CHAPTER II

REVIEW OF LITERATURE

This chapter reviews the relevant literature on service quality, its measurement and requirement for understanding Gaps. This chapter provides the theoretical base for this study, supported by relevant concepts and literature in the area of service quality and its measurement. The objective for this literature review is to broaden the understanding of service quality, considering the gap between expectations and perceptions of service quality and how service quality and other constructs relate in management higher education of Gujarat. This chapter examines the relevant literature relating to the construct of service quality – a heavily researched component of the services marketing literature (Baron et al., 2009). In particular, it seeks to unravel and critically analyse the relevant theories, models and concepts from key authors in the subject field, whilst addressing the role played by service quality in a management higher education context in Gujarat.

2.1 Service Quality Theory

2.1.1 Service

Service is defined as “an activity or series of activities of more or less intangible nature that normally, not necessarily take place in interactions between the customer and service employees and/or physical resources or goods and/or system of the service provider, which are provided as solution to customer problems (Gronroos, 1990). Lovelock (2001) defines service as “an act or performance offered by one party to another. Although the process may be tied to a physical product, the performance is essentially intangible and does not normally result in ownership of any of the factors of production”.

The rationale for a separate treatment of service marketing centers on the existence of number of characteristics of services which are consistently cited in literature-intangibility, heterogeneity, perishability and inseparability of production-consumption (Zeithaml et al, 1985). Theories and frameworks relating to service are also mostly
developed and driven according to these four characteristics of services. Each of these unique characteristics of services leads to specific problems for service marketers and necessitates special strategy for dealing with them. It becomes essential to have a clear understanding of the features/characteristics of service in order to develop and justify diverse strategies used in marketing services.

The most basic distinguishing characteristic of services is intangibility. Because services are performances or actions rather than objects, they cannot be seen, felt, tasted or touched in the same manner in which goods can be sensed (Zeithaml et al, 1985) The intangible nature of service is argued to be one of the fundamental characteristics of service which differentiates services from goods (Bateson 1979). Heterogeneity reflects the potential for high variability in service delivery (Zeithaml et al., 1985). The quality and essence of service can vary from producer to producer, from customer to customer and from day to day, from situation to situation. Given the very nature of services, each service offering is unique and cannot be exactly repeated even by the same service provider. While products can be mass produced and be homogenous, the same is not true of services. Inseparability of production and consumption involves simultaneous production and consumption of services. Where goods are first produced, then sold and then consumed, services are first sold then produced and consumed simultaneously (Regan, 1963). The fourth characteristic of services highlighted in the literature is perishability. Perishability refers to the fact that services cannot be saved, stored, resold or returned. Because services are performances that cannot be stored service businesses frequently find it difficult to synchronize supply and demand (Zeithaml et al., 1985) Onkvisit and Shaw (1991) suggest that services are “time dependent” and “time important” which make them very perishable.

2.1.2 Quality

The concept of quality, though very fundamental to businesses, has not been devoid of confusion. There are a number of ways in which quality is defined and conceptualized by
various researchers. The word quality means different things to people according to the context. “Quality is an unusually slippery concept, easy to visualize yet exasperatingly difficult to define”: Garvin. The lack of consensus over the meaning of quality stems primarily from the divergent perspectives and vantage points used to view the ideal. Many experts sought to define quality using their unique perspective. Some of them define quality as follows:

- “Quality is conformance to requirements”: Crosby, P., 1979
- “Quality is zero effects - doing it right the first time”: Parasuraman, Zeithaml and Berry
- “Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs”. American Society of Quality Control
- Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for. Drucker, Peter, 1985

The transcendent view of quality is synonymous with innate excellence: a mark of uncompromising standards and high achievement. It argues that people learn to recognize quality only through the experience gained from repeated exposure. The product-based approach defines quality objectively. Quality is a function of a specific and measurable variable. The manufacturing-based approach focuses on conformance to internally developed specifications that often are driven by productivity and cost containment goals. User-based definitions start with the premise that quality lies in the eyes of the beholder. These definitions equate quality with maximum satisfaction. This subjective, demand-oriented perspective recognizes that different customers have different wants and needs. Value-based definitions define quality in terms of value and price. By considering the trade-off between performance and price, quality comes to be defined as “affordable excellence.” The User based definitions of service quality has received considerable attention from researchers.

A product or service is considered of quality when it fulfills customer’s expectations. Goods being tangibles, made up of objectively quantifiable attributes or ingredients,
permits objective measurement of quality. Objective quality refers to the technical superiority or excellence of a product against measurable and verifiable standards. However, difficulties arise when, one tries to define quality in services based on the same discrepancy concept, because service characteristics differ from product characteristics. Service quality is more difficult to measure objectively than product quality as service characteristics include intangibility, heterogeneity, and inseparability of production and consumption of services. These characteristics make service quality an abstract and elusive construct.

2.2 Service Quality

Significant research and managerial effort is devoted to improving service quality. While researchers are in agreement on the importance of service quality in a firm, the theory and practice of service quality has not reached a consensus. The foundation of service quality theory lies in the product quality and customer satisfaction literature. Service quality is defined by various authors in different ways:

**Table 2.1 Definitions of Service Quality**

<table>
<thead>
<tr>
<th>Author</th>
<th>Definition</th>
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<tr>
<td>Lewis &amp; Booms, 1983</td>
<td>Service quality is a measure of how well the service delivered matches customer expectations. Delivering quality service means conforming to expectations on consistent basis”.</td>
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<tr>
<td>Gronroos, 1984</td>
<td>Outcome of an evaluation process, where the consumer compares his/her expectations with the service he/she perceives he/she has received.</td>
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<tr>
<td>Parasuraman et al. (1985)</td>
<td>Service quality is defined as a function of the magnitude and direction of the gap between expectation and perception of the performance received</td>
</tr>
<tr>
<td>Bitner, Booms and Mohr (1994)</td>
<td>Service quality is defined as the consumer’s overall impression of the relative inferiority/ superiority of the organization and its services</td>
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Early conceptualizations were based on disconfirmation paradigm (Gronroos 1982, 1984, Parasuraman et al, 1985). Gronroos, (1982, 1984) developed a model in which contends that consumer compare a service they expect with perceptions of the service they receive in evaluating a service.

This study is based on the disconfirmation paradigm of service quality. Positive disconfirmation was introduced by Olshavsky and Miller (1972) and continued as Olson and Dover (1975) analysed the effects of positive and negative disconfirmation as compared to evaluation under condition of accurate expectations. The concept of “disconfirmation” is described as the perception of a product’s performance compared to pre-purchase expectations (Oliver 1977). The assumption is that consumers acquire cognitive expectations of the most probable level of products performance. The extent to which these expectations are met determines the perceived disconfirmation experience. If perceived performance exceeds expectations, disconfirmation is said to be positive. If perceived performance falls short of expectations, disconfirmation is said to be negative. Thus confirmation is the mid-point of disconfirmation paradigm (Oliver, 1977). In general, the literature shows that disconfirmation plays a major role in the determination of satisfaction level (Oliver, 1980; Swan and Trawick, 1981). Conceptually as positive disconfirmation increases, satisfaction level increases and as negative disconfirmation increases, satisfaction level decreases (Oliver, 1980). Swan and Trawick (1981) introduced a disconfirmation model of expectations and satisfaction in a retail setting. They concluded that consumer satisfaction depends upon how expectations are confirmed or disconfirmed and in turn could predict consumer intentions for purchasing or seeking the service.

The disconfirmation paradigm is also the basis for Parasuraman et al. (1985, 1988) SERVQUAL model. Many researchers have contributed to the theory and concepts of service quality measurement, in different ways. However, the credit for conceptualization and measurement of service quality goes to Parasuraman, Zeithaml and Berry (PZB 1985, 1988, 1990). Their research drew both academic and practitioner interest in service quality and served as a framework for further empirical research in this
area. Parasuraman et al. (1985) define service quality as a function of the magnitude and direction of the gap between expectation and perception of the performance received. However, where Gronroos (1984) suggested two factors, Parasuraman et al (1985) proposed five dimensions of service quality - reliability, responsiveness, assurance, empathy and tangibility. The work of Parasuraman et al. (1985, 1988, and 1991) significantly advanced the fundamental concepts of service quality measurement. Parasuraman et al. (1985, p.42) suggested three underlying themes in service quality:

1. Service quality is more difficult for the consumer to evaluate than goods quality

2. Service quality perceptions result from a comparison of consumer expectations with perceptions of actual service performance.

3. Quality evaluations are not made solely on the outcome of a service; they also involve evaluations of the process of service delivery.

4. Consumption and evaluation of services quality are simultaneous process.

According to Parasuraman, Zeithaml and berry (1985), customers evaluate service encounters and the process of service delivery to form perceptions of service quality. Their study probed into quality issues using focus groups of customers in four services - retail banking, credit cards, security brokerage besides product repairs and maintenance. Based on the their study, it was found that consumers clearly supported the notion that the key to ensuring good quality is meeting or exceeding what consumers expect from the service. It was clear that judgments of high service and low service quality depend on how customers perceive the actual service performance in the context of what they expected. Therefore service quality, as perceived by customers, can be defined as the extent of discrepancy between customer’s expectations or desires and their perceptions (Parasuraman et al, 1985, 1988, 1990).
2.3 Perceived Service Quality

Due to the subjective nature of service quality (Rust and Oliver, 1994), the services marketing literature focuses on quality in terms of perceived service quality (Nadiri et al., 2009). Perceived service quality results from the comparison of customer service expectations with their perceptions of actual performance (Zeithaml et al., 1990), and is seen as a global judgement of the service (Parasuraman et al., 1988). Athiyaman (1997) extends this idea, claiming that perceived service quality is an overall evaluation of the goodness or badness of a product or service.

Perceptions of service quality differ between different parties. For example, the discussion pertaining to different stakeholders in higher education (Section 2.2.6) demonstrates that a customer’s perceptions of service quality might not be the same as company perceptions of service quality, resulting in a mismatch when attempting to measure service quality. In addition, perceptions of service quality change over time. In the context of higher education, experiences of students are varied and continuous, over months and years (Cuthbert, 1996a). This highlights the relevance of the context when measuring perceived service quality. Hill (1995) adds to the complexity of perceived service quality, stating that the service does not just depend on the service provider, but also on the performance of the consumer. The co-production of services is of greatest concern to an organisation when customers are more involved in the production process (Palmer, 2011). This is extremely significant in the context of higher education, as the participation of the student is vital, since they play a large role in determining the success of the service. As a result, managing and monitoring the quality of services is increasingly difficult for the service provider (Palmer, 2011).

2.4 Management Higher Education as a Service

DeShields et al. (2005) argue that it is essential for higher education management to apply market-orientated principles and strategies that are used in profit-making institutions. These principles and strategies are being applied to higher education
institutions with the aim of gaining a competitive advantage (Hemsley-Brown and Oplatka, 2006). Accordingly, institutions are increasingly realising the importance of higher education as a service industry and are placing greater emphasis on meeting the expectations and needs of students (DeShields et al., 2005). Nadiri et al. (2009) point out that it is crucial for higher education providers to understand students’ expectations and perceptions of what constitutes a quality service in order to attract students and serve their needs. This promotes the need for higher education institutions to continue to deliver a quality service and satisfy its participating customers to achieve sustainability in a competitive service environment (DeShields et al., 2005). According to Oldfield and Baron (2000), higher education can be seen as a “pure service,” suggesting that it possesses all the unique characteristics of a service.

More recently, Gruber et al. (2010) assert that higher education is a service that is predominantly intangible, perishable and heterogeneous. This is due to the service experience varying from one situation to the next, making higher education service encounters difficult to standardize. Higher education as a service also satisfies the perishability criterion since it is difficult to store. However, ways to overcome this are evident, for instance, the emergence of e-learning and video technology (Cuthbert, 1996a) over the past fifteen years.

