

A Framework of Sector-Specific Service Characteristics

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***Abstract-* Compare to the manufacturing sector, managing quality in the service sector is sometimes more an art form rather than a scientific process. Due to the intangibility of the service product and the real-time participation of the customer in the production of the service, design of services not only requires good service standards and service procedures, it also requires tactful skills from the service operator and necessary real-time adjustments to suit specific needs of the customer in attendance.**

In this research, a study on the nature of service characteristics in various major service industries was carried out. These service industries include telecommunications, retail, banking, food & beverage, and public transport. The study involved a field survey on consumers in these service sectors. The research outcomes will hopefully provide an understanding of service output characteristics that are important to consumers. This understanding will support service productivity, service innovations and service automation, which are important attributes of a service science culture.

I. INTRODUCTION

The service sector is fast becoming the main driver of the economy. In the era of globalization, manufacturing jobs could be shifted to low-wage countries but the majority of front-end service jobs will remain for the simple fact that service is consumed at the point of “production,” thus it cannot be packaged somewhere else and be delivered here. However, having said that service jobs are here to stay, the business organization that is offering the services must still remain viable and competitive, and be able to attract and retain customers.

Singapore is promoting the service sector as a long-term competitive hub, not just for domestic consumption but also as a regional service hub with the aim of attracting millions of tourists and business travelers to the country. With this ambition, many industries within the sector are facing intense competition from within the country and from regional areas. Service industries such as retail, food and beverage, hospitality, banking, and telecommunications all faced regional competition.

Besides private businesses having the need to provide excellent service to local consumers and tourists, the need to provide excellent service in public domains such as public transport and public healthcare are equally important. All said, excellent service inherently creates a positive impact on

gracious living, harmonious human interactions, pleasant social environment, which in turn enhances the quality of living for everyone.

For the service sector to remain competitive, cost effectiveness and efficiency are not the only key concerns. In the long term, attracting and retaining customers in the service sector requires consistent provision of quality service. In today’s environment, providing good quality service to customers is akin to ensuring that the customer has a good experience when using the service. Some researchers in the service quality area have coined the term “experience economy” instead of just service economy to highlight the importance of customer experience when delivering a service.

Providing a good customer experience will lead to customer satisfaction. Customer satisfaction could lead to higher profitability for the organizations as they are then able to generate repeat visits, attract new customers and adds a premium to the price. The generalizations of models that service industries used in providing a good customer experience and the methods used to cultivate customer satisfaction are important research initiatives within the service science discipline.

II. RESEARCH BACKGROUND

In a globalized and competitive consumer market, quality is an important determinant of sustainable success for any businesses. However, it is more like a moving construct that requires constant endorsement. What is considered as good quality today may be just acceptable norm in the near future. As society progresses, the expectations of the customers also increase. Takeuchi, Hirotsuka and John A. Quelch pointed out that the concept of quality and its criteria are not easily articulated [1].

Over the past few decades, a few prominent quality experts have attempted to define quality. Juran’s definition of quality is fitness for use as judged by the customer, “fitness for use, as judged by the user” [2]. Crosby’s advocated the nurturing of a quality culture in organisations. Crosby stated that the involvement of everyone in the organisation in the quality improvement process with a top-down driven process is critical to sustain quality [3]. Deming define quality as been able to achieve a degree of uniformity and dependability at a

cost suited to the market. He advocates the reduction in output variations through process improvements. Deming emphasized continual improvement and measurement [4]. Taguchi derived a loss function, which computes the cost of any deviation from the design target as an economic loss that someone will eventually have to pay [5].

Although most of the quality experts related their quality definitions to products, the concept could easily be related to services too. The main difference between product and service quality is that products are tangible while services are intangible to the customers, and the determination of product quality is instituted way in advance of actual product usage while the derivation of service quality is usually at the point of service consumption. Technically, no rework can be done if the service quality fails to meet target. As service quality is derived in the presence of the customer, it makes the good service quality hard to define.

Service quality is a function of customer actual experience and their perceptions of how well the service has met their expectations. Berry et. al. mentioned that organizations that do not perform expected service for customers are not delivering quality service, no matter how skilfully they do them [6]. Gronroos has proposed that two types of service quality existed; technical quality, which involves what the customer is experiencing from the service, and functional quality, which relates to how the service is delivered [7]. Lehtinen's premise is that service quality is derived when interaction occurs between a customer and the service process. There are three quality dimensions: physical quality, which includes the physical aspects of the service (e.g. equipment or physical environment); corporate quality, which involves the company's image; and interactive quality, which is derived from the interaction between front line service staff and customers [8].

