An Integrated Framework for Service Quality: SQBOK Perspective

RAJESH KUMAR TYAGI, HEC MONTREAL
NIKHIL VARMA, HEC MONTREAL
NAVNEET VIDYARTHI, CONCORDIA UNIVERSITY

This article identifies the need for a comprehensive body of knowledge in the service quality domain and presents a framework to the service quality community. The framework is part of the Service Quality Body of Knowledge (SQBOK), an initiative undertaken by ASQ Service Quality Division members. The objective of this article is to introduce the theoretical rationale of the framework and to identify the different determinants of service quality. The research team, consisting of members of the Service Quality Division of ASQ, adopted brainstorming, affinity diagram, Delphi techniques, and interview-based methods to identify and define four key concepts and seven knowledge areas. Each element of the framework is discussed in detail. After discussing strategies to deliver service quality as per SQBOK, a follow-up research direction is provided toward the end of the article. The article challenges both practitioner and academic communities to find practical solutions and identify a body of knowledge based on well-established theories and principles.

Key words: core concepts of service quality, frameworks for service quality, knowledge areas of service quality, Malcolm Baldrige National Quality Award, models for service quality, service quality, scorecard for service quality

INTRODUCTION

The service sector now accounts for well over 70 percent of the total gross domestic product in most Organization for Economic Co-operation and Development (OECD) countries (OECD 2012). Considering the importance of the service sector, various textbooks on service operations and marketing management present relevant research works by providing a general background of service quality (Rust and Oliver 1994; Hope and Muhlemann 1997; Schneider and White 2004; Lovelock and Wirtz 2004; Johnston and Clark 2005; Metters et al. 2006; Fitzsimmons and Fitzsimmons 2008). These textbooks and research publications in service quality and related fields span the topics of marketing, operations research, human resources, consumer research, and various sector-specific initiatives. However, the knowledge presented in the literature often is focused on the perspective of one functional area and often fails to bridge the gap between the academic and the practitioner world.

One of the major challenges in managing service quality is the lack of a common definition of services and a general lack of a standard measurement system originating from the intangible nature of services. Unlike products, service offerings do not have any physical manifestation. The characteristics of service, generally speaking, are summarized as intangibility, inseparability, heterogeneity, and perishability (Regan 1963; Rathmell

1966; Shostack 1977; Zeithaml. Parasuraman, and Berry 1985; Evans and Ford 1997; Fitzsimmons and Fitzsimmons 2008). These intangible attributes make it more difficult for the providers to meet the heterogeneous "perceptive" demands of each customer (Ghobadian, Speller, and Jones 1994). Some definitions of services are based on features and characteristics and others are based on the fulfillment of customer expectations.

While some articles have recognized the need for strategies to deliver a high-quality service to customers (Gounaris and Dimitriadis 2003; Chen and Chang 2005), others have identified a need for further research in this area (Ladhari 2009; Dabholkar, Shephard, and Thorpe 2000). Literature has also identified a need to bridge the gap between academia and the real world in terms of quality frameworks, standards, and processes in the service industry (Latham 2008). After a thorough study of the literature in the area of service quality and a perception of a gap for the service quality practitioner, the Service Quality Division of ASQ undertook a project to identity a common definition of services and a framework that could serve as a theoretical formulation. The stated objective of the project was to foster the knowledge and professional development needs of the service quality community. The gap identified by a survey, conducted in 2004, of service quality professionals—members of ASQ's Service Quality Division—was the main motivation behind the formulation of a standardized set of definitions and activities within an umbrella framework of the Service Quality Body of Knowledge (SQBOK).

The intent of this article is to provide a bridge between theoretical and practical aspects of service quality and to spur further research in this area. The remainder of the article is organized as follows. In the next section, the authors provide a review of existing frameworks followed by an overview of the methodology used for the SQBOK research work. The SQBOK framework development is presented in the subsequent section, followed by a detailed discussion of delivery service quality as per SQBOK. The last section describes the further development and research direction of the field.