As a result, service sectors such as higher education are attempting to defy the perishability characteristic of a service through the assistance of innovation and technological advances. Notwithstanding the characteristics of higher education as a service, it is important to appreciate that higher education institutions, like any other businesses, have different stakeholders with varying interests and agendas.

### 2.5 Service Quality in Higher Education

According to Sultan and Wong (2010), service quality research in the higher education sector is relatively new, at least when compared to that of the commercial sector. With significant changes taking place in higher education institutions over the last decade, it
seems that higher education should be regarded as a business-like service industry, which focuses on meeting and exceeding the needs of students (Gruber et al., 2010). Many higher education institutions are beginning to realise this and are competing for students, both in the local and international market (Paswan and Ganesh, 2009). Furthermore, with the emergence of many informal platforms for students to post their views on their experiences (e.g. The Student Room), higher education institutions are increasingly being called to account for the quality of education that they provide. Accordingly, achieving quality has become an important goal for most higher education institutions (Abdullah, 2006b). Harvey and Green (1993) contend that quality in higher education is a complex and multifaceted concept and an appropriate definition is lacking. There are many ways to define quality in higher education and each definition has its own criteria and perspective and is regarded as ‘stakeholder relative’ (Harvey and Green, 1993). In terms of the student as the stakeholder, DeShields et al. (2005) argue that the higher education sector needs to continue to deliver a high quality service and satisfy students in order to succeed in a competitive service environment. Therefore, attempting to evaluate the level of service quality and understanding how different factors impact overall service quality is crucial so that higher education institutions can design their service in the best possible way (Abdullah, 2006b). Furthermore, knowing the strengths and weaknesses of different factors and their relative influence may lead to better allocation of resources, resulting in students being provided with an improved service (Abdullah, 2006b).

2.6 The Stakeholders of Higher Education

It is important to define a stakeholder in order to enable an understanding of the various stakeholders in the context of higher education. An early definition, which is still very prominent today, is provided by Freeman (1984, p. 46), who defines a stakeholder as:

“All group or individual who can affect or is affected by the achievement of the organisation objectives.”
It is common for many organizations to have a number of stakeholders with different opinions, interests and attitudes towards the organization. This is no different in the context of higher education, where a number of stakeholders exist, all experiencing the institution in different ways. Stakeholders in a higher education institution tend to include students, their parents and family, the local community, society, the government, the governing body, staff, local authorities, and current and potential employers (Aldridge and Rowley, 1998). Due to the variety of stakeholders in higher education, it is natural for perceptions to vary between different stakeholder groups (Appleton-Knapp and Krentler, 2006). Gruber et al. (2010) argue that every stakeholder involved in a higher education institution has its own view of quality due to particular needs. Moreover, quality means different things to different people depending on the context being examined (Lovelock and Wirtz, 2011), illustrating the importance of acknowledging different stakeholder groups.

2.6.1 Student as the primary Stakeholder

Identifying the primary stakeholder in higher education is problematic (Cuthbert, 1996a). This combined with the issue that service providers can only deliver an effective service if they know what the customer wants (Gruber et al., 2010), makes the identification of the primary stakeholder even more crucial. Hill (1995) claims that students are the primary stakeholders of higher education services in the India, demonstrating that they play a key role in the production and delivery process of the service. More recently, Gruber et al. (2010) contend that students are the specific and primary target audience, stressing the need for academic administrators to focus on understanding their requirements. In addition, if universities focus on understanding how their students perceive the services offered, they may be able to adapt their services in a way that stimulates a positive impact on students’ perceived service quality (Section 2.3.3). This could provide the institution with a certain competitive advantage, principally in terms of generating positive word-of-mouth communication between potential, current and future students (Alves and Raposo, 2009). This study recognizes that there are range of
stakeholders in higher education. However, the focus for the study is the student as the primary stakeholder, with the aim of revealing what they actually think, which may support or contradict what other representatives in higher education believe. Therefore, all subsequent discussion pertaining to stakeholders in higher education relates to the student as the primary stakeholder.

2.7 Expectations and Perceptions

The services marketing literature presents an interesting debate regarding whether customer expectations and perceptions should be used, or whether it is appropriate to use purely perceptions to form judgements (see e.g. Cronin and Taylor, 1992, 1994). Despite this, Zeithaml et al. (1990) maintain that word of mouth communications, personal needs, external communications from the service provider, price and past experiences of the service are pivotal in influencing the customer’s expectations. Notwithstanding the issues associated with multiple stakeholders discussed earlier (Section 2.2.6), Berry et al. (1988) suggest that the consumer is the sole judge of service quality and that it is assessed by comparing expectations with their actual experience of the service (Section 2.3.2). Zeithaml et al. (1990) propose that knowing what the customer expects is an essential step for delivering good service quality. This demonstrates the importance of understanding consumer expectations, how they develop and their significance when managing service quality. On the other hand, many academics believe in disregarding expectations completely, stating that recalling them can be problematic (e.g. Abdullah, 2006a, 2006b; Cronin and Taylor, 1992, 1994; Oldfield and Baron, 2000). Theories of hindsight bias (see e.g. Hawkins and Hastie, 1990) suggest that people generally do not recall the past correctly but rather allow their experience to shape what they claim to have believed initially, resulting in the possibility of biased expectations (Appleton-Knapp and Krentler, 2006). Furthermore, in the context of higher education, Hill (1995) suggests that students’ expectations of higher education are informed by their experiences at high school leading to a potential mismatch between expectations and perceived service quality.
Despite the debate surrounding the relevance of expectations, it is appropriate to discuss the disconfirmation paradigm, as this provides a basis for understanding the relationship between student expectations and student satisfaction (Appleton-Knapp and Krentler, 2006).

### 2.8 The Disconfirmation Paradigm

Traditionally, the disconfirmation paradigm has been used extensively to determine satisfaction. However, the disconfirmation paradigm is a flexible model that is also useful for the measurement of quality in services (see e.g. Gronroos, 1982). The paradigm is useful for understanding the relationship between a consumer’s expectations and actual perceptions (Figure 2.1). It utilises four important constructs – expectations, performance, disconfirmation, and satisfaction (Smith and Houston, 1982, cited in Parasuraman et al., 1985).

**Figure 2.1: The Disconfirmation Model**

![Disconfirmation Model Diagram]

**Source:** Walker (1995)

Expectations are predictions of performance and their comparison with perceived performance leads to three possible outcomes:
**Confirmation**: Occurs when actual performance is as expected.

**Positive disconfirmation**: Occurs when actual performance is greater than expectations

**Negative disconfirmation**: Occurs when actual performance is less than expectations.

Positive disconfirmation produces satisfaction, whereas negative disconfirmation produces dissatisfaction (Buttle, 1995). Moreover, when the expected and perceived performance is the same, the customer is neither satisfied nor dissatisfied (Buttle, 1996). This paradigm has been studied and tested by many researchers and serves as the basis for the vast majority of satisfaction studies (Appleton-Knapp and Krentler, 2006).

### 2.9 Measuring Service Quality

Practitioners and academics are keen to accurately measure service quality in order to better understand its essential antecedents and consequences, and ultimately establish methods for improving quality to achieve a competitive advantage and build customer loyalty (Abdullah, 2006a). In addition, there are many areas of disagreement in the debate of relating to measuring service quality (Abdullah, 2006a). Some authors deem service quality difficult to define and model as a result of the problems involved in conceptualising and measuring the construct (Parasuraman et al., 1985). This is predominantly due to the intangible nature of services, making conceptualisation more difficult for services than goods (Palmer, 2011). Therefore, it is no surprise that the complexity in conceptualising and measuring service quality has been deemed to be one of the most debated and controversial topics in services marketing (Brady and Cronin, 2001). Despite numerous attempts by academics, no single model of service quality is universally accepted (Clewes, 2003). Moreover, a review of the existing literature demonstrates that there is no agreement pertaining to the measurement of service quality (Marzo-Navarro et al., 2005), providing further evidence to illustrate that a generally accepted measurement scale does not exist.
2.10 Service Quality models for Measuring Service Quality

Over the last three decades, a range of conceptual frameworks and models have been proposed that attempt to measure service quality (see e.g. Abdullah, 2006a, 2006b; Cronin and Taylor, 1992, 1994; Gronroos, 1984; Parasuraman et al., 1985, 1988). According to Palmer (2011), the main methods used to measure service quality are performance-only and disconfirmation approaches. Furthermore, the most widely used methods applied to measure service quality can be categorised as quantitative multi-attribute measurements (Abdullah, 2006a), for instance, the SERVQUAL approach (Parasuraman et al., 1988), the SERVPERF approach, and in the context of higher education, the HEdPERF approach (Abdullah, 2006a, 2006b). Of the approaches highlighted above, the most frequently cited model is the SERVQUAL model, which stems from the earlier work of Gronroos (1984). Furthermore, the development of the SERVPERF model has encouraged the introduction of context specific models for measuring service quality. Abdullah (2006) developed the Higher Education performance-only model (HEdPERF). The model is a comprehensive performance-based measuring scale that attempts to capture the determinants of service quality within the higher education sector.

2.10.1 GAP Model (Parasuraman et al., 1985)

The researchers across the world have identified number of models on service quality. Parasuraman et al. (1985) developed a service quality model based on exploratory investigation of gap between consumers and service providers. They identified five potential discrepancies or gaps associated with the delivery of service:

GAP 1: Customer expectations - management perception gap: the difference between management perceptions of customer expectations and actual customer expectations;

GAP 2: Management perception - service quality specification gap: the difference between understanding the customer expectations and development of service quality specifications;
GAP 3: Service quality specifications - service delivery gap: the difference between service quality specifications and actual service delivery;

GAP 4: Service delivery - external Communications Gap: the difference between actual service delivery and what is communicated about the service to consumers and

GAP 5: Expected Service - Perceived gap: the difference between customer expectations and customer perceptions.

**Figure 2.2 GAP Model**

This gap analysis formed the basis of the model summarizing the nature and determinants of service quality as perceived by consumers. Service quality as perceived by the consumer depends on the size and direction of Gap 5 which, in turn depends on the
nature of the gaps associated with the design, marketing and delivery of services: gap 5 = f { Gap 1, Gap 2, Gap 3, Gap 4}; (Parasuraman et al., 1985). According to the Gap model, consumer assessment of service quality results from a comparison of service expectations with actual performance (Zeithaml, Berry, Parasuraman, 1885, 1988, 1993). The entire approach was developed on the tenet that customers form expectations of performances on the service dimensions, observe performance and later form performance perceptions. To evaluate quality of service, consumers compare the services they received with the services they expected prior to the service encounter. Quality in services is held in the eyes of the customer and therefore is called perceived service quality. The consumer’s perception of service depends on the nature of discrepancy between the expected service (ES) and the perceived service (PS). When ES>PS, perceived quality is less than satisfactory; ES=PS, perceived quality is satisfactory; and ES<PS, perceived service quality is more than satisfactory (Parasuraman et al 1985).

When Parasuraman and his colleague first developed the model in 1985, their exploratory investigation consisted of in-depth interviews of 37 executives in four nationally recognized service firms and 12 consumer focus groups. The initial results, based on qualitative research, yielded 10 dimensions of service quality that included tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer (Parasuraman et al; 1985).

