MEASURING INTERACTIVE SERVICE QUALITY: SOME OPPORTUNITIES FOR FURTHER STUDY

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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 literature review to manuscripts 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.

Keywords: Service Quality, Interactive, Bi-directional Relationship, Behavior Modeling, Taguchi Loss Function.

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 inmeasuring quality of service provision is also continuously rising.Although service quality is old terminology in literature, as quality of service willstill become key factor in gaining enterprises objective(s) (Saravanan and Rao, 2007) it is worth to dig more inside measuring service quality issues. Seth et al (2005) presented their work on reviewing papers on the issue of quality service measurement. It seemed thattheir 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 areoccurred is overlooked. Based on this indication, the authors in this work will propose some new perspectives inextending researchof interactive service quality issue.

2. SERVICE QUALITY

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 (Wikipedia, 2009). The service as an economic activity can be characterized by distinct features such as: intangibility, perish ability, simultaneous, 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 bycustomer. 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 et al (2005) and extended by Martinez and Martinez (2009), all are 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 is worthy for study due to some factors 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).
- It needs enhanced statistical techniques to reduce data dimensionality of service quality to focus managerial attention to critical quality gaps only.
- It needs special statistical techniques for testing difference and association between perspectives to describe the interactive qualities of service quality in service encounters.
- 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 intentionare on relational or social aspects of service provision.

In this study, theauthors will start with state of the art publications in interactive service quality, bi-directional service quality, and pinpoints some gaps and at conclusion, some opportunities for further investigation will be proposed.

3. 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 et al (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. Two important questions in service encounters are:

(1) What doeseach entity do in service encounters?
(2) How do service providers and service receivers act and react in service encounters?

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 empiricalstudy 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.

4. 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 environmentand 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 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 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 describedexplicitly 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.

5. SOME NEW OPPORTUNITIES FOR FURTHER STUDY

Despite the fact that almost all everyday service provisionsare 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 be new avenues for further study:

5.1 Designing and expanding the applicability 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 Kmenta et al (1996). Behavior modeling 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 eachelements(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 Kmenta et al (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.

5.2 Incorporatetime 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)offered that further research could be in the scope of measuring perception of each individualinvolved 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.

5.3. Quantify the 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 happened, 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, the development of Taguchi Loss Function for quality service quality loss for both customer(s) and producer(s) will worth for further investigation.

6. CONCLUSION

Although almost every day service activity is interactive –oriented, however; the existence of a sound method to measure interactive quality is still in its infancy. Majority of published works merely refer to 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 on it, and proposed some new ideas as endeavor for further study.Considerin that our survey is using very limited references, replication of this study by using additional databases are suggested to enrich our initial findings.

REFERENCES

Bolton, Ruth, Shruti Saxena-Iyer (2009) Interactive Services: A Framework, Synthesis, and Research Directions. Journal of Interactive Marketing: Vol.23, pp: 91-104.

Chuang, Pao-Tiao (2007) Combaining Service Blue Print & FMEA for Service Design. The Service Industries Journal, Vol.27, No.2, pp: 91-104.

Chuang, Pao-Tiao (2010) Incorporating Disservice Analysis to Enhance Perceived Service Quality, Industrial Management & Data System Vol. 110, No.3,

Cronin, J.Joseph Jr (2003) Looking Back to See Forward in Service Marketing. Managing Service Quality Vol.13, No.5, pp :332-337.

Eubanks, Charles F., S.KMenta, K. Ishii (1996) System Behavior modeling as Basis for Advanced FMEA. Procd. Of the ASME DETC, pp: 1-8.

Eubank, Charles F., S.Kmenta, K. Ishii (1997) Advanced FMEA Using Behavior Modeling. Procd. Of ASME DETC Design Theory and Methodology, pp : 1-10.

Holmlund, Maria (2008) A Definition, Model, and Empirical Analysis of Business to Business Relationship Quality. Int.Journal of Service Industry Management Vol.19, No.1, pp: 32-62.

Martinez, J.A., and Laura Martinez (2010) Some Insights on Conceptualizing and Measuring Service Quality. Journal of Retailing and Consumer Service Vol.17, No.1, pp: 29-42.

Parasuraman, A., Zeuthm, V.A., andBery, L.L. (1988) SERVQUAL: aMultiple – Item Scale for Measuring Customer Perceptions of Service Quality. Journal of Retailing, Vol.64, pp: 2 – 40.

Seth, Nitin, S.G. Deskmuh, and PremVrat (2005) Service Quality Models: A Review. International Journal of Quality and Reliability Management, Vol.22, No.9, pp : 913-949.

Shahin, Arash (2010) SSCM: Service Supply Chain Management. International Journal of Logistics System and Management Vol. 6, No.1, pp: 60 - 75.

Saravanan, R., K.S.P Rao (2007) Development and Validation of an Instrument for measuring Total Quality Service. Total Quality Management &

Business Excellence, Vol.17, No.6, pp: 733 – 749.

Sampson, Scott E (2000) Customer-Supplier Duality and Bi-directional Supply Chains in Service Organizations, International Journal of service Industry Management vol. 11, No.4, pp : 348-364.

Svensson, Goran (2001) The Quality of Bi-directional Service Quality in Dyadic Service Encounters. Journal of Service Marketing Vol.15, No.5, pp: 357-378.

Svensson, Goran (2002) a Triadic Network Approach to Service Quality. Journal of Service Marketing Vol.16, No.2, pp: 158-179.

Svenson, Goran (2003) A Generic Conceptual Framework of Interactive Service Quality. Managing Service Quality Vol.13, No.4, pp: 267-275.

Svensson,Goran (2004) Triadic Dependencies in Business Network. European Journal of Business Review Vol.16, No. 5, pp: 473-493.

Svensson, Goran (2006a) The Interactive Interface of Service Quality: A conceptual Framework. European Business Review, Vol. 18, No.3, pp: 243-257.

Svensson, Goran (2006b) New Aspect of Research into Service Encounters and Service Quality. International Journal of Service Industry Management Vol.17, No.3, pp: 245 – 257.

Woo, Ka-Shing., Christine T.Ennew (2005) Measuring Business to Business Professional Service Quality and Its Consequences. Journal of Business Research, Vol.58, No.9, pp: 1178-1185.

Zolkiewsky,Judy., Barbara Lewis, F.Yuan, and Jing Yuan (2007) An Assessment of Customer Service in Business to Business Relationship. Journal of Service Marketing, Vol.21, No.5, pp: 313-317.