional approach</th>
<th>Antecedent approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key focus</td>
<td>The dimensional approach provides an understanding of quality dimensions and its relevant attributes.</td>
<td>The antecedent framework provides an insight of how customers view service quality as a whole and how this view contributes predicting their behavior (Dabholkar et al., 2000).</td>
</tr>
<tr>
<td>Approach</td>
<td>This approach is service specific approach</td>
<td>This approach is consumer (market) specific approach</td>
</tr>
<tr>
<td>Direction</td>
<td>The direction is from service to consumer</td>
<td>The direction is from consumer to service</td>
</tr>
<tr>
<td>Measurement</td>
<td>The items focus on functional, delivery and physical aspects of a product/service</td>
<td>The items focus on consumers' cognitive understanding and try to answer – what and how a certain thing occurs</td>
</tr>
<tr>
<td>Reflective versus formative</td>
<td>The dimensional approach is reflective. This is because the content of each item should primarily reflect the construct of interest (Diamantopoulos and Sigauw, 2009)</td>
<td>The antecedent approach is formative or causal. The formative indicators can be viewed as causal rather than being caused (Diamantopoulos, 1999).</td>
</tr>
<tr>
<td>Scale versus index</td>
<td>This forms a scale</td>
<td>This forms an index</td>
</tr>
<tr>
<td>Benefits</td>
<td>The major benefit of using the dimensional approach is that it gives an understanding of the service features and their relevant dimensions. It also shows the importance of service features that are desired by consumers.</td>
<td>The major benefit of using the antecedent approach is that it provides an understanding of how consumers view a particular phenomenon and what are the dominating factors. This in turn helps predicting consumers’ behaviour.</td>
</tr>
<tr>
<td>Results</td>
<td>The resulting dimensions vary based on service types, firms or provider, industry and even culture</td>
<td>The antecedents aspects may also vary but in a limited manner. This is because consumers use more or less similar cues in their cognition to view a particular phenomenon</td>
</tr>
</tbody>
</table>

Source: Sultan and Wong (2010c)

Appendix 3 - Table AII. Demographics of the respondents

<table>
<thead>
<tr>
<th>No</th>
<th>Age</th>
<th>Gender</th>
<th>Nationality</th>
<th>Level of study</th>
<th>Program of study</th>
<th>Duration of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>19</td>
<td>Female</td>
<td>Japan</td>
<td>Undergraduate</td>
<td>Arts</td>
<td>7 Months</td>
</tr>
<tr>
<td>R2</td>
<td>2</td>
<td>Male</td>
<td>Australia</td>
<td>Undergraduate</td>
<td>Information tech</td>
<td>1 Months</td>
</tr>
<tr>
<td>R3</td>
<td>2</td>
<td>Male</td>
<td>Australia</td>
<td>Undergraduate</td>
<td>Business studies</td>
<td>9 Months</td>
</tr>
<tr>
<td>R4</td>
<td>21</td>
<td>Male</td>
<td>Australia</td>
<td>Undergraduate</td>
<td>Information tech</td>
<td>1 Months</td>
</tr>
<tr>
<td>R5</td>
<td>21</td>
<td>Male</td>
<td>Australia</td>
<td>Undergraduate</td>
<td>Business studies</td>
<td>9 Months</td>
</tr>
<tr>
<td>R6</td>
<td>26</td>
<td>Male</td>
<td>Australia</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R7</td>
<td>26</td>
<td>Male</td>
<td>China</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R8</td>
<td>26</td>
<td>Male</td>
<td>China</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R9</td>
<td>27</td>
<td>Male</td>
<td>India</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R10</td>
<td>27</td>
<td>Male</td>
<td>India</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R11</td>
<td>27</td>
<td>Male</td>
<td>India</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R12</td>
<td>33</td>
<td>Female</td>
<td>Singapore</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R13</td>
<td>34</td>
<td>Female</td>
<td>Australia</td>
<td>Postgraduate</td>
<td>Business studies</td>
<td>7 Months</td>
</tr>
<tr>
<td>R14</td>
<td>33</td>
<td>Female</td>
<td>Bangladesh</td>
<td>Doctoral</td>
<td>Education</td>
<td>6 Months</td>
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<tr>
<td>R15</td>
<td>34</td>
<td>Male</td>
<td>Bangladesh</td>
<td>Doctoral</td>
<td>Accounting</td>
<td>7 Months</td>
</tr>
<tr>
<td>R16</td>
<td>34</td>
<td>Male</td>
<td>Pakistan</td>
<td>Doctoral</td>
<td>Law</td>
<td>7 Months</td>
</tr>
<tr>
<td>R17</td>
<td>38</td>
<td>Male</td>
<td>Botswana</td>
<td>Doctoral</td>
<td>Accounting</td>
<td>&gt; 3 years</td>
</tr>
<tr>
<td>R18</td>
<td>38</td>
<td>Female</td>
<td>China</td>
<td>Doctoral</td>
<td>Information tech</td>
<td>&gt; 3 years</td>
</tr>
<tr>
<td>R19</td>
<td>38</td>
<td>Male</td>
<td>Pakistan</td>
<td>Doctoral</td>
<td>Information tech</td>
<td>&gt; 3 years</td>
</tr>
</tbody>
</table>