- **Tangibility** includes physical evidence of the service- appearance of physical facilities, equipment, personnel and communications material
- **Reliability** involves ability of the firm to perform the promised service dependably and accurately.
- **Responsiveness** concerns the willingness and readiness of employees to help customers and provide prompt service.
- **Competence** means possession of the required skills and knowledge to perform the service
- **Courtesy** involves politeness, respect consideration and friendliness of the contact personnel
- **Credibility** involves trustworthiness, believability, honesty of the service provider
- **Security** is the freedom from danger, risk or doubt
- **Access** involves approachability and ease of contact
- **Communication** means keeping customers informed in language they can understand and listening to them
- **Understanding the customer** involves making the effort to understand customers and their needs

These ten dimensions and their descriptions served as the basic structure of the service quality domain from which items were derived for the development of measurement scale. Further empirical study (Parasuraman *et al.*, 1988) resulted in a Multiple-item scale, named ‘SERVQUAL’, which measures service quality based on five dimensions, viz. **tangibles**- the physical facilities, equipment and appearance of personnel; **reliability**- the ability to perform the promised service dependably and accurately; **responsiveness**- the willingness to help customers and provide prompt service; **assurance**- the knowledge and courtesy of employees and their ability to inspire trust and confidence and **empathy**- the caring, individualized attention the firm provides its customers. SERVQUAL is a two part instrument, with 22 items measuring expectations of customers and 22 similarly worded items measuring perceptions or experiences of customers to measure service quality. Each quality dimension can be quantified by obtaining measures of expectations and perceptions of performance levels for service attributes relevant to each dimension, calculating the difference between expectations and perceptions of actual performance on these attributes, and then averaging across attributes.

SERVQUAL is designed as a diagnostic instrument to assess the strengths and weaknesses of a service provider, in terms of various service dimensions. Three dimensions- tangibles, responsiveness and assurance have four items each and the other two dimensions - reliability and empathy have five dimensions each. Parasuraman *et al* used SERVQUAL with service companies in banking, credit cards, product repairs, insurance and telephones. The component and total reliability of SERVQUAL was found to be consistently high across all four samples. The overall patterns of factor loadings were remarkably similar across the four independent sets of results. The distinctiveness
of SERVQUAL’s five dimensions was further supported by relatively low inter-correlations among the five factors. The SERVQUAL instrument was judged to have content validity by examining the extent to which the items represented the construct’s domain. Convergent validity was tested by comparing SERVQUAL scores with Overall quality scores. The strength and persistence of the linkage between Overall Q scores and SERVQUAL scores across four samples offered strong support for its convergent validity.

Following this work by Parasuraman and his colleagues, numerous research studies were conducted to validate and verify the five dimensions (Babakus and Mangold, 1992; Bowers, Swan and Koehler, 1994; Carman, 1990; Cronin and Taylor, 1992, 1994; Teas, 1993; Brown, Churchill and Peter, 1993). Babakus and Mangold (1992) used SERVQUAL to evaluate the quality of services that discharged patients had experienced during their hospitalization. The researchers concluded that some modification should be made in the instrument because of the uniqueness of hospital services. The negatively worded statements and a 5-point likert response format were adopted instead of the original 7-point scale. Carmen (1990) suggested through their empirical research that stability of the SERVQUAL dimensions is impressive, but the PZB dimensions are not completely generic. Carmen (1990) indicated that although the number and identification of factors are quite similar across settings, the applicability of an individual item to the factor to which it was expected to belong is far less stable. Based on their research, it is recommended that items on seven or eight of the original ten PZB dimensions be retained until factor analysis shows them to be unique (Carmen 1990). The researcher also suggested that the SERVQUAL needed to be customized by adding items or changing the wording of items.

2.10.1.1 Critical Evaluation of SERVQUAL

2.10.1.1.1 Arguments against SERVQUAL

Although the SERVQUAL model has greatly contributed to the literature on service quality, it has been criticized. Generally, critics have questioned the multidimensional
nature of the instrument, psychometric properties, applicability as a generic scale and the feasibility of SERVQUAL as a framework in measuring service quality.

Some of the theoretical and empirical criticisms of the scale can be summarized as follows:

**Gap Score**

The first issue raised by lot of researchers involves the appropriateness of the perceptions-expectations gap conceptualization, which is the basis of the SERVQUAL Scale. The use of gap score to measure perceived service quality as difference between customer perception and expected service does not actually capture the cognitive evaluation process of the customer. The concept and operationalisation of the “gap score” have been questioned by many researchers. Brown et al., (1993) investigated the SERVQUAL scale and concluded that there are serious problems in conceptualizing service quality as a difference score. The use of a “gap score” is said to be a poor choice as a measure of psychological construct (Van Dyke et al., 1999) because there is little evidence that customers actually assess service quality in terms of perception-minus-expectations scores (Peter et al., 1993; Buttle, 1996). Moreover, the validity of the operationalisation of the “gap score” has been questioned because such scores are unlikely to be distinct from their component scores (Brown et al., 1993). Any gap score should be directly measured to yield a better outcome (Van Dyke et al., 1999). Revisiting the conceptual foundations of the SERVQUAL model provides some insight into the conflicting results. Origins of SERVQUAL can be found in the writings of the disconfirmation model widely adopted in the customer satisfaction literature (Oliver 1977, 1980 a, 1981). Oliver proposes that consumers make “better than expected / worse than expected” (disconfirmation) judgments on the basis of a comparison of product performance to expectations in the determination of customer satisfaction. Though conceptually consumers can make arithmetic or calculated comparisons between expectations and performance, Oliver, 1981 argues that they may not because of measurement failure or effort or because the relevant performance dimensions cannot be quantified. Cronin and Taylor (1992) observes: ‘Researchers have attempted to
differentiate service quality from customer satisfaction, even while using the disconfirmation format to measure perceptions of service quality. This approach is not consistent with the differentiation expressed between these constructs in the satisfaction and attitude literatures’. The disconfirmation-based service quality measurement scale is inappropriate and it was suggested that service should be measured as an attitude (Cronin and Taylor, 1992). Babakus and Boller (1992) found the use of a gap approach to service quality measurement ‘intuitively appealing’ but suspected that the difference of scores do not provide any additional information beyond that already contained in the perceptions component of the SERVQUAL scale. They found that the dominant contributor to the gap score was the perceptions score because of a generalized response tendency to rate expectations high.

**Customer Expectations**

In their 1988 work, Parasuraman *et al.* defined expectations as “desires or wants of consumers, i.e. what they feel a service provider *should* offer rather than *would* offer” (emphasis added). The expectations component was designed to measure “customers’ normative expectations” (Parasuraman *et al.*, 1990), and is “similar to the ideal standard in the customer satisfaction/dissatisfaction literature” (Zeithaml *et al.*, 1991). The concept of “expectations” has been criticised for being loosely defined and open to multiple interpretations (Teas, 1993, 1994). According to this critique, expectations have been variously defined as “desires”, “wants”, “what a service provider should offer”, “the level of service the customer hopes to receive”, “adequate service”, “normative expectations”, and “ideal standards”. Teas (1993a) found these explanations somewhat vague and have questioned respondents’ interpretation of the expectations battery in the SERVQUAL instrument. He believes that respondents may be using any one of six interpretations (Teas, 1993b): (1) *Service attribute importance*. Customers may respond by rating the expectations statements according to the importance of each. (2) *Forecasted performance*. Customers may respond by using the scale to predict the performance they would expect. (3) *Ideal performance*. The optimal performance; what performance “can
be”. (4) Deserved performance. The performance level customers, in the light of their investments, feel performance should be. (5) Equitable performance. The level of performance customers feel they ought to receive given a perceived set of costs. (6) Minimum tolerable performance. What performance “must be”. Each of these interpretations is somewhat different, and Teas contends that a considerable percentage of the variance of the SERVQUAL expectations measure can be explained by the difference in respondents’ interpretations. Carman (1990) agreed that expectations are important and the service marketers need to collect the information about them. But from their empirical study, they concluded that there appear to be serious problems with the value of the expectations battery as proposed by PZB and the ability to administer it.

**Difference scores: psychometric problems**

Brown *et al.* (1993), Peter *et al.* (1993), Edwards (1995) and Van Dyke *et al.* (1997) have criticised SERVQUAL’s interpretation of service quality in terms of difference scores, on the grounds that the subtraction of scores from two separate measurements to create a new variable, which is then used in subsequent data analysis, can lead to several psychometric problems affecting reliability and discriminant validity and can lead to spurious correlations and variance restriction.

The calculation of difference score in SERVQUAL measure leads to several psychometric problems. Difference score measures often demonstrate poor reliability, primarily because any positive correlation between the component scores attenuates the reliability of the resulting difference score. It means as the reliability of either component score decreases or the correlation between the component scores increases, the reliability of the difference score itself increases. When two responses are taken from the same respondent and then subtracted to form a measure of the third construct, only rarely the difference score components will not be positively correlated (Brown, Churchill and Peter 1993).
The use of difference score can also lead to two potential problems with discriminant validity. Recall that discriminant validity refers to the degree to which measures of theoretically unrelated constructs do not correlate too highly with one another—that is the extent to which SERVQUAL has five distinct dimensions. The common problem relates to how the reliability of measures affects discriminant validity. Low measure reliability attenuates correlations between constructs. Thus a measure with low reliability may appear to possess discriminant validity simply because it is unreliable. Since, difference scores are usually less reliable than non-difference score measures, they can be particularly affected by this phenomenon (Brown, Churchill and Peter 1993). The other problem which is unique to difference scores and other linear combinations concerns the degree to which the difference score measure can be discriminated from one or both of the component measures used to obtain the difference. In theory, difference is supposed to represent a construct that is distinct from the constructs represented by its component measure. In practice though, the difference will be highly correlated with at least one of the component measures. Since difference score measures will not typically demonstrate discriminant validity from their components, their construct validity is questionable.

Another common problem with difference scores is variance restriction, which occurs when one of the component scores used to calculate the difference score is consistently higher than the other component. Wall and Payne (1973), for example, emphasis that there is ample evidence that when two people respond to “what is desirable” in comparison to “what there is now,” they seldom rate the former lower than the latter. Such in the case with SERVQUAL; the expected or desired level of service is almost always higher than the perceived level of actual service (Brown, Churchill and Peter 1993).

**Predictability**

Most studies have found a poor fit between service quality as measured through Parasuraman, Zeithaml and Berry’s (1988) scale and the overall service quality measured directly through a single-item scale (e.g., Babakus and Boller, 1992; Babakus and Mangold, 1989; Carman, 1990; Finn and Lamb, 1991; Spreng and Singh, 1993). Cronin
and Taylor, (1992) found that SERVPERF measure explained more of the variance in the overall measure of Service quality than did SERVQUAL. The ability of a scale to explain the variation in the overall service quality (measured directly through a single-item scale) was assessed by regressing respondents’ perceptions of overall service quality on its corresponding multi-item service quality scale (Jain and Gupta, 2004). Adjusted $R^2$ values clearly point to the superiority of SERVPERF scale for being able to explain greater proportion of variance in the overall service quality than SERVQUAL. Efficacy of perceptions-based and disconfirmation-based service quality scales were examined from respondents representing different birth countries and the results have shown that the perceptions-based service quality scale better explains variations of customer satisfaction (Nam, 2008). The perceptions component outperforms SERVQUAL in predicting behavioral intentions also (Brown et al 1993).