One of the most often used criteria for service quality were those proposed by Zeithaml, Parasuraman and Berry in their seminal work [9]. They identified ten dimensions of service quality; reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customers, and tangibles.

III. THE RESEARCH APPROACH

The research objective is to evaluate the importance as well as the experience that customers attached to various service quality characteristics in relation to different services used by customers.

For the first research objective, ten service quality characteristics were chosen as measures for the project. The 10 characteristics are reliability, knowledge, promptness, attitude, communication, accessibility & availability, safety, trustworthiness, consistency and facilities & equipment.

These service quality characteristics are based on the ServQual model [10].

Survey questionnaire was used to operationalize these characteristics and to collect measurements. The survey questionnaire design included measuring the importance attached to the characteristics by customers and measuring the customer experience on these characteristics. Scale rating range is 1-5. Six service sectors were covered in the survey, banking, healthcare, food & beverage, retail, public transport, and telecommunications.

The cross-sectional questionnaire survey exercise took in a total of 3376 responses for all six service sectors been evaluated. The respondents were drawn from around Singapore. The sample has proportionate representation of the major ethnic groups in Singapore. Male and female adults of different ages were surveyed. Intercept interviews were carried out locations in the North, South, East, West and Central zones of Singapore.

IV. INSIGHTS ON SERVICE CHARACTERISTICS

As services are becoming a dominant component in businesses, the need to improve service productivity, to create service innovations and to automate services is now a major concern in most organizations. These activities are now considered as part of a service science discipline. As a discipline, a body of knowledge has to evolve and this knowledge include both codified and tacit format [11].

In tangible products, the needs of the customers often expressed in terms of features and functionalities are the driver of manufacturing requirements. In service delivery, the needs of the customers are expressed in terms of service characteristics. Fulfilling the service characteristics equate to quality service. Thus, there is a need to identify what are the relevant service characteristics in major service sectors of the economy.

Although most literature has indicated that service quality is based on consideration of multiple characteristics, this research attempted to evaluate whether customers using different types of service would attach the same level of importance to the same service characteristics. Ten service characteristics were used in the survey questionnaire. Six service sectors were covered in the survey, banking, healthcare, food & beverage, retail, public transport, and telecommunications. Respondents were asked to rate the degree of importance they attach to each of the ten service characteristics. A summary of findings in relation to importance rating is given in Table 1.

Table 1

Importance Ranking of Service Characteristics (in various Service Sectors)

	Banking	F&B	Healthcare	Public Transport	Retail	Telecommunications
1) Reliable service.	3	9	1	4	4	7
2) Service staff is Knowledgeable.	6	10	5	7	9	9
3) Prompt service.	8	8	3	3	8	5
4) Service staff has good Attitude to me.	7	1	8	2	2	8
5) Service staff can Communicate well.	5	7	4	9	5	2
6) Service is easily Available and easily Accessible to me.	4	3	6	4	7	1
7) Feel Safe when using this service	2	2	7	1	1	4
8) Trustworthy service.	1	5	2	6	3	3
9) The service is Consistent every time I used it.	9	6	9	8	6	6
10) The service provides Nice Environment and Good Equipment/Facilities.	10	4	10	10	10	10

From Table 1, an important insight is that the attachment of importance for specific service characteristics varies across services. For example, reliable service is ranked first in healthcare service while it is ranked almost last (9) in food and beverage service. Conversely, service staff having a good attitude is ranked first in food and beverage service while it is ranked near the bottom (8) in healthcare service. Service quality is important but in what aspects it is important to customers seemed to defer in different service industries. Similarly, for Telecommunications service, availability and accessibility of service is of utmost important to customers while not so for most other service industries. In banking, trustworthy service is the most important while it is relative not the case in food & beverage as well as public transport. Having a nice environment in which the service is provided evidently is not an important issue to customers in most service industries except food and beverage.

If we were to focus only on the top four most important service characteristics to customers in each service sector, what emerge as clusters of prioritised service characteristics are shown in Table 2.