A REVIEW OF EXISTING FRAMEWORKS

Deming (2000) argues that "quality" is a predictable degree of uniformity and predictability at a low cost suited for the market. Fitzsimmons and Fitzsimmons (2008) define services as a time-perishable, intangible experience performed for a customer acting in the role of a co-producer. Ennew, Reed, and Binks (1993) state that service quality is not judged by its outcome but by the process through which it is delivered and, hence, it is difficult to identify the objective performance indicators, which results in problems for the service consumers in assessing the service quality. Cronin and Taylor (1992) suggest and demonstrate a model of measuring service by characterizing it as an attitude of the customers that should be the core focus.

There are primarily two schools of thought in measuring service quality. One suggests that service quality is best measured by customer evaluations of the service that consume (Cronin and Taylor 1992), while the other looks more specifically at the difference in customer expectations and actual services consumed by them (Gronroos 1984; Parasuraman, Zeithaml, and Berry 1985; Spohrer et al. 2007).

Within the research community, the need to define and measure service quality has been addressed while discussing existing frameworks and models. The authors can identify research communities associated with the Malcolm Baldrige National Quality Award, the Service Profit Chain, the European Quality Award (EFQM Excellence Model), SERVQUAL, the Service Science initiative, and literature in the area of applications of Six Sigma for services. A more exhaustive review of existing frameworks in service quality is provided by Seth et al. (2005) while reviewing 19 different models for service quality.

The Malcolm Baldrige National Quality Award recognizes organizations for excellence irrespective of the sector. Critical linkages among various elements of the Baldrige criteria have been discussed and tested in the literature (Evans 1997; Ford and Evans 2000; Wilson and Collier 2000). A view of the customer-employee mirror is presented by the service-profit chain where a link is demonstrated between employee satisfaction and customer satisfaction (Heskett, Sasser, and Schlesinger 1997; Kamakura et al. 2002). The rich stream of literature in SERVQUAL, a service quality framework based on customer perception (Parasuraman, Zeithaml, and Berry 1985; Zeithaml, Parasuraman, and Berry 1985; Parasuraman, Zeithaml, and Berry 1988; Parasuraman, Zeithaml, and Berry 2005), provides a view from the customer's perspective and helps identify gaps between perceptions and expectations. A nonexhaustive literature review on SERVQUAL (Ladhari 2009), examining 20 years of its history, describes 30 applications of the framework. An adaptation of this framework representing internal service quality is presented in Frost and Kumar (2000). However, no single model presented in the literature is comprehensive enough to capture multiple perspectives and the interdisciplinary nature of service quality.

Service Science Management and Engineering (SSME), a broader area of service science encompassing service quality, has been promoted by IBM worldwide (Maglio et al. 2006; Larson 2008; Maglio and Spohrer 2008; Maglio, Kieliszewski, and Spohrer 2010). The group is actively creating new programs at the university/college level to fulfill the needs of graduates with knowledge of such a field. However, this stream of literature is more pertinent to researchers in the field of information technology. The adoption of this initiative in non-information technology service sectors is still unclear and being debated. However, an initial promise of generality of application has not materialized.

Six Sigma methodology, a widely used practice in the manufacturing industry, has been adapted for the service industry (Hensley and Dobie 2005; Goel et al. 2005; Tyagi and Gupta 2008). The applications of Six Sigma methodology to services are driven by the need to deliver faster, better, and cheaper services to customers. This need is based on the premise that customers' satisfaction is directly influenced by the service quality's timeliness and response to their needs (Antony 2006). The service scorecard concept recognizes the need for a measurement system in the service sector. It identifies the characteristics of services—intangibility, proximity to the customers, and concurrent production and delivery (Tyagi and Gupta 2008; Tyagi 2011). Taking these into consideration, it identifies a framework for measuring different tangibles and presents to management areas in need of attention for improving service quality. These improvement frameworks don't tend to deliver on more strategic upfront decisions of service design.