**Dimensionality**

SERVQUAL’s five dimensions are not universal and number of dimensions and their stability comprising service quality depends on the context in which it is used. The items do not load on to the factors as proposed by the researchers and there is a high degree of inter-correlation between the five SERVQUAL dimensions. Carmen (1990) suggested through their empirical research that stability of the SERVQUAL dimensions is impressive, but the PZB dimensions are not completely generic. Carmen (1990) indicated that although the number and identification of factors are quite similar across settings, the applicability of an individual item to the factor to which it was expected to belong is far less stable. These dimensions are not so generic that users of these scales should not add items on new factors they believe are important in the quality equation. It has been also suggested that the factor-loading pattern in a number of studies indicates a weakness in terms of convergent validity because several of the SERVQUAL items had the highest loadings on different dimensions from those in SERVQUAL (Babakus and Boller, 1992). They further suggested that the dimensionality of service quality may depend on the type of industry being studied. Cronin and Taylor (1992) suggested from their study on four types of service firms that the five component structure proposed by PZB (1988) for their
SERVQUAL scale is not confirmed in any of the research samples. Brown, Churchill and Peter (1993) suggested from their empirical research that the dimensionality of SERVQUAL did not replicate.

Cronin and Taylor (1992) and Brown et al. (1993) proposed an alternative explanation and suggested a uni-dimensional construct of service quality. The authors suggested that all the items loaded predictably well on single factor and service quality is in fact unit-dimensional construct and certainly not a five dimensional one. The five dimensions of SERVQUAL failed to construct a service quality measurement because of the intercorrelations among them and the SERVQUAL is uni-dimensional rather than a five-dimensional construct (Babakus and Boller 1992). However, this is not corroborated by a more recent study by Llosa et al. (1998). While their study failed to find evidence that the 22 items of SERVQUAL cause respondents to think in terms of the five service quality dimensions as defined by Parasuraman et al. (1988), the results also do not confirm other researchers’ assertions of uni-dimensionality.

**Applicability across Industries**

Parasuraman et al. purposed that the instrument has been designed to be applicable across a broad spectrum of services. However, it was considered more appropriate by many researchers to do more replication and testing of the SERVQUAL dimensions and measures before accepting it as a valid generic measure of perceived service quality. The validity of the items and dimensions of the SERVQUAL instrument have been questioned by many researchers. Carmen (1990), had to use 14 additional items and dropped 13 items of the original items in the factor analysis stage of his study on four industries. Brown, Peter and Churchill (1993), also suggested that the original SERVQUAL scales do not completely cover the service quality dimensions of Banking Industry. Dabhokar, Thorpe and Rentz (1996) argued that service quality in retailing is different from any other service, and developed the Retail Service Quality Scale (RSQS) for measuring retail service quality. The RSQS has a five dimensional structure of which three dimensions comprising of two sub-dimensions each. In an empirical research, it was
reported that the five factor structure in SERVQUAL does not hold up in the context of Indian banks (Angur, Natarajan, and Jahera 1999). These studies emphasized the difficulty in adapting SERVQUAL instrument across service industries and suggested the use of industry specific measures of service quality.

### 2.10.1.1.2 Arguments for SERVQUAL

When the SERVQUAL scale was developed, the researcher’s aim was to provide a generic instrument for measuring service quality across a broad range of service categories. Rust and Oliver (1994) noted that the SERVQUAL instrument captured the crux of what service quality might mean, i.e. a comparison to excellence in service by the customer.

- PZB, (1993) agrees with Brown et al., (1993) that reliability of a scale operationalized as the difference between two measures will be low when correlation between the perceptions and expectations is high and when the reliabilities of perceptions and expectations are low. However, they argued that the reliability issues are not likely to be serious threat when the construct being operationalized is an expectation-minus-perception difference score. The expectation component of SERVQUAL is a general measure and pertains to customers normative standards i.e. the service levels customers believe excellent companies in a sector must deliver (PZB, 1993). The perceptions component on the other hand, pertains to customer’s perceptions of a given company’s service within the sector. As such there is no conceptual reason for a customer’s general evaluation standards to be co-related with his or her company specific assessments. Any observed correlation between the two may be merely an artifact of both measures appearing on the same instrument. In fact correlations between expectations and perceptions are low (PZB, 1988 and Brown et al., 1993). Moreover, the empirical studies of PZB (1988,1991) and Brown et al.,(1993) have demonstrated high reliabilities for two components - perceptions and expectations of SERVQUAL.
Discriminant validity may be inflated if the measure has as low reliability. But this problem is unlikely to be serious in case of SERVQUAL, as the reliability of difference score formulation of SERVQUAL has been shown to be consistently high (PZB, 1988 and Brown et al., 1993). Difference score measure will lack discriminant validity because it will be correlated with its two components (Brown et al., 1993). PZB (1985) defines, “Service quality is a function of the discrepancy between customer the former expectations and perceptions, implying that the former construct is necessarily related to the other two”. Hence, inferring poor discriminant validity of difference score of SERVQUAL on basis of its correlation with its components is inconsistent with the definition of discriminant validity.

Brown et al., raises concern on restriction of variance of the difference scores at higher level of service quality due to high mean value and low standard deviation of expectation component relative to the perception component of SERVQUAL. This problem of variance restriction can have an impact, only in the case of multivariate analysis. And, even when used in multivariate application such as regression analysis, variance restriction is likely to be serious only when the difference score measure is used as a dependent variable. As far as using SERVQUAL for diagnostic purpose is considered, variance restriction is not relevant (PZB, 1993).

If Performance (P) is measured alone, respondents will mentally compute P–E regardless, using their own vague notions of E, in order to deliver their response (Llosa et al. 1998). While it is the maximally attainable score of 5 on a 5-point scale that presumably is serving as a reference point in the case of the SERVPERF scale, it is customer expectation for each of the service area that is acting as a yardstick under the SERVQUAL scale. The SERVQUAL scale does not point to managerial intervention as long as perceived performance equals or exceeds customer expectations for a service attribute. However, the SERVPERF
scale, suggests the need for managerial intervention because the perceived performance level is less than the maximally attainable value of 5. The customer perceptions of performance are above their expectation level, so there is no justification in further trying to improve the performance in this area. The customers are already getting more than their expectations; any attempt to further improve the performance in this area might drain the owner of the resources needed for improvement in other critical areas (Jain and Gupta, 2004). Between the two scales, therefore, the SERVQUAL scale stands to provide a more pragmatic diagnosis of the service quality provision than the SERVPERF scale (Jain and Gupta, 2004). The incorporation of expectation scores provides richer information than that provided by the perception-only scores thus adding to the diagnostic power of the service quality scale. Even, the developers of performance-only scale were cognizant of this fact and did not suggest that it is unnecessary to measure customer expectations in service quality research (Cronin and Taylor, 1992). When one is interested simply in assessing the overall service quality of a firm or making quality comparisons across service industries, one can employ the SERVPERF scale because of its psychometric soundness and instrument parsimoniousness. However, when one is interested in identifying the areas of a firm’s service quality shortfalls for managerial interventions, one should prefer the SERVQUAL scale because of its superior diagnostic power. Moreover, when one is interested in both the objectives - (1) accurately diagnosing service shortfalls and (2) explaining the variance in related variables, the difference score can be used for the former while the perceptions component alone can be used for the latter (Parasuraman et al., 1993).

- Measuring expectations and perceptions separately also allows managers to better understand the dynamics of customer’s assessment of quality over time (Parasuraman et al., 1993). For example, if SERVQUAL scores for certain item have declined significantly from one period to another, service providers can assess whether it is due to higher expectation, lower perceptions or both. This
information is neither available in performance only scale nor when performance relative to expectation are measured on the same scale.

- Addressing the issue of universal applicability, PZB (1991), states that, the SERVQUAL items represent core evaluation criteria that transcend specific companies and industries. The SERVQUAL items are the basic ‘skeleton’ underlying service quality and as much as possible it must be used in its entirety. While minor modifications in the wording of items to adapt them to a specific setting are appropriate, a deletion of item could affect the integrity of the scale and cast doubt on whether the reduced scale fully captures service quality. The SERVQUAL scale can be supplemented with context specific items when necessary. Carman (1990) states that the dimensions may have been over-generalized and suggests that some items of the ten dimensions that were no longer explicitly stated in the five dimensions be retained until further factor analysis shows that they really are not unique.

- In response to the issue related to the increased questionnaire length, PZB (1991), suggested reduction in the questionnaire length by using just one list of the SERVQUAL items and placing the expectations and perceptions rating scales in two columns adjacent to the list.

Parasuraman et al. (1993) acknowledged that P scores alone do outperform gap scores (P–E) in terms of the prediction of overall evaluations of service and behavioural intentions. But raised an important trade-off question: Is the increased ability of the P scores alone to explain variance worth the potential loss of richer more accurate diagnostics for improving service quality?’. Parasuraman, Zeithaml, and Berry, (1994) explain that using ‘perceptions-only’ is appropriate if the research purpose is to measure variances in some dependent construct: while, ‘perceptions-minus’ measurement is appropriate when the research purpose is to diagnose accuracy of service short-falls and
use this information to allocate resources to improve Service Quality. Moreover, Lam and Woo (1997) found that the performance items are subject to instability even in a one week test-retest interval.

This finding casts doubt on the usefulness of the SERVQUAL performance only items to measure service quality. In the mean time, ‘even in its present state, SERVQUAL is a helpful operationalisation of a somewhat nebulous construct’ (Buttle 1996). The impact of SERVQUAL in the domain of service quality measurement is widely accepted, and although few of its claims remain undisputed (Smith 1995), it should be noted that even its major critics acknowledged its popularity (Brown et al. 1993; Cronin and Taylor, 1992 and Teas, 1994). An alternative with the same level of general appeal and market dominance is yet to be produced.

2.10.2 Service Performance Model (SERVPERF)

Maintaining service quality is essential; therefore a proper service quality measurement model is the basic necessity of organization. By observing the previous literature, it is found that service quality is still under the process of exploration (Cronin and Taylor, 1992; Samat, et al., 2006). By 1992 the only model developed to measure service quality was SERVQUAL, however there were many unanswered issues relating to the model. Since, it is the service provider’s right to understand the method to gain customer trust therefore they have to distinguish the difference in the perception and the expectation of the consumer (Cronin and Taylor, 1992; Carrillat, et al., 2007; Samat, et al., 2006; Rowley, 1997; Herstein and Gamliel, 2006; Legcevic and Strossmayer, 2008).

From the literature, it is clear that the previous available model has been developed to measure quality, however now the emphasis of the researcher is on the performance based evaluation of the company (Cronin and Taylor, 1992; Abdullah 2005, 2006a; Rowley, 1997). Cronin and Taylor (1992), by referring to the literature, learned the importance of performance in an organization, therefore developed an improved version
of service quality measurement model known as Service Performance (SERVPERF). (Cronin and Taylor, 1992; Carrillat, et al., 2007; Abdullah 2005, 2006a; Samat, et al., 2006; Awan, et al., 2008; Legcevic and Strossmayer, 2008). The main dimensions that create relation with service quality are the customer liking and buying power (Samat, et al., 2006; Azmi, et al., 2008; Legcevic and Strossmayer, 2008). According to Azmi, et al. (2008, p.165) the customer can tolerate the variation in the performance of an organization to some extent, this tolerance is known as ‘Zone of Tolerance’, as the variation extends the tolerance level then the customer is completely dissatisfied.

The methodology adopted by Cronin and Taylor (1992) is that they compared two models i.e. SERVQUAL and SERVPERF. The comparison was made on the basis of the concept behind the models and dimensions adopted to measure the service quality. Equations had been drawn to further simplify the concept (Cronin and Taylor, 1992; Carrillat, et al., 2007). The five components created in SERVQUAL have been developed after extensive research, thus Cronin and Taylor (1992, p.58) also used the same five components as the base of their research namely ‘(a) Tangibles: Physical facilities, equipment and appearance of personnel, (b) Reliability: Ability to perform the promised service dependably and accurately, (c) Responsiveness: Willingness to help customers and provide prompt service, (d) Assurance: Knowledge and courtesy of employees and their ability to convey trust and confidence, (e) Empathy: Caring, individualised attention the organisation provides to its customers’.

