Service Quality Evaluation Under Bi-directional Perspective: An Initial Survey and Opportunities for Investigation

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ABSTRACT

Service quality is very important to improve competitive advantage of industrial organizations. This paper presents a summary on some research gaps within current service quality measurement models and explores the possibility to extend study on interactive service quality arena. The content of the paper is commenced by preliminary literature review to previous works related to service quality measurement models, interactive service quality, some observable gaps on interactive service quality measurement models. At conclusion, some directions for further studies are presented.

1. INTRODUCTION

Globalization, advancement of Information Technology, and the growing importance of service sector in enhancing global Gross Domestic Bruto (GDP) are some factors which become drivers to manage service sector as a fertile area for exploration. In line with that reality, studies in measuring quality of service provision are also continuously rising. Although service quality is old terminology in literature, as quality of service will still become key factor in gaining enterprises objective(s) as (Saravanan and Rao, 2007) noticed, it is worth to dig more inside measuring service quality issues. Seth, Deskhmuh, and Vrat (2005) presented their work on reviewing papers on the issue of quality service measurement. It seemed that their work only focusing on the view on quality of service based on uni-directional perspective. The reality that during service provision, bi-directional relationship and the interactions among service customer, producer, and service enabling equipment are occurred is overlooked. Based on this insufficiency, the authors in this work will propose some new perspectives in extending research of interactive service quality issue. The structure of this paper is given as follows: in section II, the rational to investigate interactive service quality issue is given. Section III relates with initial survey to the status of interactive service quality topic. Some observable gaps from our survey are given in section IV. Conclusion from our study is given in section V.

II. SERVICE QUALITY MODEL

Linguistically, the word 'service' comes from the Latin word "servitium "means to slave. A definition of "service "is an economic activity that does not result in ownership and create benefits to customer. The service as an economic activity can be characterized by distinct features such as: intangibility, perish ability, simultaneousity, variability and interactivity. Service quality is defined as the effort given by organization(s) in order to meet and satisfy the expectation and requirement which desired by customer. Service quality provides a key competitive differentiation in the attempt to raise profitability. In order to fulfill or exceed customer expectation to service quality, service quality determinant must be identified as basis for service quality improvement.

In making business between service customer(s) and producer(s), customer (s) can also act as service co-producer (Sampson, 2000, Shahin 2010). This phenomenon is called bi-directional relationship and brings theoretical and managerial implication in measuring quality of service. This kind of relationship implies that endeavor to measure quality of service shall be viewed from both service producer and consumers' perspective. Under bi-directionality relationship, both parties rely on mutual win-win principle of relationship. Unbalance service quality provision from each party, will make imbalance service quality perception and unexpected reactions that in turn, will lead into dissatisfaction and ruining business relationship.

Among 19 service quality models available in service literature as summarized by Seth,Deskhmuh and Vrat (2005) and extended by Martinez and Martinez (2009), all are seemed still based on uni-directional perspective and non interactive – oriented. The construction of service quality model which based on interactive and bi-directional relationship is still scanty (Svensson, 2003); Svensson, 2004). Investigating interactive service quality topic is worthy for study due to some factors as below:

- During interaction, the power of economics and

social interaction are also influencing the outcome of service provision; therefore construction of service quality model should be based on multi dimensional service quality attributes namely: technical, social, and economical dimensions (Holmlund, 2008).

- Beside five (5) dimensions of service quality as known from The PZB theory, there are various dimensions should be considered during interactive service quality. Those dimensions are such as: regret, disgust, variability (Cronin, 2003).
- The measurement techniques should consider both the service provider's and service receiver's perspectives.
- From managerial perspective, when the products sold are the same, the only differentiation factors that lead into purchasing intention are on relational or social aspects of service provision.

