Key service drivers for building strong brand equity in higher Education : The case of the Arab academy for science and Technology and Maritime Transport *(*AASTMT)

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Abstract

The present study investigates the path from specific aspects of service qualities to overall perception of service quality; perceived value on service brand equity in higher education. Based on a survey of foreign students registered in the Arab academy for science and Technology and Maritime Transport (AASTMT). it has been realized. That not all specific aspects of service quality have the same effects on overall service quality or perceived value and brand equity. Moreover, overall service quality mediates the relationship between service quality dimensions and perceived value. This is in addition to other realized findings to suggest that the Perceived value is not a mediator variable in the relationship between overall service quality, preceded by all specific aspects of service quality, and brand equity. Finally, the survey refer also findings suggest that overall service quality has a significant role in building service brand equity in the private higher education sector for managers; study suggests the importance to improve all the different aspects of service quality in order to increase the value of their brand. Developing and maintaining value-adding service quality dimensions will help with the positioning of a university's services

Keywords: service quality, overall service quality, perceived value, brand equity and higher education .

Introduction

Growing and significant area for service quality has been dedicated to building strong brands in service sectors. An enormous amount of investment by service organizations such as Higher Education Institutions (HEIs) has been on service quality in addition to building a strong service brand. This encapsulates the assertion that service quality might be a key driver for building a strong service brand. Although aspects of service quality had been investigated in HEIs, the effect of service quality on brand equity in higher education has not been assessed.

The significance of building strong brands in higher education sectors has gained increasing importance for service sectors. Investing in service quality has been marked to be one of the most important investments in the service sectors. It is with no doubt that building a strong service brand might be affected by the crucial role of service quality. To date, much of the research on brand equity research in marketing has been dedicated on discovering the nature and value of consumer-based brand equity (Aaker, 1991) while finding measures for it (Agarwal and Rao, 1996).
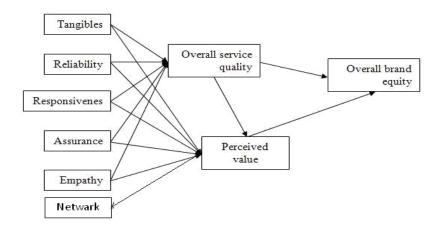
Bell et al. (2005) has identified that investing in service quality would lead to improvement of customer perception of an overall service quality. Additionally, it enhances their service experience and enables strong consumers' brand associations. Thus, to enable strong brand equity (i.e.differential effects regarding consumers' responses to the focal brand), strong and positive brand associations might be derived from service quality. This shed the light on the relationship between service quality and consumer-based brand equity.

Empirical research concerning the effect of service quality on service brand equity is apparent. Moreover, the differential effect of specific aspects of service quality would have on service brand equity have not been researched in the private education sectors. Therefore, this study research explores the path from specific service qualities to service brand equity in higher education in Egypt. It also examines how pe-rceived value and on overall service quality mediates the relationship between service quality dimensions, such as tangibility, responsiveness, empathy, reliability, and assurance; and brand equity.

Literature review and hypotheses:

This study adopted He and Li (2010) a conceptual framework. It examines how different characteristics of service quality could affect overall perception of service quality, perceived value, and service brand equity. In mobile telecommunications services in Taiwan, and modifies the model, The modification mainly concerns removing the 'Network' dimension and empirically testing the model in the Egyptian Higher Education sector; thus carrying out the required change of environment and sector. and applied it to higher education sectors in Egypt.

Source: He and Li (2010) Fig.1

Brand equity

Brand equity gets its significance from its benefit in quality signaling, search cost reduction, purchasing risk reduction and symbolic power (He and Li 2010). Some researchers have defined brand equity as the term that denotes the distinctive effect of brand knowledge on customers' responses to the marketing activities of the brand. High Brand equity levels are known to lead to higher consumer's preferences and purchase intention (Cobb-Wagner et al. 1995), as well as higher stock returns (Aaker and Jacobson 1994). In addition, high brand equity is proven to bring opportunities for successful extension and resilience against competitors. Moreover, the brand can create strong customer loyalty, increased marketing effectiveness, and opportunities for alliances, as well as strong competitive positioning (Keller 2001).

Aaker (1991a) has defined brand equity as "a set of assets; such as name awareness,loyalcustomer, perceived quality, and associations that are linked to the brand and add value to the products or service being offered". Similarly, Leuthesser (1988) has described brand equity as the set of associations and behaviors on the part of the brand's consumers; which permits the brand to acquire a greater market share and earn more profits than it would without the brand name; this gives the brand a strong and sustainable differentiated advantage over competitors.

Swait et al. (1993) defined brand equity as the consumers' implicit valuation of the brand in a market with differentiated brands relative to a market with no brand. In said market, the brand acts as a signal or cue regarding the nature of product and service quality, as well as, reliability and image/status. Lassar et al. (1995) indicated that customer-based brand equity takes place when the consumer is acquainted with the brand and holds some favorable, strong, and unique brand association in memory.