They examined the reliability on the customer satisfaction and their purchase intention when measuring the service quality. To empirically testify the objectives of the study Confirmatory factor analysis was conducted to check the reliability of the 22 item of the SERVQUAL model (Cronin and Taylor, 1992). Then the comparison of models was done by assuming Weights in the SERVQUAL as well as the SERVPERF model, creating three equations on SERVQUAL, SERVQUAL with weight, and SERVPERF with weight. After that the reliability of consumer satisfaction on service quality, the outcome of consumer satisfaction on the purchasing decisions and the impact of service
quality due to the consumer purchasing decision was checked (Cronin and Taylor, 1992; Abdullah 2005, 2006a). The researchers calculated correlation among the 22 item scale and the highest correlation was found among the performance based scales, therefore proving the confidence of SERVPERF.

The comparison was made among different equations which proved that weights do not bring any addition to the reliability of the model, thus models without weights should be considered. The reliability of service quality, customer satisfaction and purchase intension were tested by the researcher. Four industries were considered for testing (bank, pest control, dry cleaning and fast food); their reliability with the three components (service quality, customer satisfaction and purchase intension) was significant (Cronin and Taylor, 1992). The findings illustrated that the SERVQUAL model was not fully measuring the service quality in organizations. Even the four industries selected by the researcher, SERVQUAL only supported two industries. Eventually, the literature as well as the empirical studies showed preference to the SERVPERF (Cronin and Taylor, 1992; Abdullah, 2005). Thus, the perception of the consumer when purchasing the product/service relies on the performance of the company (Abdullah, 2005). Service quality should be promoted by company in terms of an attitude and the style. Thus for further studies attitude should be considered for service quality measurement (Cronin and Taylor, 1992). So far the development of two service quality measurements models have been explained, both the models show significance to the Service Quality and is also used by many researchers till date.

2.10.3 Evaluated Performance Model (EP)

Once again in 1993, Teas questioned the SERVQUAL model developed by Parasuraman, et al. in 1988. He had doubts regarding the entire concept of measuring the perceived quality with the gap of perception and expectation of the consumer (Teas, 1993). The main emphasis of the researcher was on the conceptual understanding of Expectation (Abdullah, 2005). In literature the expectation is the term used when the consumer has a
certain mindset relating to the performance of the company (Teas, 1993; Samat, et al., 2006). By studying the concept of SERVQUAL, Teas in 1993 concluded that the difference in expectation and perception is when certain mindset of the consumer is not achieved due to poor service of the company. The researcher even pinpointed that the concept of quality defined by the perspective of the consumer is an old concept. In literature, the expectation of consumer has always been explained as the level of performance of the company in the mind of the consumer. Thus the company has to understand the nature of the customer (Teas, 1993; Ham, et al., 2003).

The vagueness in the development of the concept of expectation has led to confusion. The expectation associated with the services can exceed the actual level of performance of the company. Keeping such issues in mind, Revised Expectation ($E^*$) was developed by Parasuraman, et al. in 1988. Now the expectation measure ($E$) is related to the opinion of the consumer, Perception ($P$) is referring to the concept of the consumer and revised expectation ($E^*$) is about the experience of the consumer relating to the services of the company (Teas, 1993).

The extensive amount of unclear concepts led to the creation of Evaluated Performance (EP) Framework by Teas in 1993. By reviewing the literature Teas (1993, p.22) defined Perceived Quality as ‘the perceived ability of the product (defined as good or service) to deliver satisfaction’ can be conceptualized as ‘the product’s relative congruence with the consumers ideal product feature’. Thus, the Evaluated Performance model developed by Teas, shows a positive relationship between the consumer’s perception of quality and the likelihood that the actual performance will be able to fulfill the consumers expectation (Teas, 1993; Abdullah, 2005). Teas further dig in to the matter of customer expectation, the revised expectation has led to the creation of a new concept of ideal point and standards set in the mind of the consumer. Later Teas, highlighted the after purchase experience as well as the change in the perspective of the customer (Teas, 1993).

2.10.4 Normed Quality Model (NQ)
In 1993, the revised expectation (the expectations created after the experience of the consumer) led to the creation of Normed Quality Model by Teas. He addressed it as the excellence norm leading to the creation of SERVQUAL E*. Here the excellence norm is a result of the positive experience of the consumer. The excellence norm is compared with the ideal standard set in the mind of the consumer (revised expectation in comparison with the expectation). The difference in the two expectations are referred as “Normed Quality Gap” , if there is no difference in the excellence norm and the expectation then the Normed quality is equal to the perception of the consumer (Teas, 1993).

After the study of both measurement models (EP & NQ), Teas adopted a methodology of empirically testing their reliability with respect to Service Quality. Due to the minor differences in the models, Teas examined the perceived quality models with respect to the ambiguities. The main issue was the expectation as well as the revised expectation (E & E*) in the SERVQUAL model, then the ideal point (I) identified by Teas in the EP model and lastly the validity of the Normed Quality (NQ) with respect to the revised expectation (E*) measures (Teas, 1993). Teas developed research questionnaire form; randomly selected sample of 120 consumers and personally interviewed them regarding the concept of expectation, perception and revised expectation. Three local discount stores were selected for the study. The findings of the research led Teas to the result that revised Expectation (E*) and expectation (E) in SERVQUAL are usually misunderstood by the consumers and are not valid methods of measuring perceived quality (Teas, 1993). From the research it was found that Normed Quality (NQ) and SERVQUAL have lower validity as compared with Evaluated Performance (EP). However the Ideal point (I), in EP required some clarification to the consumer. The main purpose of this paper was to solve the explanatory problems of the dimensions used in the Service Quality Measurement Models. After the validity test of SERVQUAL (E & E*), NQ and EP, it was concluded that EP is the most valid instrument to measure service quality (Teas, 1993; Abdullah, 2005, 2006a).
2.10.5 Higher Education TQM Model of Excellence (HETQMEX)

Later In 1996, the development of Service Quality Measurement Models began specifically for the Higher Education Industry. Ho and Wearn (1996) developed a quality measurement model especially for the Higher education institutions (HEI). According to Ho and Wearn, quality is equally required in higher education institutions as in businesses. Ho and Wearn explained that TQM (Total Quality Management) is essential for the maintenance of Quality in HEI (Ho and Wearn, 1996; Awan, et al., 2008). Ho and Wearn (1996, p.1) stated that it should be used to formulate the mission statement for the services provided by Higher Education Institutions; a generic mission statement could be ‘To provide quality education, research and related services to continuously satisfy stakeholders needs and achieve excellence through TQM’.

Application of Quality improvement model with respect to TQM is the main theme of the researchers. As stated by Samat, et al. (2006, p.713) TQM has been explained by many scholars as ‘the most global advanced approach in the area of quality’. TQM provides consumer loyalty and profitability to the organization (Samat, et al., 2006; Vazzana, et al., 1997; Awan, et al., 2008). Ho and Wearn (1996) basically applied the Quality management process on the Indian Higher Education Industry and explained the factors and organizations associated with the maintenance of quality in it and concluded the presence of TQM in service quality is essential (Samat, et al., 2006). According to Ho and Wearn (1996, p.3) the basic elements of TQM are ‘leadership, commitment, total customer satisfaction, continuous improvement, total involvement, training and education, ownership of problems, reward and recognition, error prevention, and teamwork’.

Quality maintenance in service requires change in the entire system shifting from traditional methods to the quick and innovative techniques. Thus, it is essential for the top managers to support the new system and encourage their employees (Samat, et al., 2006).
Ho and Wearn (1996, p.4) have stated the importance of adopting new teaching methods such as ‘modelling is better than words, demonstration is better than explanation, minimize instructions, and positive reinforcement is more effective than punishment’. The training of teachers and administration also plays an important role in maintaining quality in higher education institutions therefore developing a proper teaching plan is essential (Ho and Wearn, 1996; Vazzana, et al., 1997).

Ho and Wearn (1996, p.5) adopted the methodology of developing 5 gaps in the Higher education industry stated Gap 1-Customers expectations and management’s perceptions of customers’ expectations,
Gap 2-management’s perceptions of customer’s expectations and service quality specifications
Gap 3-Service quality specifications and service delivery
Gap 4-Service delivery and external communications to customers
Gap 5-Customers expectations and perceived service.

The importance of stakeholders is also highlighted since it is essential to keep in mind the internal stakeholders (students, staff, teachers, administration) informed and manage the external stakeholders (government bodies, other institutions) (Ho and Wearn, 1996). Ho and Wearn in 1996 developed a new service quality measurement model by the name of Higher Education Total Quality Management Model of Excellence (HETQMEX). The main purpose of its development is to achieve a level of quality in the higher education institution (Hahn and Bart, 2003). The satisfaction of customer is the most important factor which could be achieved by the TQM methods and proper application of model in Higher Education Institution (Ho and Wearn, 1996). For the implementation of HETQMEX it is essential that the institution trains the faculty and also make sure the entire institution body act as one team (Ho and Wearn, 1996; Vazzana, et al., 1997).

2.10.6 Higher Education Performance Model (HEdPERF):
For further enhancement of the Service Quality Measurement Models for HEI, in 2006, Abdullah developed a model to measure specifically the quality in higher education institutions. The researcher had determined specific factors to measure service quality relying on the fact that students are the main customers of the service.

It is an empirical study, reliability and validity test have been conducted to develop the model (Abdullah 2005, 2006a, b). According to the Abdullah, the previous research on the perception of consumers is not covering all aspects. As stated by Abdullah (2006b, p.569) the findings of previous researchers relied on six dimensions i.e. ‘non-academic aspects, academic aspects, reputation, access, programme issues and understanding’. By consulting the previous literature, it is very important for the institution to differentiate among the important dimensions which directly affect the service quality. Even the adoption of specific dimension may attract the student, since direct contact of the student to the institution does make a difference (Abdullah, 2006b). The research conducted by Abdullah concluded that Customer-orientation is the important factor considered for service quality maintenance (Abdullah, 2006b; Awan, et al., 2008). Thus designing an instrument that is catering to a specific variable is more feasible. In 2006, Abdullah development HEdPERF (Higher education performance) model (Abdullah 2005, 2006a, b). The researcher adopted such a methodology, where he verified factors relating to service quality from consumer i.e. student perspective. After the proper research of literature review, focus groups were conducted with constructed questionnaire forms, hence the survey was conducted through personal contact and out of 6 institutions, 680 students were a part of the research (Abdullah, 2006b). Test of normality was conducted to avoid misrepresentation of data. Then factor analysis was conducted to derive correlation among the dimensions. Confirmatory factor analysis was conducted to verify the level of relatedness of the dimensions to the service quality. To check the reliability of the model, the reliability analysis was performed. Once no errors were discovered and the dimensions were properly related, then the Validity test was conducted, which showed that the all the dimensions clearly defined the purpose of study. Lastly the
Multiple regression analysis was applied to check the impact of the six dimensions on the quality of services (Abdullah, 2006b).

The findings were positive and it showed that the six dimensions did have an impact on the service quality management. However, the limitation of the study are that the model is referring to only one industry, as well as the situations would always lead to positive result as the students might neglect it and misunderstand the concept. For further research more models can be created on the basis of internal and external customers (Abdullah, 2006b).

2.10.7 Service driven Market Orientation (SERVMO):

It is the art of the service provider to represent their organization in the market in a way to attract more customers, like by the means of the institutions activities, structure or programmes offered. However, the service oriented tries to keeps an eye on their customers and process according to their expectations and perceptions (Voon, 2006; Guo, 2002). The relation of measurement of Service Quality with the higher education industry flourished with the passage of time, since 1988 till now the development on the measurement models and their application to the industries have been specified. In 2006, Voon integrated the idea of applying Market orientation in the service industry, by creating a SERVMO (Service Market Orientation) model.