Additionally, some relevant frameworks and models that require special mention are discussed in this section. Franceschini and Rossetto (1999) proposed an online tool called Qualimetro. This tool is conceived for the evaluation of an "online" service. Qualimetro monitors the developments by means of a "*p*" control chart. A three-component model, which includes the service product, its environment, and delivery, was conceptualized by Rust and Oliver (1994). Another study refers to task, treatment, and tangibles (3Ts) as three critical aspects of service that need to be managed to ensure high service (Chase and Stewart 1994). Rust, Zahorik, and Keiningham (1995) presented a framework called return on quality (ROQ) that ensures financial accountability of quality decisions. Several integrated approaches have been defined to measure the perceived service quality (Brady and Cronin 2001). Santos (2003) presented an e-service quality framework based on focus group studies. Parasuraman, Zeithaml, and Berry (2005) presented an adapted two-stage version of electronic service quality, representing two distinct stages of encounters: routine online service encounters and nonroutine

Table 1 Summary of service quality standards.

Approach to Service Quality	Objectives
SERVQUAL: Measures the gap between customer expectation and experience	Introduces five dimensions (RATER) to measure the gap between customer expectations and experience. The framework has been used in a variety of subsectors and is a useful tool to identify gaps from customers' perspectives. Service-specific methodology. (Parasuraman, Zeithaml, and Berry 1985)
SERVPERF: Customer perception drives buying decisions	Defines that customer perceptions should drive service quality, which results in the buying decisions of the customer and hence has an impact on the profitability of the company (Cronin and Taylor 1992).
Malcolm Baldrige National Quality Award (renamed Baldrige Performance Excellence Program)	Assessment model and recognizes organizations for performance excellence. Quality award program. Provides organizational assessment tools and recognizes national role models in the United States. http://www.nist.gov/baldrige/
EFQM Excellence Model	European quality award using peer ratings. The EFQM is a membership network and helps identify good practices and emerging trends. www.efqm.org
Six Sigma oriented view of services (define, measure, analyze, improve, and control, or DMAIC)	Transactional view of services. DMAIC steps improve service by reducing defects and increasing service satisfaction. Methodology has been adapted to services. (Goel et al. 2005; Aboelmaged 2010).
ISO/IEC 20000: Defines design, transition, delivery, and improvement of services to fulfill service requirements	An international IT standard that allows companies to demonstrate excellence and prove best practices in IT management. Provides guidance on the application of service management systems. It has nine sections. http://www.isoiec20000certification.com/
Service Scorecard	The scorecard provides measureable results in the form of a dashboard to identify measures of performance. The basic architecture consists of seven elements. Incorporates relative weights/tradeoffs and benchmarking to identify improvement opportunities (Tyagi and Gupta 2008).
SSME service science, management, and engineering	"As such, service science draws on ideas from a number of existing disciplines—including computer science, cognitive science, economics, organizational behavior, human resources management, marketing, operations research, and others—and aims to integrate them into a coherent whole." http://en.wikipedia.org/wiki/Service_science,_management_and_engineering/

encounters. The research showed that an incubative dimension consisting of ease of use, appearance, linkages, structure and layout, and content increases hit rates and customer retention in an e-service environment. Table 1 summarizes selected frameworks and initiatives related to the field of service quality. The authors chose frameworks based on the uniqueness that represents the landscape of the frameworks and have refrained from including all of the frameworks. An exhaustive description of each of these frameworks is beyond the scope of this article. Readers are referred to the identified literature for in-depth descriptions, for example, Seth, Deshmukh, and Vrat (2005) and Tyagi and Gupta (2008) and references therein. Some of the approaches listed in Table 1 are generic assessments or auditing tools, and others are designed specifically for services. For example, SERVQUAL is more focused on the customer perception and Six Sigma is more focused on the variations and errors, while others such as the Baldrige and EFQM excellence models are used as assessment tools for awarding quality prizes. Broadly speaking, existing frameworks focus on individual components of service delivery, award criteria, customer viewpoint, and improvement methodology. While some frameworks focus on one particular aspect of the service delivery system, others fail to deliver on more strategic upfront decisions of service design. Hence, there is a need for an integrated framework that incorporates upfront strategic decisions while considering the interdisciplinary nature of service quality and bridging between theoretical and practical aspects of service quality.

METHODOLOGY

In 2005, the Service Quality Division of ASQ defined a vision for creating a holistic resource for service quality professionals. Following the needs assessment survey by the division, a steering team was formed to identify important service concepts, tools, and issues of service professionals and to bridge the knowledge gap between the academic world and the real world.