The brand equity concept has evolved into many approaches in recent years, and many specific conceptualizations and measures have been developed to describe it. The extensive research done on brand equity can be broken down into two approaches namely; the dimensional approach and the outcome approach.The dimensional approach suggests that brand equity is a multi-dimensional construct which can be measured by assessing its antecedents and components (Keller, 2003).

Typical dimensions for brand equity include brand performance, perceived quality, brand image, trustworthiness, and loyalty or commitments, (Keller, 2003). On the other hand, the outcome approach focuses on measuring the differential and preferential effect of a brand, and it also measures the overall brand equity. Brand equity can be viewed from two different perspectives; the first is finance based, while the other is consumer based. The financial perspective emphasizes the brand as a name that represents an asset which is of value to the organization because of its ability to create future earnings or cash flow (Kim et al., 2003).

From the consumer point of view, brand equity represents many other attributes such as better product performance, strong risk reduction, lower information costs and positive image of the product. Moreover, consumer-based

brand equity represents the added value of the brand to the consumer (Farquhar, 1989). Consumer-based brand equity can be measured by the level of consumer perceptions.

Aaker (1991) suggested measuring brand equity through price premium, loyalty, perceived quality, and brand association. Also, he proposed the first comprehensive model of brand equity which identified five dimensions of brand equity, namely: brand name, awareness, brand association, perceived quality, and brand loyalty. Additionally, Keller (1993) developed the customer-based brand equity model which stresssed on brand familiarity and awareness, and favorable strong and unique brand associations

An extensive body of research has been based upon Asker's and Keller's models of brand equity. These models have also been adopted and implemented in many different service sector fields; such as, education, food and beverages and telecommunication. In the study, dependence would be on the outcome approach when linking the impact of service quality on brand equity to focus on the customer behavior in preferring one university over the others. Brand loyalty is considered as a measure for the outcome approach to gauge brand equityBrand Equity Concept and dimensions

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Brand Equity Dimensions

Conceptualization of Aaker's five dimensions of brand equity has been used to develop a conceptual framework for measuring customer-based brand equity. Yoo et al. (2000) have re-tested the most popularly adopted brand equity dimensions in an attempt to explore the generalizability of the brand equity measurement devised by Aaker, whose model for brand equity has been probed in a number of empirical investigations (Washburn and Plank, 2002). The dimensions of brand equity developed by Aaker (1991) are described in the following subsections.

Brand Loyalty

Loyalty is a core dimension of brand equity and an important consideration when estimating the value of a brand as loyalty can be translated into profit. Aaker (1991)
defined brand loyalty as a situation that reflects how likely a customer will switch to another brand, especially when that brand makes a change, either in price or in product features. Brand loyalty attaches the customer to a brand, resulting in the fact that brand loyalty comes to represent a barrier for new competitors and firms, (Aaker, 1996b).

Researchers have described different levels of loyalty (Gremler and Brown, 1996). Behavioral loyalty is linked to customer behavior in the market place. This can be indicated by the number of repeated purchases (Keller, 1998). Conjunctive loyalty means that when the need to make a purchase decision arises, the brand that comes up first in the consumer's mind is the consumers' first choice. Conjunctive loyalty is closely linked to the highest level of awareness; (top-of-mind) where the matters of interest can be found, and consequently, the brand in a given category, which the consumer recalls first.

Perceived Quality

Zeithaml (1988) defined perceived quality as "the customer perception of overall quality or superiority of a product or service with respect to its intended purpose relative to the available alternatives". He differentiated between perceived quality and objective quality. The perceived quality is related to the customer's judgment about the product's overall excellence or superiority, whereas, objective quality refers to the technical, measurable and verifiable nature of products or services, processes and quality control.

Therefore, customers use quality attributes that are associated with quality of a product/service (Zeithaml, 1988). Consumers use the quality attribute to "infer" quality of an unfamiliar product. Consequently, perceived quality is not an important measure, since the customers make their choices based on product attribute and compare this to other products.

Brand Awareness

Aaker (1991a) defined the brand awareness as the ability of a potential costumer to recognize the brand as a member of a specific product category and emphasize that awareness and recognition are important before attaching attributes to the brand. Keller (2003) defines awareness as "the customers' ability to remember and recognize the brand as reflected by their ability to identify the brand under different conditions, and to link the brand name, logo, symbol and so forth to certain association in memory."

Aaker (1996b) identifies other higher level of awareness based on recognition and recall and includes top of mind, dominant, brand knowledge in the full set of brand association linked to the brand. Keller (1993) conceptualized that brand association must be preceded by brand awareness. Thus a consumer must be aware of the brand, in order to develop a set of associations (Washburn and Plank, 2002).

Brand Association

Aaker (1991) felt that brand equity is closely related to brand association; which is anything in the memory to a brand. Brand association may be seen in all forms and reflects characteristics of the product or aspects independent of the product itself (Chen, 2001). Yoo et al. (2000), whom also they found that the brand association and brand awareness dimensions, were not clearly detached and they are inter-related concepts. Keller (1998) suggested that **brand association can be divided into three major categories:**

1) **Attributes** (including product-related attributes and non-product-related

attributes such as price, brand personality, emotions and experience),

2) **Benefits** (what customer think the product or service can do for them, including functional benefitted, symbolic benefitted and experiential benefitted), and

3) **Attitudes** (customer overall evaluation of the brand). Strong association can help strengthen brand and quality. Similar to perceived quality, brand association can also increase customer satisfaction with the customer experience (Aaker, 1991).