According to Voom (2006, p.598) SERVMO is ‘the set of beliefs, behaviours and cross functional process that seriously focus on continues and comprehensive understanding, disseminating as well as satisfying the current and future need of the target customers, for service excellence. Market oriented methods have proven to be essential for many businesses. However, according to Voon (2006, p.596) due to lack of empirical research on this issue the researcher, has developed a relationship between the ‘service market orientation and the customer perceived service quality in the Higher Education
Institutions’. Education industry has been selected, to highlight the importance of customer satisfaction in this area. Since students are the main customers in the Higher Education Industry, so they are the stakeholders of the HEI. Stakeholders are the main users of the services and they are aware of all the loopholes in the organization. Thus, students are the main source of information (Voon, 2006; Rowley, 1997). The main theory behind Market orientation is the customer loyalty. Fulfilling the needs of the customers is the focus of companies. However, form the marketing and management perspective, previous studies reveal that the main target of market orientation is about gathering the true market information and then assembling it to find the requirement of the customer (Voon, 2006; Guo, 2002; Slater and Narver, 1994).

Voom (2006, p.599) defined the service driven market orientation on the basis of six components namely ‘Customer Orientation (CUS), Competitor Orientation (COM), Inter-Functional Orientation (IO), Performance Orientation (PO), Long-Term Orientation (LO) and Employee Orientation (EMO)’ Voom’s hypotheses were dependent on the reliability and validity of the six components, therefore his H1 is about the fact that SERVMO is assembled on the basis of these six components. Then H2 refers to the fact that these six components are interrelated, thus giving a positive outcome. In H3 and H4 are about the relation shown with the service quality. Voon proclaims that SERVMO has connection with the higher education institutions for the measurement of service quality (Voon, 2006).

After giving the hypothesis statement on the wider context, Voon moved to the individual components and their significance with the service quality. Continuing with the hypothesis on individual basis H5 has six parts referring to the six components mentioned by Voon (2006, p.600) i.e. ‘Customer Orientation (CUS), Competitor Orientation (COM), Inter-Functional Orientation (IO), Performance Orientation (PO), Long-Term Orientation (LO) and Employee Orientation (EMO)’. -H5 (a) - Customer Orientation has a significant relation with the service quality. H5 (b)- The Competitor orientation (COM) is also a very critical factor, the Voon has shown significant relation with service quality
in H5 (b). H5 (c) IO is assumed to have significant relation with service quality (Voon, 2006; Guo, 2002). H5 (d) The fourth component is the Performance Orientation (PO), since performance of every company is the one factor that changes the mind of the consumer and leads them towards loyalty. H5 (e) The fifth component is Long Term Orientation (LO) which is about the vision of the company i.e. long term planning. H5 (f) Employee orientation (EMO) is essential for the organization, since without the flourishing of the team, market orientation would not be possible. The methodology adopted by Voon was to develop a quality measurement model SERVMO. Six of the components were determined by the Voon mentioned previously (CUS, COM, IO, PO, LO & EMO), however more components were also considered such as the Critical Incident Technique (CIT), which was directing to the Market Orientation.

From the study it was concluded that as the service driven market orientation increase, the customer perceived service quality also increases (Voon, 2006; Slater and Narver, 1994). Thus from these findings it is clear that SERVMO is a reliable model to measure the service quality. The main idea behind this model is to make the employees realize the impact of perception of customers on the organization. Thus fulfilling their need and want should be the main goal of the organization. The implication faced by the researcher was in terms of the changing environment of the education industry. However the development of SERVMO has shown extensive measures of service quality in the Higher education Industry as SERVMO is the path of discovery from the administration to the customer’s perceptions. The researcher was only limited to the Higher Education Institutions and all the measurement were done on the base of the student’s perceptions. However SERVMO scale should be applied to other service oriented industries, to find out the relevance of this model (Voon, 2006).

2.10.8 Service Quality and Information System Success (SERVCESS)
When referring to the previous literature, there has not been enough research done on the relation of Service Quality (SQ) and the information system success (ISS). Therefore, the need to develop a new service quality measurement model with information system success was requirement of the time. Recently in 2008, Landrum, et al. developed a success model SERVCESS in order to measure the association of Service Quality with Information System Success. SERVCESS basically not only covers the main components of service quality in fact it also caters to the other variables that have an impact on the ISS (Landrum, et al., 2008).

The researcher basically combined the legendary SERVQUAL (a service quality measurement model) and other important variables that have an impact on the Information System Success (ISS). According to Landrum, et al. (2008, p.19), the important variable related to ISS are ‘System Quality (SyQ), Information Quality (IQ), Use, User Satisfaction, Individual Impact and Organizational Impact’. Usually, Service Quality is the independent variable and the six variables are dependent on SQ. However, these variables depict the performance, the attitude and behaviour of the consumers. Later on Landrum, et al. (2008, p.19) developed a User information Satisfaction (UIS) model relying on three variables namely ‘staff service quality, quality of user developed applications and user self sufficiency’. Basically Landrum, et al. (2008, p.19), replaced the term ‘users’ were by ‘users involvement’ in the research on ISS variable and ‘usefulness’ was also included in the list of variables. Eventually for development of SERVCESS, Landrum, et al. (2008, p.19) considered the three variables namely ‘Service Quality (SQ), Information Quality (IQ), User Involvement and System Quality (SyQ)’.

The methodology adopted by Landrum, et al. to develop SERVCESS, was that questions were prepared considering the 22 items of SERVQUAL and the six components of ISS. The questionnaire forms were given to Army Corps of Engineers information research centers. The customers replied in terms of the importance of Service Quality and their
perceptions and expectations on the height of service provided to them (Landrum, et al., 2008).

The response rate was very low and the majority of consumers were not even frequent visitors of the research library. The SERVQUAL model was evaluated using the Cronbach’s alpha and once again the performance was considered more over the expectation. Exploratory factor analysis was applied to the 66 item scale created for testing the five dimensions of the model. The variable with low Average variance extracted (AVE) were discarded, eventually 30 item scales were left. It was evident that performance based instruments were more cost effective and clear. At the same time application of weights did not bring much improvement in the model. Thus, the richness of data doesn’t lead to cost effective methods. SERVCESS is probably the most reliable source since its connection with the ISS and SQ leads to the configuration of customer satisfaction. However, the implication could be that the entire result is drawn based on just one sample survey and it could draw other implications when applied to any different industry. Thus, SERVCESS provides cost effective method to evaluate the service quality measurement in the organization (Landrum, et al., 2008).

2.11 Accreditation and Quality assessment bodies in India

In India, there is a wide variety of higher educational institutes in terms of quality. On the one hand, there are ‘Centres of Excellence’ such as Indian Institutes of Technology (IITs), and on the other there are institutes that have failed to maintain even a minimum standard of quality. Not only is there a wide gap between the world and Indian averages of quality, but there also exists a vast disparity between the institutions across India. The reasons for this low quality are multifaceted and interlinked — poor governance being the main reason. Resource constraints and poor infrastructure further worsen the situation. Many private institutes, especially in the field of professional education,
provide low-quality education as they are mostly interested in cutting cost and making profits (Chattopadhyay 2009).

A corrupt and ineffective regulatory system aggravates the problem as many educational institutes are engaged in subversion of duties and in maximising the benefits that accrue to the authorities without any effort to improve the quality of education. Also, there has been an age-long trade-off between excellence and inclusion (Velaskar 2010).

Since, the quality of education largely depends on that of the students and teachers, an institution may choose to be extremely selective and only offer seats to brainy people in order to maintain its quality. This selective competition may make HEIs more hierarchical and exclusive (Clotfelter 1996; Winston 1999). While we consider the fact that in India only 15 per cent in the age group of 18–23 years enter into a college, ‘excellence’ appears to be an ‘elite’ term. However, maintaining a minimum quality in all the HEIs is imperative. The problem is to appropriately define and quantify for effective monitoring and enforcement of minimum quality of education. This is critical because unfair practices and poor quality of education can ruin the entire life of students and affect their families, societies and the nation.

Keeping this problem in mind, quality assurance mechanisms in higher education were adopted in India and at present the popular agencies are:

(a) National Assessment and Accreditation Council (NAAC) under the University Grants Commission (UGC);

(b) National Board of Accreditation (NBA) under the All India Council of Technical Education (AICTE);

(c) Accreditation Board under the Indian Council of Agricultural Research (ICAR).
Among these, the two most popular accreditation agencies are the NAAC and the NBA.

**2.11.1 National Assessment and Accreditation Council (NAAC)**

The Council was established in 1994 under the UGC following the recommendations of the National Policy on Education (1986). The NAAC generally deals with universities recognized by the UGC and its affiliated colleges and autonomous institutes that have a minimum experience of functioning. For accreditation and assessment, the NAAC follows a two-step process in which HEIs first have to get Institutional Eligibility for Quality Assessment (IEQA) status and then send a filled-up format to the council. Institutions that have already gained IEQA status can directly send a letter of intent to the NAAC. After receiving a self-study report from the HEIs, a team of NAAC members and experts visit them and a final decision is taken by the NAAC executive members. Based on indicators and assigned measures, a cumulative grade point average (CGPA) is calculated for the institution and the implication of the grades are as follows:

<table>
<thead>
<tr>
<th>Range of Institutional CGPA</th>
<th>Letter Grade</th>
<th>Performance Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.01-4.00</td>
<td>A</td>
<td>Very Good (Accredited)</td>
</tr>
<tr>
<td>2.01-3.00</td>
<td>B</td>
<td>Good (Accredited)</td>
</tr>
<tr>
<td>1.51-2.00</td>
<td>C</td>
<td>Satisfactory (Accredited)</td>
</tr>
</tbody>
</table>

According to the NAAC, the major role of an HEI is to promote the values inherent in education. These core values as specified for the Indian higher education system are:

(a) Contributing to national development,
(b) Fostering global competence among students,
(c) Inculcating a value system among students,
(d) Promoting use of technology, and
(e) Quest for excellence. Table below gives the criteria, indicators and weights specified by the NAAC.

Although the NAAC had started doing the accreditation and assessment in 1998, it was only after 2002–03 that it gained momentum, and by October 2006 it had accredited 129 universities and 2,956 colleges (only 13 per cent of higher educational institutes). This was mainly because of the voluntary accreditation process that was recently made compulsory in India. Among the HEIs accredited by the NAAC, most are public - or government-run, and mainly public universities and public colleges. Private universities and private colleges perhaps showed less interest in getting accredited by the NAAC.

**Criteria for Assessment:** NAAC has identified through national consultations and consensus the following seven criteria to serve as the basis for its assessment procedure:

1. Curricular Aspects
2. Teaching-Learning and Evaluation
3. Research, Consultancy and Evaluation
4. Infrastructure and Learning Resources
5. Student Support and Progression
6. Organisation and Management
7. Healthy Practices

**2.11.2 National Board of Accreditation (NBA)**

The NBA (under the AICTE) offers accreditation to all institutions or programmes that are approved by the AICTE, provided at least two batches have passed out of the programme or institution. Under the provisions of the AICTE Act of 1987, all diploma, degree and postgraduate programmes coming under certain disciplines (Engineering and Technology, Management, Architecture, Pharmacy, Hotel Management and Catering Technology, Town and Country Planning, Applied Arts and Crafts) are covered under
accreditation by the NBA. Institutions interested in being accredited by the NBA need to fill up a form with necessary details about their institution or programmes.