2.1. Literature Review: the State of Art of service Quality Model under Interactive and bi-directional Relationship

Svensson (2001) proposed a method, called t*he perceptual bi-directionality method (PBD-method)* to measure service quality under influence of bi-directional relationship between service producers and costumers. The PBD method is constructed from three components; Balance of Perceptual bi-directionality (BPB), the level of perceptual bi-directionality (LPB), and the quality of bi-directionality (QPB). During empirical testing, for adaptability and ease of use, he changed the term PBD into QSQ (quality of bi-directional service quality), with its additional concepts; the balance of bi-directional service quality (BSQ), the level of bi-directional service quality (LSQ), the quality of bi-directional service quality (QSQ). From empirical testing by using service quality dimensions from the PZB theory of Parasuraman, Zeithaml, and Berry (1988), it was found that the QSQ could showed the hierarchical magnitude of service quality deficiencies among five SERVQUAL's attribute from each of features of BSQ, LSQ, and QSQ from dyadic environment. From managerial perspective, the result of QSQ techniques can help management to map and trace the source of quality deficiencies under bi-directional relationship.

Svensson (2002) extended application of his PDB theory into triadic network environment. By using SERQUAL dimensions, he tested the applicability of the PDB theory in revealing service quality deficiencies under triadic network environment. The result confirmed with his earlier study that the concept of PBD enable to reveal level of service quality deficiencies from each features of Triadic Network. Svensson (2003) presented that most devotions to construct model of service quality is based on uni-directional, non interactive – oriented, and lack of research that addressed the construct of service quality as based on multiple perspective and interactive –oriented. He proposed framework of interactive service quality at service encounters that consist of three parts: the service continuum; the service cycles, and interactivity model of service continuum and service cycle.

Svensson (2004) tested the conceptual model of interactive service quality by adopted case study in automotive sector in Sweden. He used the SERVQUAL quality dimensions and 6 times tested the difference of the results using univariate and bivariate statistical approaches. The result of his empirical study showed the existence of variations on the magnitude of service quality measures from each of SERVQUAL based - interactive quality measures. His work also proposed conceptual model of the gap of interactive service quality, the see-saw model of service quality, and hierarchy of interactive service quality.

Svensson (2006a) described the progress of service quality models development according to timeline perspective. He noted that most of studies are non- interactive oriented (i.e mostly based upon one perspective, the service customer). He suggested that future studies related to develop service quality models should be interactive based and networks - oriented.

Svensson (2006b) revealed another unexplored aspect of interactive service quality, the actual behavior and actions taking place as part of service quality - the between service receiver(s) and service provider(s), and the enabling service equipment(s). Traditional service quality model viewed only on expectation and perception between service customer(s) and service producer(s). The dynamics of actual happenings on service encounters are neglected. The ignorance to this feature will make service quality decision maker(s) at service encounter failed to uncover the cause of faulty service occurrence.

Svensson (2006b) also revealed that interface service quality in service encounters consists of generic sub-components, namely: tangibles, intangibles, and outcome. At conclusion, he pursued other researchers to explore his conceptual frameworks to measure service quality at various interfaces into practice.

Woo and Enew (2005) argued that attempt to measure interactive service quality should consider multidimensionality of interactive service quality. Their works revealed some interactive dimensions such as: product/service exchange, information exchange, financial exchange, institutionalization, and adaptation. Their empirical study showed that those six interaction dimensions can capture the basic of interactive service quality and informed that different interactive service

encounters will have different priorities of perceived service quality.

The study of Zoelkoewski *et al.* (2007) answered the crucial questions in interactive environment; which service quality dimensions are applicable - under business to business to business (B2B) relationship?, which of those dimensions are new from the previously model found on literature? Their study revealed that under influenced of interactive service, both service customer and service provider has the different perception on service quality.

Bolton and Iyer (2009) presented that depend on the role of service customer's behavior, whether behave as service co-producer or service co-creation, this different role has certain influence to identify method to measure service quality.