Brand Image

Keller (1993) defined brand image as "perceptions about a brand as reflected by the brand association held in consumer memory". These associations refer to any brand aspect within the consumer's memory (Aaker, 1996b). Basically, brand image describes the consumer's thoughts and feelings towards the brand (Roy and Banerjee, 2007). In other words, brand image is the overall mental image that consumers have of a brand, and its uniqueness in comparison to the other brands (Faircloth, 2005).

Brand image comprises a consumer's knowledge and beliefs about the brand's diverse product and its-product attribute. When consumers have a favorable brand image, the brand's messages have a stronger influence in comparison to competitor brand messages (Hsieh and Li, 2008). Therefore, brand image is an important determinant of buyers' behavior (Burmann et al., 2008)

Brand equity in higher education

In higher education, branding plays an important role in adding value to an educational institution's offer and in-creasing customer satisfaction (Kotler and Fox, 1995). Branding also helps students identify the services offered and encourages them to make a decision. In parallel, through branding, a university is able to establish a differentiated identity that avoids competition and is able to attract students

Lepak et al., (2007) described higher education as a lifetime's unique experience for most people, which have the most complex highly intangible service attributes and higher credence qualities students experience the brand. In doing so, they perceive whether or not there is value added to their learning experience, while Berry (2000) have pointed out that "a strong brand reflects a promise of future satisfaction" in educational services .

On the contrary, Kapferer (2004) has concluded that "brand equity is a concept which portrays the ability of a brand to deliver profits at the end of the day".University image has been considered as component of a service brand equity and often the case assist a prospective student in identifying which university will meet his/her educational needs. Padden and Stell (2006) have concluded that brand image may serve as an implicit promise that a service provider, in this case the university, will perform consistently up to`customer expectations over time.

It is interesting, therefore, to discover the extent to which brand equity influence potential HE students in how they form distinct images of university brands and whether these students are able to identify with any of the institutions. The perception that students hold of different universities, and their identification with these institutions, impact

upon the students' planned behavior, i.e., their supportive intentions and their choice of where to study. Brand equity is therefore important concepts for educational institutions, as they contribute to determining student enrolments and the profitability and competitiveness of HEIs

Service quality

Service quality is a key determinant in the success of a service business. Measuring service quality has proven to be an exceptionally difficult challenge because of the intangibility and heterogeneity of services. Quality of service cannot be compared against a preset external standard because it could literally vary from moment to moment, and is subject to wild swings in the perceptions of the same service consumption experience by the consumer and the provider (Bitran and Lojo, 1993).

Quality is as important in a service environment as it is for manufactured goods. Zeithaml et al. (1996) have shown that the quality of service provided is an important determinant in the consumers' decisions to choose their service provider. Due to the intangible and non-standardized nature of services, consumers are likely to be much more anxious in choosing service providers than producers of manufactured goods. Hence, the more certain they are about quality provided by an organization the more likely they are to develop loyalty to that service provider (Rust and Oliver, 1994). Involvement by the top management and a corporate culture that emphasizes a high quality of service are important to achieving a leadership position in the service industry (Bhat, 2005). The quality of manufactured goods has been variously defined as con-

formance to specifications (Gilmore, 1974), conformance to requirements (Crosby, 1979) and excellence (Tuchman, 1980). But these definitions have proven to be inadequate due to the unique characteristics of services described previously.

Service Quality Measurement.

It is difficult to develop absolute standards of excellence and performance in the service business. Gronroos (1984) and Parasuraman et al. (1985) have attempted to solve this problem by comparing the consumer perception of quality to their expectations prior to engaging in the service experience. High quality of services would then mean meeting or preferably exceeding the consumers' apriority expectations.

LeBlanc (1992) has identified corporate image, competitiveness, courtesy, responsiveness, accessibility, and competence as the factors that affect service quality perceptions, in that order. The most successful approach to measure service quality by far is based on the gap model developed by Parasuraman et al. (1988). The gap model holds that consumer's quality perception depends on whether or not an organization is able to satisfy consumer expectation prior to the service experience. Parasuraman et al. (1988) conducted focus group research in the service industry to determine what factors affect consumer expectations and perceptions of service quality. **They reduced their initial list of ten factors to the following five (SERVQUAL):**

- **Tangibles:** The quality of physical assets, such as building and equipment of the service provider.

- **Reliability:** The ability of the service provider to deliver what they promised.
- **Responsiveness:** Promptness and willingness to help the customer.
- **Assurance:** The ability of the service provider to project an image of trustworthiness and expertise.
- **Empathy:** Sensitivity to customer needs and the ability to see things from a customer point of view.

These five dimensions are generic and can be considered as drives or overall service quality. Moreover, Overall service quality refers to consumer overall perception of the gap between expectations and actual service performance (Parasuraman et al., 1985). Modifications to SERVQUAL have been proposed in order to adopt it to specific service quality context (Dabholkar et al., 2000).