A team comprising the chairperson and programme experts is then constituted which visits the institution and verifies the facts. The team carries out physical authentication of infrastructure facilities, records, interviews faculty, staff, students, alumni, industry, and any other activity deemed necessary, and ensures transparency. The parameters on which accreditation is done and their respective weights are shown in Table below. These eight criteria carry a sum total of 1,000 points, with a minimum of 600 points required to qualify for accreditation. The accreditation is ‘yes’ or ‘no’ type.

Any institution scoring a sum total greater than 600 points but less than 750 gets a provisional accreditation valid only for two years. If the institution or the programme gets 750 or more and meets all qualifying criteria mentioned in the table, then it gets an accreditation for five years from NBA. The NBA accreditation is voluntary for institutions, and in May 2009 only 3,274 out of 6,040 eligible undergraduate engineering programmes got accredited.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Weights for Undergraduate College (per cent)</th>
<th>Weights for Diploma (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation and Governance</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Financial Resources, Allocation and Utilization</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Physical Resources</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Human Resources including Faculty and Staff</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Human Resource of Students</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
The process of accreditation by NBA goes through the following stages:

- Institutions acquire the manual of accreditation and application forms;
- Institution responds to the two part application form (self-study);
- NBA secretariat scrutinizes the request and constitutes the accreditation team;
- Accreditation team visits the institution and makes recommendations (peer team visit);
- The sectoral committee considers the recommendations and the results are placed before the Executive Committee of the AICTE for approval.

2.11.3 ICAR Model

The Indian Council of Agricultural Research (ICAR) established an Accreditation Board (AB) in 1996 to accredit higher education institutions and programmes in different branches of agriculture and allied sciences, including Agricultural Engineering and Veterinary Sciences. For the ICAR-AB, “accreditation is a process of assuring acceptable quality and a tool for improving educational standards” (ICAR, 2002). Accreditation is a three-tier system at ICAR covering university, college and individual programmes and departments. The accreditation process follows a four-step process:

- Institutions submit a detailed self-study report mentioning how the institution meets the criteria of accreditation;
- Peer team visits the institution to examine and validate the self-study report;
- Peer team submits a detailed report with recommendation to the AB; and
- Final decision on the accreditation is taken by the AB.
The peer team recommendations and the outcomes of the accreditation process are in the form of categorical information: full and unconditional accreditation; provisional accreditation with conditions and advice; and denial of accreditation. Re-accreditation is done after an interval of 5-10 years, and the initial accreditation is done only after completion of one batch of students. Though accreditation is criteria-based, no specific score is given, and the AB takes a final view on the status of accreditation based on the peer team report, response of the institution, and review by AB secretariat. The criteria used by ICAR-AB are as follows (ICAR, 2002):

Criterion 1: *The institution has clear and publicly stated objectives consistent with its mission and goals*

Criterion 2: *The institution has organized effectively human, financial and physical resources, necessary to accomplish its objectives.*

Criterion 3: *The institution is accomplishing its educational objectives.*

Criterion 4: *The institution can continue to accomplish its objectives and improve its quality of educational programmes and effectiveness.*

### 2.12 Measuring Service Quality in Other Sectors

In order to get a better insight into the concept of measurement of service quality, few studies in other industries were also reviewed. This section helped in the process of conceptualization of service quality and development of research framework for this study.
<table>
<thead>
<tr>
<th>Research Studies</th>
<th>Sectors</th>
<th>Methodology</th>
<th>Analysis tools</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shirshendu Ganguli, 2008</td>
<td>Indian Cellular services</td>
<td>32 service related variables, survey, 238 sample</td>
<td>Factor analysis, Discriminant analysis( two groups- satisfied and unsatisfied customers)</td>
<td>7 factors were extracted; most of the service related factors and demographic and usage related variables were able to discriminate between satisfied and unsatisfied customers</td>
</tr>
<tr>
<td>Ekiz, E.H. and Bavik, A., 2008</td>
<td>Car rental services</td>
<td>First stage-49 items, questionnaire survey, 213 sample; 2nd stage- 24 items, 726 sample</td>
<td>Exploratory factor analysis, Confirmatory factor analysis</td>
<td>18 item RENTQUAL scale with six factors comfort, delivery, safety, handing over, ergonomics ( $X^2=568.68, p=0.00$, CFI=0.94, AGFI=0.89, RMSEA=0.072)</td>
</tr>
<tr>
<td>R Vandamme and J. Leunis, 1993</td>
<td>Health care sector</td>
<td>28 item scale, questionnaire survey, 70 patients</td>
<td>Reliability analysis, factor analysis, multiple regression and one-way ANNOVA</td>
<td>Six factors were extracted explaining 67% of the total variance</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Sector</td>
<td>Methodology</td>
<td>Analysis</td>
<td>Findings</td>
</tr>
<tr>
<td>----------------------------------</td>
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<td>-----------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Suzana Markovic, 2004</td>
<td>Hotel industry</td>
<td>Adapted SERVQUAL scale, self administered questionnaire, 401 sample</td>
<td>Two sample t-test, one-way ANOVA, factor Analysis-separately for expectations(SERVEXP) and perceptions(SERVPERC) and reliability Analysis</td>
<td>Principal Component Analysis with Varimax rotation resulted in 3 factors on the SERVEXP scale and 3 factors on the SERVPERC scale. The coefficient alpha values for SERVEXP scale and SERVPERC were 0.9640 and 0.9388 respectively.</td>
</tr>
<tr>
<td>Tyran, C. K. and Ross, S. C., 2006</td>
<td>Academic Advising Support System</td>
<td>Adapted SERVQUAL, Survey, 110 students</td>
<td>Factor Analysis-Principal Axis Factoring, oblique Rotation, paired sample t test</td>
<td>Three Factor structure was obtained- Information Resources, Reliability/Responsiveness and Knowledge/Empathy. Actual service quality was found to be significantly below the expected service quality.</td>
</tr>
<tr>
<td>Seth, A.; Momaya, K. and Gupta H. M., 2008</td>
<td>Cellular Mobile Service Sector</td>
<td>31 item scale, survey, 225 responses</td>
<td>Reliability Analysis, Factor analysis Regression</td>
<td>Seven dimensional 30-item scale was developed, Regression model of overall service quality with service quality dimensions</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Type</td>
<td>Adapting</td>
<td>Method</td>
<td>Sample Size</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>---------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>Darren Lee-Ross, 2008</td>
<td>Retail (mart-type stores, banks, restaurants)</td>
<td>Adapted SERVQUAL, Questionnaire survey, 782 customers</td>
<td>Reliability analysis, Factor analysis</td>
<td>Proposed five-factor structure of service quality was roundly unsupported. Two-factor structure for restaurants and mart, three-factor structure for banks</td>
</tr>
<tr>
<td>Chavadi C. A. and Kokatnur, S. S., 2008</td>
<td>Fast food outlets</td>
<td>Adapted SERVQUAL, survey, 125 responses</td>
<td>Descriptive statistics, Chi-square</td>
<td>Highest gap exist for assurance and empathy, Association between age and preference is proved (p&lt;0.05)</td>
</tr>
<tr>
<td>Chang, D. et al, 2002</td>
<td>Airline</td>
<td>22 SERVQUAL and 8 additional items; survey; 643 sample</td>
<td>T-test</td>
<td>SERVQUAL scale was identified as more appropriate measure in comparison to SERVPERF scale</td>
</tr>
<tr>
<td>Singhla, V. and Singh, A. I., 2008</td>
<td>Hotel Industry</td>
<td>36-item scale, survey, 70 sample</td>
<td>Factor analysis, t test</td>
<td>7 dimensions were identified, tangibility and responsiveness are considered most important dimensions.</td>
</tr>
</tbody>
</table>

### 2.13 Gap Analysis as a Service Quality analysis tool for Higher education

In business and economics, gap analysis is a tool that helps an organization to compare its actual performance with its potential performance. At its core are two questions: "Where are we?" and "Where do we want to be?" If the organization is not making the best use of
its current resources or is forgoing investment in capital or intellectual assets, then it may be performing at a level below its potential. The goal of gap analysis is to provide the organization with insight into areas which could be improved.

In Management higher education, Student Satisfaction (Quality of service which is being delivery to students) is a function of the gap between expected service and perceived service.

\[
\text{Student Satisfaction} = \text{Gap (Perceived - Expected)}
\]

Key is to minimize the gap

2.13.1 Understanding Gap Model in Management Education

GAP model analysis of quality, developed by Zeithaml, Bitner, and Parasuraman of USA (1988), can be better utilized in order to have introspection and to diagnose the syndromes that the Indian higher education system has been suffering from, and to suggest remedial measures and strategies for preventing or minimizing the specific syndromes, and for revamping the various strategic elements of system. This entire article is structured around this model. The actors that are noted in its original model are named differently for our purpose in this article. The student is substituted for a customer (service taker), while the university/management institutes is substituted for a marketer (service provider).
The basic objective of the management institute is to develop the strategies in such a way that it can influence the student’s expectations and perceptions so that all the four gaps that take place due to differences in expectations and perceptions can be filled up. Let us diagnose the specific causes for each of the gaps.

**University/Institute Gap - 1:** Services expected by students minus institutes’ perception of student’s expectations.

Causes for Gap-1: Inadequate research on market research on what the student, and industry need and want from the management institute. Insufficient communication between students and professors, professors and administrators, and students and administrators.
**University/Institute Gap - 2:** University’s perceptions of student’s expectations minus student-driven service designs and standards.

Causes for Gap-2: Lack of student-driven service standards. Absence of process (delivery of services) management to focus on student requirements. Inadequate administration commitment towards the services.

**University/Institute Gap - 3:** Student-driven service designs minus service delivery.

Causes for Gap-3: Ineffective recruitment and selection of professors and non teaching staff. Role ambiguity and role conflict among professors. Lack of empowerment, teamwork, collaborative research, etc.

**University/Institute Gap - 4:** Service delivery minus external communications to students.

Causes for Gap-4: Ineffective CRM to manage students’ expectations about services from the universities. Failure to educate students about their roles and responsibilities. Over or under promising about the quality of education (placements, teaching) through cues for physical evidence. Differences in the policies and procedures (structure of syllabi, examination schedules and model papers, infrastructural facilities).

**Student Gap - 5:** Student’s expectations of service minus student’s perceptions of service.

Causes for Gap-5: The first impression that the students get while interacting with the administration and professors over phone or in person during admission in to the institute campus. Response of professors and staff (employees) to their failure in service delivery; to student needs and requests; to problematic students; and spontaneity in delivering memorably good or poor service to students. Student assessment of service quality
dimensions, such as reliability, responsiveness, assurance, empathy, and tangibles of institute education.

**Introducing Action and Performance Gap**

Gap-5 (another name is Student Gap) is the Student’s expectations of service minus student’s perceptions of service. Many of the times, students are having more initial expectations. Another side, the particular institute is also ready to provide everything to their students which are best in the industry in order to improve their holistic personality. But, still the gap remains which is the same as student gap. The reason behind the existence of this gap is, the students have not taken the right action over the time-period they spent inside the institute. It shows further that a student Gap (Gap-5) is a mix of two different gaps, known as Action Gap and Performance Gap. Action Gap is the difference between Students' initial expectations minus expectation after taking required action. Whereas, the performance gap is the difference between the perceived value and the expectation after taking required action.

**Figure 2.4 Action & Performance GAPS**

[Diagram showing Introducing Action & Performance Gaps in GAP-5]

\[
\text{GAP-5} = \text{Action Gap} + \text{Performance Gap}
\]
Origin of Expectation

Young people’s attitudes towards higher education are shaped by interwoven psychosocial, socioeconomic, and personal factors. Carpenter and Western (1984) have hypothesized a causal ordering of the variables influencing student choice and opportunities for access to higher education:

- Social origins (sex, parental occupation, geographical location, perceived family income, area, wealth);
- Schooling (type of school, interest in school);
- Influence of significant others (perception of parental influence, perception of teacher influence, friends’ plans);
- Academic self-assessment (opinion of own academic ability, perceived utility of education for later life);
- Educational aspirations (plans for education beyond Year 12); and
- Academic achievement (final school academic results).