III. SOME OBSERVABLE GAPS FROM PREVIOUS WORKS

Having studied to some selected papers above, in our opinion, it is apparent that previous related works still possess some gaps as below:

a. The works of Svensson (2001, 2002) in measuring service quality under bi-directional relationship are only limited under dyadic and triadic environment and also excluded some recent observable service quality dimensions such as regret, disgust and resistance as suggested by (Cronin, 2003).
b. The concept of measuring quality of service under influence of various interfaces interactive quality as presented by Svensson (2006b) is still in its conceptual stage and need further work by empirical studies. In this case, the proposal on structural model that linking the "physics" of service customer, provider, and service enabling equipments and its associate rule in estimating the behavior between those entities will be worthy for next studies.
c. Based on the selected literature on the issue of interactive and bi-directional relationship service quality, it is observable that the work which integrate endeavor to construct quality of service model that consider both bi-directional and interactive service process is still vacant in literature.
d. As the occurrence of faulty service delivery has risk to service firm(s), it is also important to quantify the service quality loss due to faulty service provision under influence of bi-directional and interactive service. Unfortunately, to our knowledge, no literature described explicitly on how to quantify the impact of service loss to both service customer(s) and service provider(s) at encounter under influence of bi-directional and interactive service.

IV. INTERACTIVE SERVICE QUALITY: SOME NEW OPPORTUNITIES FOR FUTHER STUDY

Despite the fact that almost all everyday service provisions are interaction-based activity, based on our preliminary survey, it is obvious that the establishment of interactive service quality is still immature and warrant for further investigation. Some pointers below can become the new avenues for further study:

4.1. Utilising the concept of behavior modeling to construct the model of interactive service quality.

Behavior modeling is a technique developed based on the principle of artificial intelligence approach by the work of Eubanks,Kmenta, and Ishii (1996). It is working using the idea of some special reasoning methods in making inferential from mapping between entities. In this setting, we have to define clearly to what was meant as states: pre-condition ("what is required ') and post condition ("what is expected ") of each elements (physical entities) that enable functions to achieve the desired post-conditions. The behavior model represents a system as a causal sequence of functions and states.

By the use of behavior modeling, the user can estimate what is expected and unexpected from entities under study. In line with previous empirical study by Eubanks, Kmenta, and Ishii (1997), future research on applying the technique of behavior modeling for modeling interactive service quality will give more insights to understand the simultaneity among perception, expectation, action and reaction among service entities at encounter.

4.2. Incorporating time and some other dimensions of interactive service quality into total-interactive service quality measurement models.

During service transaction, economical and social service attributes also influence the outcome of service quality. Holmlund (2008) suggested that further research could be in the scope of measuring perception of each individual involved in relationship and considering the dynamics of service settings as input to construct interactive service quality model. Further issues such as how to use the observable outcome of interactive service provision for improving internal business process of service provider, identify which service attribute among technical, economic and social dimensions that mostly influence the customer's purchasing intention are still warrant for further investigation.

4.3. Quantifying Impact of Faulty Interactive Service Provision

One approach to make better service is by avoiding faulty service provision. But, in the case that faulty service occured, the management of service provider should seek way to minimize the impact of faulty service. FMEA is a technique that can be used to identify any potential and actual service failure mode and its effect, rank the criticality of risk of failure and determine appropriate corrective action to avoid the recurrent of service failure. Chuang (2007) proposed approaches toward failure free-service provisioning system by combining blueprinting techniques and FMEA. Chuang (2010) extended the work on applying FMEA to identify potential service failure modes, estimate the adverse effect of failure occurrence, counting the risk priority number of service failure, rank the risk of faulty service, and pursue to extend the study on quantification of the impact faulty service provision in terms of service quality cost. In this setting, development of the Taguchi Loss Function model for estimating service quality loss for both customer(s) and producer(s) will worth for further investigation.

V. Conclusion

Although almost every day service activity is interactive –oriented, the existence of a sound method to measure interactive service quality is still in its infancy. Based on our initial findings, majority of published works in previous references are merely referred to the uni-directional perspective and non interactive service provision. This paper presented reviews to selected literature on the issue of interactive service quality, identify some observable gaps, and proposed some new ideas as endeavor for further study. Regarding that our survey is using very limited references, obviously some other issues are apparently escaped from our attention, thus replication of this primitive study by using additional databases are suggested to enrich our initial findings.

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