Service quality is indispensable to the development of strong service dominant brands because it augments perceived superiority of the brands and helps customers discern brands in competitive markets (Aaker, 1996b). The concept of service quality is widely accepted as multidimensional, but the concept and this dimension is still debated. Some researcher view of service quality consists of two dimensions: Technical quality and functional quality (Gronroos, 1984).

Technical quality is the net outcome of service evaluation while functional quality is subjective evaluation of service interaction. Some researchers suggest that two dimensional service quality model offered by the Nordic School is more valid when applied to hospitality service. Other identified three dimensions of service quality: physical qual-

ity (post product and support); the interactive quality (interaction between consumer and service provider); and the corporative quality (the image). These three dimensions are specifically used in higher education (Lehtinen and Lehtinen, 1991).

Despite academics and practitioners having applied the SERVQUAL model, the validity of the model has been seriously questioned. The most substantial disagreement retains to the exact number of dimensions and its appropriateness to a specific service sector. It is worth noting that specific aspects of service quality could have different effects on overall service quality in different sectors and different cultural contexts (Smith and Reynolds, 2002).

Service quality has mainly overlooked the relationship between service quality and brand equity. Most service research has been dedicated to developing service quality measures for specific context; for example, retailing (Dabholkar et al., 2000) and online service (Rabinovich, 2007); as well as, examining its behavioral outcomes, for example positive word of mouth (loyalty).

SERVPERF is a scale developed by Cronin and Taylor (1992); it is solely based on the performance of the service provider instead of the performance in relation to the expectations of the customer like the SERVQUAL. They argue that customer expectations are a component of performance and hence it is not necessary to measure it separately. When setting performance standards for themselves, service providers automatically take into consideration customer expectations which results in a more rigid scale. However, Hudson et al. (2004) have found no statistical difference

between SERVPERF and its predecessor SERVQUAL; only that SERVPERF is much more industry-specific, posing limitations on its application in a wide variety of service industries (Bahnan et al., 2007).

Brunson (2010) examined the contribution of service quality factors and satisfaction levels to student enrollment and retention in a private university, for it to remain competitive. Relationships were measured between three sets of variables: how students perceive institutional quality performance and their satisfaction levels; how students perceive quality and their commitment to remain enrolled in school; and satisfaction levels and commitment. Brunson (2010) concluded that positive relationships do exist between students' quality perceptions and their satisfaction, between quality perceptions and students' commitment, and between satisfaction and commitment.The strongest relationnships between quality perception and student satisfaction were found in the relationships between faculty and students.

H_{01}: There is no significant impact of the quality dimensions (i.e. tangibles, reliability, responsiveness, assurance, and empathy) on overall service quality

Perceived value

Perceived value is an essential motivator for consumer behavior. However, researchers have met with diversity and difficulty in their attempts to customer value. Nonetheless, researchers have agreed upon some areas of consensus, which include utility and the trade-off between utility and sacrifice (He and Mukherjee, 2007). Perceived value denotes the net perceived utility of a product/service or relationship with a company, and so it is a function of and trade-off between sacrifice and utility.

As defined by Zeithaml (1988), "perceived value is the overall assessment of the utility of a product/service as measured by received benefits deducted by perception of sacrifice." Perceived value as a concept is defined by Monroe (1990) as: "representing a trade-off between the qualities of benefits they perceive in the product relative to the sacrifice they perceive by paying the price". As most consumption activities are driven by the fulfillment of a need and want, perceived value is measured in terms of the extent to which fulfillment (of those wants and needs) has been successful and efficient.

Zeithaml (1988), noted that the utility theory suggests that value is relative from one person to another; some consumers find value in low prices; others perceive value when the ratio between quality and price is balanced. However, the perception of service quality implies some aspects of perceived utility and benefits, and it is therefore likely to augment the perception of value. The theme of the present study is to incorporate perceived value into the service quality–brand equity framework and not to examine the complete list of antecedents to perceived value. This is carried out for the sake of theoretical simplicity.

Studies in different contexts have documented the positive effect of perceived quality on perceived value (Moliner et al., 2007). In the service sectors, service qualities have also been found to be positively related to service value (Bolton and Drew, 1991). Prior re-

search by Wang et al. (2004) in the service sector, has found that perceived value is positively predicted by both specific aspects of service quality and overall service quality. It was also found that overall service quality (plus some specific service quality aspects; i.e. tangibles, empathy, and quality) are positively related to perceived value
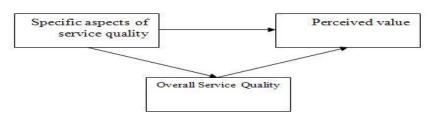
H$_{02}$: There is no significant impact of the quality dimensions (i.e. tangibles, reliability, responsiveness, assurance, and empathy) on perceived value)

H$_{03}$: There is no significant impact of the quality dimensions (i.e. tangibles, reliability, responsiveness, assurance, and empathy) on brand equity**.**

It is important to differentiate between overall service quality and specific aspects of service quality. This differentiation becomes more important when considering the relationship between service quality and perceived value. This is because when consumers try to calculate the trade-off between utility and sacrifice, they tend to sum up the total utility and total sacrifice. Overall perception of service quality represents one side of the entirety of total utility.

should act as a mediating variable in the relationship between specific service quality dimensions and perceived value, Another foundation for the essential role of overall service quality is that overall service quality has been found to be a better and more immediate forecaster of some general outcomes of service quality perception, such as behavioral intentions and perceived value (Dabholkar et al., 2000). To claim the mediation effect of overall service quality on the effect of specific service qualities, there have to be main effects of specific service qualities on perceived value when overall service quality is absent (Baron and Kenny, 1986).