Drawing on these ideas, the conceptual framework for the present research presupposed that decisions about education are influenced by a complex range of interrelated factors including family expectations and support, the range and level of local employment opportunities, perceptions of one’s abilities and talents, degree of familiarity with the educational system.

Weight-age of Expectation

Overall, there is a widespread belief among young people that tertiary education provides valuable career outcomes. Most students often indicated they saw value in tertiary study, even those who were intending to commence work after school. Vocational education and training is a lower priority than higher education—going to university is the dominant preference among young people. The students who are definitely planning to
enroll at university share strong vocational or career motives. They report improving job prospects and opportunities for interesting and rewarding careers as the dominant factor in their thinking.

**Action and Performance Gap Measurement**

Action Gap can be caused by any one of the following reasons.

- Lack of strong communication knowledge specially English
- Lack of subject knowledge and contents, like a student in IT background doing PGDM course in Finance
- Lack of proper self-motivation & Lack of proper guidelines
- Lacking in proper time management
- Not making the proper time-table and just trying to finish multi-tasking work.

### 2.14 Search for a Uniform Measurement Scale in Management Higher Education

There is an extensive amount of literature pertaining to the search for a general scale and instrument for the measurement of service quality in all or a number of distinct groups of service contexts (Aldridge and Rowley, 1998). Furthermore, Seth *et al.* (2005, p. 933) state that:

“There does not seem to be a well-accepted conceptual definition and model of service quality nor is there any generally accepted operation definition of how to measure service quality.”

Although measurement scales such as SERVQUAL and SERVPERF were designed as generic measures of service quality, it is important to view these instruments as the basic platforms, which often require modification to fit the specific situation (Abdullah, 2006a). More specifically, higher education institutions must focus their attention on the dimensions perceived to be important rather than focusing on a number of different
attributes (Abduallah, 2006a). However, the approach of attempting to determine what students perceive to be the important dimensions through the use of surveys is questionable. According to Gruber et al. (2010), many existing surveys are poorly designed, lack standardization and give no evidence concerning reliability or validity. Therefore, it is inevitable that problems pertaining to the reliability and validity will arise when developing an instrument (e.g. the HEdPERF model) that attempts to capture and model the complex and multifaceted nature of service quality (Hill, 1995). More sophisticated approaches to the construct of service quality within the service encounter are required (Svensson, 2006). Abdullah (2006a) suggests that it may be time to bury the existing instruments and attempt to reconstruct or redefine service quality from a new and different perspective. However, instead of trying to generalise and attempt to model service quality for a particular sector (e.g. higher education), Sultan and Wong (2010) see service quality as a contextual issue since its dimensions vary widely. Therefore, it could be more worthwhile to investigate service quality based entirely on the situation at hand, since findings may vary from one situation to the next. Carrillat et al. (2007) support this view suggesting that the measurement of service quality should be adapted to context of each study. Customers do not perceive quality in a one-dimensional way but rather judge quality based on multiple factors relevant to the context (Zeithaml et al., 2009).

2.15 Service Quality dimensions in Management Higher Education

The service attributes contributing more towards customer satisfaction may vary from service to service depending on its nature and scope. Different dimensions of service quality are used for different industries. However, there are some similarities on the chosen dimensions. Many authors have developed service quality dimensions according to their customers preferences in various service industries. Researchers agree that there is no single dimension which can be applicable for all the service sectors (Carman, 1990, Cronin and Taylor, 1994). They also agree that customers must be the determinant of
service quality dimensions rather than the management (Parasuraman, 1985; Cronin and Taylor, 1994; Carman, 1990; Lee et al, 2000).

Developing a service quality model to measure the students perception is a very complex and tedious task because the service quality dimensions cover many aspects and therefore it is not possible to cover all (Hadikoemoro 2002). Due to this reason, the researchers have included only those important dimensions in the survey which matters most. A summary of various studies conducted for development of measurement scale for service quality with list of dimensions considered is presented below in table below.

**Table 2.5 Summary of various studies conducted for development of Service Quality measurement scale**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Author</th>
<th>Dimensions</th>
</tr>
</thead>
</table>
| 1       | Gronroos (1988) | • Professionalism and skill  
|         |        | • Attitudes and behaviour  
|         |        | • Access and flexibility  
|         |        | • Reliability and trustworthiness  
|         |        | • Recovery  
|         |        | • Reputation and credibility |
| 2       | Gronroos (1990) | • Technical Quality  
|         |        | • Functional Quality  
|         |        | • Corporate Image |
| 3       | Lehtinen and Lehtinen (1991) | • Physical Quality  
|         |        | • Interactive Quality  
|         |        | • Corporate Quality |
| 4       | Parasuraman et. al. 1991 Service Quality Model (SERVQUAL) | • Reliability  
|         |        | • Responsiveness  
|         |        | • Competence  
|         |        | • Access  
|         |        | • Courtesy  
|         |        | • Communication  
|         |        | • Credibility  
|         |        | • Security  
|         |        | • Understanding the customer  
<p>|         |        | • Tangibles |</p>
<table>
<thead>
<tr>
<th></th>
<th>Source</th>
<th>Dimensions</th>
</tr>
</thead>
</table>
| 5  | Parasuraman and Berry, 1991; Zeithaml et al, 1990 Service Quality Model (SERVQUAL) | - Tangibles  
- Reliability  
- Responsiveness  
- Assurance  
- Empathy |
| 6  | Cronin and Taylor, 1992 Performance Only; Service Quality Performance Model (SERVPERF) | - Tangibles  
- Reliability  
- Responsiveness  
- Assurance  
- Empathy |
| 7  | R. K. Teas, 1993; Normed Quality Model (NQ) | Revised Expectation and Performance of PZB SERVQUAL model. |
| 8  | Carney (1994) | - Student Qualification (Academic)  
- Student Qualities (Personal)  
- Faculty-Student Interaction  
- Quality Instruction (Faculty)  
- Variety of Courses  
- Academic Reputation  
- Class Size  
- Career Preparation  
- Athletic Programs  
- Student Activities (Social Life)  
- Community Service  
- Facilities and Equipment  
- Location  
- Physical Appearance (Campus)  
- On Campus Residence  
- Friendly and Caring Atmosphere  
- Religious Atmosphere  
- Safe Campus  
- Cost/Financial Aid |
| 9  | Owlia and Aspinwall (1996) | - **Tangibles:** Sufficient equipment/facilities, modern equipment/facilities, ease of access, visually appealing environment, support services (accommodation, sports)  
- **Competence:** Sufficient (academic) staff, theoretical knowledge, qualifications; practical |
| 10 | Ho and Wearn, 1996, Higher education TQM model of excellence; (HETQMEX) | Leadership  
Commitment  
Total customer satisfaction  
Total involvement  
Training education  
Ownership of problem  
Reward and recognition  
Error prevention and  
Teamwork |
| 11 | Athiyaman (1997) | Teaching Students Well  
Availability of Staff for Student Consultation  
Library Services  
Computing Facilities  
Recreational Facilities  
Class Size  
Level and Difficulty of Subject Content  
Student Workload |
| 12 | Lee et al (2000) | Overall impression of the university/institute  
Overall impression of the education quality |
| 13 | Hadikoemoro (2002) | Academic Services  
Readiness and Attentiveness  
Fair and Impartial |

- **Attitude:** Understanding students need, willingness to help, availability for guidance and advisory, giving personal attention, emotion, courtesy.
- **Content:** Relevance of curriculum to the future jobs of students, effectiveness, containing primary knowledge skills, completeness, use of computer, communication skills and team working, flexibility of knowledge, being cross-disciplinary.
- **Delivery:** Effective presentation, sequencing, timeliness, consistency, fairness of examinations; feedback from students, encouraging students.
- **Reliability:** Trustworthiness, giving valid award, keeping promises, match to the goals, handling complaints and solving problems.
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<tr>
<td>14</td>
<td>Sangeeta et al. (2004)</td>
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<td></td>
<td><strong>Tangible</strong></td>
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<td><strong>General Attitudes</strong></td>
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<td><strong>Competence:</strong> Appropriate physical facilities/infrastructure, faculty’s expertise, faculty’s teaching ability and skills, sufficient faculty/support staff</td>
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<td><strong>Attitude:</strong> Effective problem solving, orientation towards achievement, healthy competitive and collegial environment</td>
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<td><strong>Content:</strong> Learn to apply, clarity of course objectives, relevance of curriculum to future needs, flexibility of knowledge being cross disciplinary</td>
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<td><strong>Delivery:</strong> Ease of contract/access to teachers and administrative staff, effective classroom management, adequate and appropriate classroom</td>
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<td><strong>Reliability:</strong> Clearly specified values and aims, consistency of practice, clearly specified policies/guidelines, fairly and firmly-enforced rules and regulations, adherence to course objectives.</td>
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<td>15</td>
<td>Brooks (2005)</td>
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<td><strong>Reputation,</strong></td>
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<td><strong>Faculty Research Productivity</strong></td>
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<td><strong>Student Educational Experiences and Outcomes</strong></td>
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<td><strong>Program Characteristics:</strong> Counts of degree issued, financial support, fellowship grant support, teaching assistantship</td>
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<td><strong>Program Effectiveness:</strong> Timeline of their programme, proportion of students, completing their intended degree programme,</td>
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<td><strong>Student Satisfaction:</strong> Classroom, co-curricular activities, interaction with faculty and peers, instructions, campus life and</td>
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<td><strong>Student Outcome:</strong> Assessment of learning and career outcomes of educational programs</td>
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<td>16</td>
<td>Firdaus Abdullah (2006); Higher education performance model; (HEdPERF)</td>
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<td><strong>Academic aspect</strong></td>
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<td><strong>Non academic aspect</strong></td>
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<td>17</td>
<td>Voon (2006); Service driven market orientation model; (SERVMO)</td>
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<td>18</td>
<td>Landrum et. al. (2008); Service quality and information system success model (SERVCESS)</td>
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<td>19</td>
<td>Sangeeta Sahney (2010) Application of QFD on SERVQUAL</td>
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2.16 Chapter Summary

This chapter presented the relevant literature regarding the conceptualization and measurement of service quality, and the relationship of service quality to related constructs such as satisfaction and behavioural intentions. This chapter critiques measurement scales used to measure service quality and served as the foundation for the development of the conceptual model proposed in this thesis.

The chapter has reviewed the literature regarding the nature of services, the construct of service quality and the measurement of service quality. In summary, it has been acknowledged that the construct of service quality is complex and multi-faceted in nature, making it increasingly difficult to measure. It has also been established that confining the measurement of service quality to its particular context could be more useful than using a generic methodology (e.g. SERVQUAL). A review of the literature has uncovered a gap that this research attempts to address. It is evident that service quality is deemed an ‘elusive’ and ‘indistinct’ construct by many authors (Bolton and Drew, 1991; Carman, 1990; Cronin and Taylor, 1992; Parasuraman et al., 1988). Furthermore, there appears to be no definitive instrument that accurately measures service quality (Clewes, 2003), since many measurement instruments tend to be generic and subject to various criticisms in terms of their reliability and validity. Accordingly, Abdullah (2006a) suggests that measuring service quality using existing instruments is inadequate and that there is a need to explore service quality from new perspectives. In consideration of these issues, a gap exists to conduct research that investigates students’ perceptions of services quality, using quantitative techniques applicable to the study context, in order to identify gaps and develop scale for management higher education in Gujarat.