Table 2: Clusters of Prioritised Service Characteristics in Service Sectors

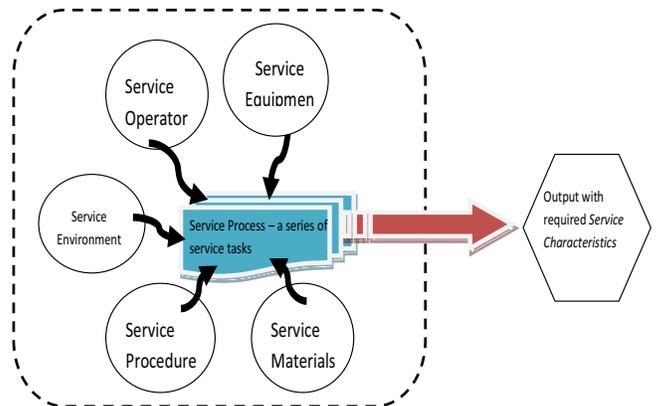
Banking	F&B	Healthcare	Public Transport	Retail	Telecommunications
Reliable service. {Process}	Service staff has good Attitude to me. {Operator}	Reliable service. {Process}	Reliable service. {Process}	Reliable service. {Process}	Feel Safe when using this service {Process}
Feel Safe when using this service {Process}	Feel Safe when using this service {Process}	Trustworthy service. {Process}	Feel Safe when using this service {Process}	Feel Safe when using this service {Process}	Trustworthy service. {Process}
Trustworthy service. {Process}	Service is easily Available and easily Accessible to me. {Equipment}	Prompt service. {Operator}	Prompt service. {Operator}	Trustworthy service. {Process}	Service staff can Communicate well. {Operator}
Service is easily Available and easily Accessible to me. {Equipment}	The service provides Nice Environment and Good Equipment/Facilities. {Equipment}	Service staff can Communicate well. {Operator}	Service staff has good Attitude to me. {Operator}	Service staff has good Attitude to me. {Operator}	Service is easily Available and easily Accessible to me. {Equipment}

What is the implication of such an insight to the body of knowledge in service science? *First*, service providers in different service sectors need to understand that not all service characteristics are equally important to their customers and it is wise to incorporate this knowledge in its service strategy. *Second*, we can model the delivery of a service based on five inputs to a service process [a service process is defined as a series of service tasks that when performed will deliver a required service output experienced by the customer] (Fig. 1); *service materials*, *service operators*, *service procedures*, *service environment*, and *service equipment*.

Third, the ability of the service output to meet specific service characteristics is determined by the efficient execution of the service process. *Fourth*, the efficiency of the service process relies on the five inputs to the service process as shown in Fig. 1. This series of insights contribute to a framework of sector-specific service characteristics that can be used as a guide to achieve targeted service productivity, service innovation and service automation.

With this interrelation, the impact of service materials, service operators, service procedures, service environment, and service equipment to the ten common service characteristics could be evaluated. Reliability, safety and trustworthy are characteristics that could be considered as functions of the service equipment, service materials, and service procedures. Customer perceptions of good attitude, prompt service, communicating well are factors that to a large extent determined by the service operator. Personality, characters, and training determine the extent in which the service operator could maximize the impact of these service characteristics. The availability and accessibility of service and the required ambience in which the service is experienced by the customer are functions of the service equipment and service environment. For different service sectors, resource allocation and priorities for service improvement in the form of increased productivity, innovations and automations can now be systematically planned based on these insights.

Figure 1: A Model of Service Delivery



With an understanding of the framework of cluster service characteristics and the model of service delivery, one can better make decisions as to which of the five inputs should be targeted for innovation and/or automation in order to maximize the performance of most important service characteristics. These decisions are obviously not the same in different service sectors. The ability to manage service delivery enhances the perception of quality of service as experienced by the customer [12].

V. SUMMARY

This paper has provided a framework of sector-specific service characteristics related to major service sectors of the economy. The framework consists of clusters of prioritized service characteristics for various service sectors. Such a framework shows that customers using service in different service sectors do not attach the same importance to all service characteristics. A model of service production is also proposed in which service outputs are viewed as a product of three main inputs; service processes, service operators, and service equipment. Last, results of a longitudinal study on service performance in the various industries were presented. This longitudinal study is able to provide benchmarking indicators and also provide an evolving picture of service quality in the service sector.

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