Research on service quality has highlighted the immediate and direct effects of specific service qualities on a number of outcome variables; such as perceived value, satisfaction, and behavioral intentions. As overall service quality tends to be a better predictor of these outcome constructs, and specific service qualities are better thought of as antecedents of overall service quality. Therefore, it becomes reasonable to expect a mediation effect of overall service quality among relationships shown in Figure 2.

Consequently, overall service quality

Fig. 2: Relationship among Specific aspects of service quality, overall service quality, and perceived value
Source: He and Li (2010)

According to Cronin et al. (2000), overall service quality facilitates the relationship between specific service quality dimensions and perceived value. Perceived value and overall service quality are two essential drivers to br-and equity. Hansen et al. (2008) found that perceived value increases the likelihood of word-of mouth recommendation and reduces the tendency to seek information about alternative service providers in the business to business context. Yang and Peterson (2004) have found that perceived value significantly drives customer loyalty for online services.

He and Li (2010) have stated that brand equity denotes the differential and preferential effect of brand kn-owledge and preferential brand resp-onses. Thus, as is a typical type of behavioral out-comes, perceived value po-sitively predicts brand equity. Figure 2.2 exemplifies how perceived value pa-rtially facilitates the effect of overall service quality on service brand equity. Therefore, perceived value mediates the relationship between overall service quality and brand equity

. H_{04}:There is no significant impact of overall service quality on perceived value.

H_{05}: Overall service quality mediates the relationship between specific service quality dimensions and perceived value

H_{06}: Perceived value mediates the relationship between overall service quality and brand equity
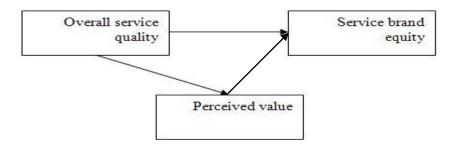

Fig. 3: Overall service quality, perceived value, and service brand equity.
Source: He and Li (2010)

In the banking sector, regarding the effect of service quality on loyalty, Caruana (2002) found that service quality is followed by service loyalty among retail banking customers. Moreover, it has been established that overall service quality is again an antecedent of perceived value. It is highly possible that some of the effect of overall service quality on perceived value can pass to brand equity. In other words, perceived value can partially mediate the effect of overall service quality on brand equity, according to Baron and Kenny's (1986) explanation. Recent research on service quality has emphasized the mediating role of perceived value in the relation-

ship between service quality and behavioral outcomes.

Research design and Methodology

The study population represents foreign students ($N = 1340$) in their final year of study covering five faculties in two branches of the Academy (i.e. Alexandria and Cairo). The assumption underlying the selection of final year students are their abilities to judge the brand equity of the Academy and also indicating their perception towards overall service quality and perceiving the service within the Academy.

study adopted a non-probability sampling technique characterized by a convince sample which provides the opportunity to select the sample purposively and identify members in the population (represented by the undergraduate foreign student studying at the Arab Academy in both branches Alexandria and Cairo in their final year of study). An advantage of a convince sample is that members are easily available or most convent to obtain.

Also, a 95% margin of error was selected and this had led to choosing a 10% response rate resulting in a sample size ($n = 134$) from the population. A sample of 34 final year students were selected from Cairo branch while 100 students were selected from Alexandria branch. The final response rate was approximately 76% in Cairo in which case 26 valid response was obtained out of 34 students while 91% response rate in Alexandria in which case 91 valid response out of 100 students were obtained

Reliability of Independent Variables for Pilot Survey

Table 1. demonstrates the internal re-liability for each item with respect to each constructs for the independent variables of the survey instrument measured by the coefficient of corrected item to total correlation in addition to the α value if this item was to be deleted from the construct. Additionally, the Cronabach's α for each construct are displayed. The internal reliability for each items comprising each constru Table 1. demonstrates the internal reliability for each item with respect to each constructs for the ct were independent variables of the survey instrument measured by the coefficient of corrected item to total as follows:

For items comprising tangibility construct (5 items), coefficient of item to total correlation ranged from (0.457-0.639). All items have their values more than 0.3 which indicates that no items are subjects for deletion as recommended by (Hair et al., 2000). Also, the Cronabach' alpha value for the tangibility construct was 0.765 indicating the consistency of the items comprising the tangibility construct, since it is larger than 0.7 value set for exploratory purposes. This indicates that all items of the tangibility construct jointly contribute in building the construct and any items deletion would result negatively in building that construct (Sakaran, 2003).

Likewise, for items comprising reliability construct (5 items) the values of coefficients of item to total correlation raged from (0.406-0.848), all values were above 0.3, while the corresponding Cronbach' value for reliability con-

struct was 0.861. This point out that all items contribute to building the reliability construct of the service quality dimension. Similar conclusions can be drawn for the responsiveness construct

(5 items) with values for item to total correlation ranging from (0.479-0.783) with corresponding Cronbach' value of 0.855.

Table 1:
Measure of constructs' reliability for independent variables of pilot survey

Constructs/Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's a for construct
Tangibility (5 items)			0.765
TAN1: Facilities are visually appealing	.521	.714	
TAN2: University provide parking areas	.457	.782	
TAN3: Classrooms have up to date equipment	.568	.711	
TAN4: Equipment have modern looking	.639	.685	
TAN5: Staffs have neat appearing	.607	.680	
Reliability (5 items)			0.861
REL1: University promises are kept on time	.848	.785	
REL2: University solves student problems	.746	.815	
REL3: University delivers services as expected	.709	.827	
REL4: University performs service right first time	.714	.824	
REL5: University' Staff gives trust and confidence	.406	.891	
Responsiveness (5 items)			0.855
RES1: Staff react politely to students' queries	.730	.811	
RES2: Staff are always willing to help	.707	.818	
RES3: Staff gives you exact service time	.783	.794	
RES4: Staff never too busy to respond	.479	.873	
RES5: Staff respond promptly	.690	.822	
Assurance (4 items)			0.705
ASS1: Do you have confidence in staff behaviors	.334	.724	
ASS2: Is student's accommodation safe?	.504	.641	
ASS3: Staff are courteous with students	.698	.536	
ASS4: Staff have knowledge to answer questions	.487	.646	
Empathy (5 items)			**0.719**
EMP1: Can lecturers be easily contacted	.338	.725	
EMP2: It is easy to interact with local students	.306	.705	
EMP3: University give student individual attention	.409	.518	
EMP4: Does university gives student best interest	.587	.432	
EMP5: Do staff understand student needs	.498	.447	
Total (24)			0.906

Similarly, for items comprising assurance construct (4 items) the values of coefficients of item to total correlateon ranged from (0.334-0.698), all values were above 0.3, while, the corresp-

onding Cronbach' value for assurance construct was 0.705. This points out that all items contribute to building the assurance construct. In the same way,

conclusions can be drawn for empathy construct (5 items) with values for item to total correlation ranging from (0.-306-0.587) with corresponding Cronbach' value of 0.719. The Cronbach' alpha value was also calculated for the total items comprising the independent variables of the instrument for measuring (24 items) and its value was 0.909 indicating that these items are reliable for measuring the independent variable constructs in an exploratory setting.

Reliability of Dependent Variables for Pilot Survey

In this respect ,Table 2. demonstrates the internal reliability for each item with respect to each constructs for those dependent variables. The internal reliability for each items comprising each construct were as follows:

For items comprising overall service quality construct (3items),coefficient of item to total correlation ranged from (0.714-0.756). All items have their values more than 0.3 which indicates that

no items are subjects for deletion as recommended by (Hair et al., 2000). Also, the Cronabach' alpha value for the tangibility construct was 0.768 indicating the consistency of the items comprising the overall service quality construct. This indicates that all items of the overall service quality construct jointly contribute in building the construct and any items deletion would result negatively in building that construct.

Similarly, for items comprising perceived value construct (3 items) the values of coefficients of item to total correlation ranged from (0.721-0.880), all values were above 0.3, while, the corresponding Cronbach' value for perceived value construct was 0.883. This points out that all items contribute to building the perceived value construct. In the same way, conclusions can be drawn for brand equity construct (3 items) with values for item to total correlation ranging from (0.734-0.849) with corresponding Cronbach' value of 0.881.

Table 2:
Measure of constructs' reliability for dependent variables of pilot survey

Constructs/Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's for construct
Overall Service Quality (3 items)			0.768
OSQ1: University delivers overall services	.758	.489	
OSQ 2: University services in every aspects	.714	.550	
OSQ 3: Are you happy with value for money	.756	.512	
Perceived Value (3 items)			0.883
PV1: Services are a value for money	.739	.876	
PV2: Compare to competitors university is a value	.880	.747	
PV3: You get value for your money	.721	.879	
Brand Equity (3 items)			0.881
BE1: Enroll in the university even similar are their	.748	.855	
BE2: Prefer university even similar services	.849	.760	
BE3: Other universities are as good as your	.734	.862	

Research Findings :

Table3; Result of exploratory factor analysis

		Factors					Communalitie
		1	2	3	4	5	
RES2	Staff are always willing to help	.782					.669
RES1	Staff react politely to students'	.754					.712
RES3	Staff gives you exact service time	.737					.624
ASS3	Staff are courteous with students	.656					.575
ASS1	Do you have confidence in staff	.649					.630
RES5	Staff respond promptly	.636					.630
ASS4	Staff have knowledge to answer	.627					.549
REL5	University' Staff gives trust	.626					.530
ASS2	Is student's accommodation safe?	.576					.531
REL3	University delivers services		.813				.774
REL1	University promises are kept on time		.760				.745
REL4	University performs service right		.638				.595
REL2	University solves student problems		.609			.455	.752
EMP5	Do staff understand student needs			.716			.735
EMP3	University give student attention			.691			.545
EMP4	University gives student best interest			.669			.665
EMP2	Easy to interact with local students			.624		.537	.685
EMP1	Can lecturers be easily contacted			.484			.453
TAN3	Classroom have dated equipment				.812		.778
TAN4	Equipment have modern looking				.775		.729
TAN1	Facilities are visually appealing	.422				.686	.669
TAN2	University provide parking areas					.659	.572
	Sum of squares (eigenvalues)	5.011	2.806	2.534	1.983	1.811	14.145
	Percentage of trace	22.779	12.756	11.518	9.016	8.221	64.301

‡.table 3: Total sum of squares (eigenvalues) and total cumulative percentage of variance (trace).

The final factor solutions after deletion are shown in Table 3. The variance explained in this factor solutions (accounting for 64.301% using 22 items) after deleting 2 items being staff never too busy to respond from "responsiveness construct" and staff have neat appearing from tangibility construct due to their cross-loading on first and fourth factors. A clear insight from Table 3. indicate that the new latent variable "factor1" is decomposed of 9 items comprising 4 responsiveness items and 4 assurance items and one reliability items. The second latent variable "factor 2" is mainly decomposed of four origin nal items from reliability, the third factor is mainly decomposed of the five empathy items without any change. The fourth and fifth factor is mainly decomposed of the tangibility items Exploratory factor analysis on the traditional service quality dimensions reveals five new factor facets namely: quality of staff, reliability, empathy, tangibility, and quality of facilities

Regression Analysis of NSQD and Brand Equity

Table 4: Summarized regression results for the investigated models.

	Model 1: OSQ		Model 2: PV		Model 3: BE		Model 4: PV with OSQ		Model 5: BE with OSQ		Model 6: Full BE	
	b	**t**	**b**	**t**	**b**	**t**	**b**	**t**	**b**	**t**	**b**	**t**
Constant	3.84	78.88	3.55	57.91	3.76	59.05	1.76	4.07	2.24	4.86	1.99	4.05
Quality of Staff	.260**	5.306	.338**	5.491	.198**	3.091	.217**	3.375	.095	1.388	.064	.896
Reliability	.106*	2.158	.281**	4.561	.110	1.713	.232**	3.950	.068	1.085	.035	.524
Empathy	.244**	4.990	.271**	4.399	.151*	2.365	.157*	2.470	.055	.810	.032	.468
Tangibility	.171**	3.491	.103	1.680	.165*	2.584	.024	.393	.098	1.516	.094	1.469
Quality of Facility	.053	1.084	.005	.087	.105	1.636	-.019	-.336	.084	1.359	.086	1.409
AveOSQ							.466**	4.184	.395**	3.323	.328*	2.578
AvePV											.143	1.409
R^2	0.390		0.397		.198		0.480		0.271		0.284	
F	14.213		14.629		5.487		16.921		6.825		6.187	

**. *p*-value is significant at the 0.01 level.

A series of multiple regression models have been performed to test the hypothesized framework .Main effects of new Service Quality Dimensions (NSQD) on overall service quality represented by Model (1), on perceived value represented by Model (2), and on brand equity represented by Model (3) have been examined. The regression results of these models . Moreover, the mediating effect of overall service quality and perceived value have been examined through a series of regression models with different conditions.

- Quality of staff, reliability, empathy, and tangibility have statistically positive effect on overall service quality, while quality of facilities has been judged to be statistically insignificant.
- Quality of staff, reliability, and empathy has strong statistically positive effect on perceived value, while tangibility and quality of facilities have been judged to be statistically insignificant

- Quality of staff, reliability, and empathy has strong statistically positive effect on perceived value, while tangibility and quality ofQuality of staff has been judged to have strong statistical positive effect while empathy and tangibility have statistically significant positive effect on brand equity whereas reliability and quality of facilities have been judged to be statistically insignificant predictors of brand equity.

When taking into account the mediation effect of overall service quality on the relationship between specific aspects of service quality and perceived value, it was eminent that this mediation effects achieved a better change into the goodness of fit measure (R^2 change is approximately 8%) keeping the originally cited predictors (i.e. Quality of staff, reliability, and empathy).

- When taking into account the mediation effect of overall service quality on the relationship between specific
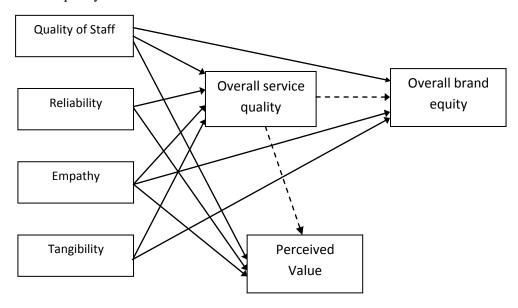
aspects of service quality and brand equity, unpredictably the mediation effects was deemed solely affecting the brand equity.

When taking into account the mediation effect of both overall service quality and perceived value on the relationship between specific aspects of service quality and brand equity, unpredictably the mediation effect of overall service quality was the sole predictor of brand equity.

Discussion

It is of significant importance that service quality research makes the nec

essary effort to explore the effects of specific aspects of service quality in different service sectors and different cultures. In the past, branding research has paid little attention to the effect of service quality on brand equity. The current study contributes to the literature by exploring the effects of different aspects of service quality and overall service quality on brand equity, through a survey conducted among foreign students in a private higher education institution. We reached the following interesting points :
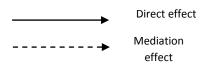

Direct effect

Mediation effect

Figure 4 .Empirical framework relating NSQD o band equity
with overall service quality as a mediator

First: Not all specific aspects of service quality have the same effects on overall service quality or perceived value by foreign students. In agreement, Wang et al. (2004) found that not all specific aspects of service quality have significant effects on overall service quality or perceived value in telecommunication sectors, which is also consistent with He and Li (2010).The research found that the quality of staff in agreement with Mourad (2011) in the Egyptian education sector is positively affecting overall service quality. Moreover, it was found that reliability, empathy, and tangibility have statistically significant effect on overall service quality but not the quality of facility. This may be due to that quality of facility has become the basic requirements for any university that aims to succeed in the highly competitive private education market.

Although the quality of facilities was found insignificant in the study, it can be of great significant in comparing the brand equity between governmental and private educational facilities. The same applies to the perceived value which was judged to be insignificant in the current study, yet it can yield different results in different settings.

Second: It was also found that not all aspects of service quality have the same effect on perceived value. Quality of facility and tangibility were found to be of insignificant effect on perceived value; however, the quality of staff, reliability and empathy has a significant effect on perceived value. He and Li (2010) support that empathy and reliability has a significant effect on perceived value in the Telecommunication sector in Taiwan.

Third: Overall service quality has been found to have a significant effect on all dependent variables (perceived value and brand equity). More importantly, overall service quality mediates the relationship between specific aspects of service quality and perceived value. However, overall service quality was found not to mediates the relationship between specific aspects of quality dimensions and brand equity but rather act as a main predictor to brand equity.

Fourth: This study found that perceived value is not a mediator variable in the relationship between overall service quality, proceeded by all specific aspects of service quality, and brand equity. This result is not consistent with previous studies carried out in the service sector, as a lack of a significant effect from perceived value on brand equity was found. This lack may have been due to the fact that the theme of the present study is not to examine the complete list of antecedents to perceived value but to adapt the concept of perceived value into the service quality-brand equity framework. In marketing research, perceived value is commonly measured as a single overall value construct (Bolton and Drew, 1991) or by using a multi-term scale to measure perceived value as a one-dimensional construct that has price perceptions.

Finally, these finding suggest that overall service quality has a significant role in building service brand equity in the higher education institution sector and act as a main driver for service brand equity; specially in the education sector unlike perceive value that was found of no impact on brand equity.

Managerial Implications

The success of any service sector is primarily dependent on positive customer perception. Therefore, it is not surprising that the major purpose of service quality investment is to improve customers perceptions of an overall service quality and enhance their service experience, which in turn would strengthen consumers' positive brand associations (Bell et al., 2005). As this research considers the educational sector as its area of study, it logically follows that the university is the service provider and the student is the customer.

Managing brands in the service sector today, especially in universities is one of the main strategic targets. In private and public universities, building a strong brand equity requires that managers be focused on their students' needs, taking into consideration the students' point of view. It is also important to not just focus on what competitors are doing but also serve the purpose of satisfying students' needs.

Top managers can consider the following guidelines when attempting to improve the value of and maintain their brand.

First, university managers should strive to improve all the different aspects of service quality in order to increase the value of their brand. Developing and maintaining value-adding service quality dimensions will help with the positioning of a university's services in the market; hence, influencing students' choices.

Second, it is also important that university managers know that creating a university brand will undoubtedly achieve the objectives of differentiation, creating entry barriers to competitors, strengthen their competitive advantage and build a sense of loyalty among the students in today's highly competitive environment.

Third, brand equity is one of the critical and helping factors in students' selection of a university and their final enrollment decision.

Limitations of research

The sample used in this research includes private higher education sector in Egypt; without touching upon public universities. Despite using a sample from a private university; still, the sample does not represent the whole population of private Egyptian universities but only two branches of the Arab Academy for Science and Technology and Maritime Transport (AAST). The sample is also composed of foreign students, not local ones. The research focused on students' perspectives concerning the dimensions of the service quality presented to them via the university but ignored the university's point of view. The study has also adopted one approach of brand equity, the customer-based brand equity approach, and disregarded the finance-based brand equity approach

Future Research

Future studies could research other brand equity approaches and explore other service quality factors that have not been measured in this study, but might still affect brand equity. Therefore, it is recommended for future studies to expand their examination to include Egyptian public universities in their empirical research. ; In conclusion, future studies should test this model on a wider population

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