The starting discussion point was a master's thesis work of Piccotti (2006), in which there was a discussion of the possibility of having a body of knowledge (BOK) and indicating the need for the same from an ASQ survey conducted in 2004. Review of a variety of existing frameworks followed, including Baldrige, ISO 9000 principles, ASQ certification BOK, other BOKs such as PMBOK and the APICS OMBOK, and service-specific frameworks. The intention was to base the SQBOK on well-established concepts and quality principles, taking into consideration the uniqueness of services.

A major brainstorming session was held at the annual meeting of the Service Quality Division in 2007 in Orlando, FL. Following the brainstorming session, the project team identified the basic structure of the framework and the boundaries of the project. The group was divided into sub teams and every project team had a team leader. The teams adopted methodologies such as brainstorming, affinity diagrams, Delphi, and semi-structured interviews. These methods helped identify and define key concepts, knowledge areas, and tools. The teams focused on the service industry specifically and expanded their studies to more than 45 different service quality roles such as project managers, business practice leads, and quality managers. The teams included more than 60 quality professionals who were supported by more than 100 volunteers to work iteratively for over six years to come up with the current version (2.0) of the SQBOK. Each team prepared an initial version of each core concept and knowledge area that was reviewed by three external reviewers. A draft version of the framework was also reviewed by past presidents of ASQ. The process to depict the SQBOK framework visually also went through peer reviews and pretesting.

Multiple cycles of review involved nearly 100 practitioners in different fields and roles in service quality. No formal methodologies were applied in surveying experts or collecting feedback; however, different groups of practitioners provided checks on each other's work at different steps.

SQBOK Framework

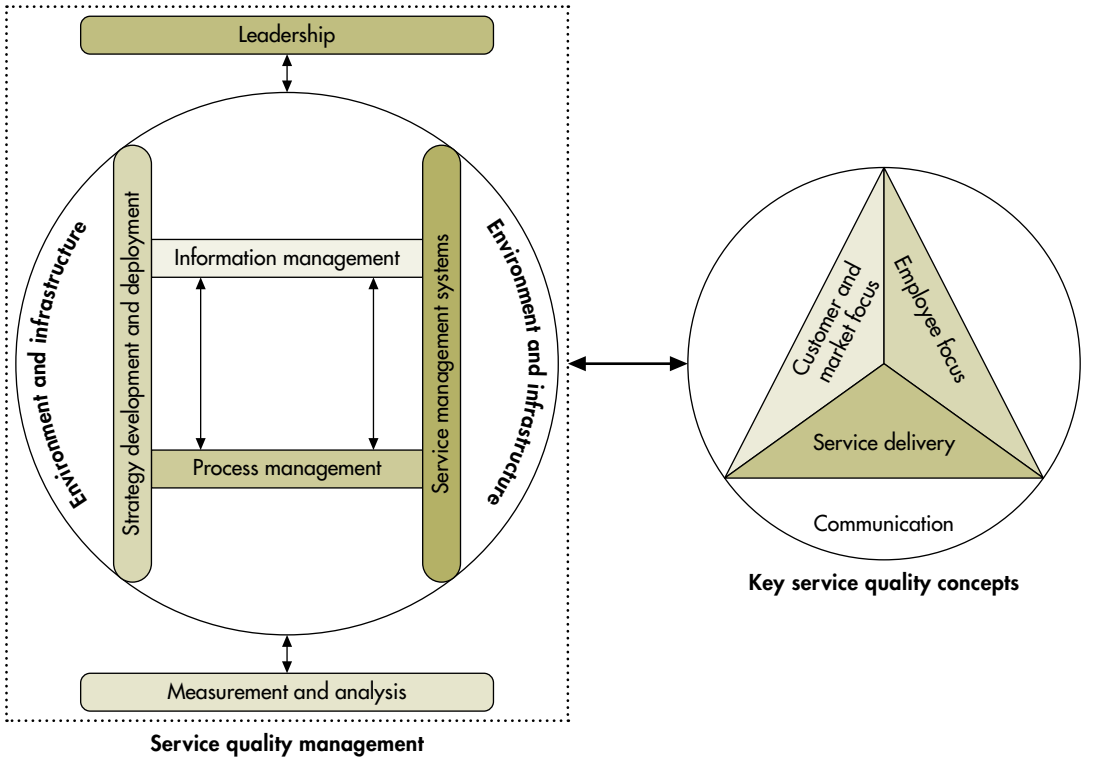
Items included in the SQBOK are topics, tools, or methods that meet the following criteria:

1. Specific to or having specific applicability to service
2. Applicable across multiple service types and industries
3. Established level of peer acceptance

In version 2.0 of the SQBOK, the framework consists of two major groups of principles: the first grouping represents four key concepts, and the second represents the management aspects, including seven quality management knowledge areas. Figure 1 represents the framework; an initial version introducing the framework was published in a *Quality Progress* (Tyagi and Piccotti 2012). The four key concepts provide the organization with a differentiation in their service delivery, and these key concepts are what differentiate service quality from the traditional view of quality. These key concepts are unique to the SQBOK and do not figure into any other framework.

The rationale to include four key concepts was based on the available literature identifying the need to separate strategic elements from other quality management topics. Arguments found in recent literature (Kull and Narasimhan 2010) can be used to support these key concepts. Powell (1995) examines total quality management (TQM)

Figure 1 SQBOK framework.



as a potential source of sustainable competitive advantage and reported findings from an empirical study of TQM's performance consequences. TQM success appears to depend critically on executive commitment, open organization, and employee empowerment, and less upon such TQM staples as benchmarking, training, flexible manufacturing, process improvement, and improved measurement. These management tools apparently do not produce performance advantages in the absence of the intangibles. The research shows that to gain a competitive advantage, firms should focus their efforts on creating a culture within which these procedures can thrive. The culture of quality, or in other words the *intangible* side of the equation, is represented by the four core concepts of the SQBOK. These four key concepts represent the culture or the way of functioning of a service organization, and map the strategic value system of a service organization. Considering these four concepts before taking into account the seven knowledge areas can take the organization a step further to gain considerable advantage over other organizations that have completely or partially implemented only the seven knowledge areas based on principles as defined in previous research.

The seven knowledge areas provide any organization with a framework for the design of service delivery. In Figure 1, one can see some similarities, especially on the side depicting the seven management areas, to other quality frameworks, such as the Baldrige criteria. During the initial phases of SQBOK brainstorming, Baldrige was just one of the frameworks reviewed. However, Baldrige did not emerge as a dominant influence during the development cycles. In fact, no single framework did. After the SQBOK structure was complete and when the framework was depicted visually, the broader categories could

Table 2 Key service concepts.

	Activities	Key elements
Customer and market focus	Stakeholder identification is done followed by requirements and wants analysis of the stakeholders. This helps in relationship management.	Stakeholder identification, cost/benefit analysis, expectation analysis of offering/attributes, primary/secondary market research, mystery shopping, behavior response, outreach and education, data mining, customer feedback/recovery.
Employee focus	Helps the organization put the right person to the right job by creating an environment that caters to employee growth and fosters retention.	Job description and staffing for service, creation of high-performance work environment, employee performance measurement, engagement and retention, empowerment.
Communication	This involves the identification of type of communication required by the market and channels to deliver it.	Nonverbal communication, body language, interaction and cultural differences, planning for communication such as forums and avenues.
Service delivery	The three different types of services: transactional, nontransactional, and internal services are identified and appropriate strategies implemented for effective delivery of each.	Moment of truth considerations, planned escalation/complaint management, multiple channel (capacity, availability, and cost), knowledge processes, capacity analysis, internal measurement, treating customers as partner (co-production), employee recognition and rewards.

be seen to show similarities, not just to Baldrige but to other frameworks as well. On the left side, quality management is well mapped and represented in the framework. However, the quality management on the left side works in tandem with core concepts represented on the right side.

In the figure, the core concepts are connected to the management areas in an interdependent manner via a double-sided arrow indicating global interrelationship of these two groups. At this stage, the authors prefer to use a double-sided arrow even though they had stated that *intangibles* may provide greater competitive advantage. Representing individual relationships and quantifying causality is beyond the scope of this article and only a data-driven approach could provide the authors more clarity on these aspects. Definitions of four key concepts and relevant decisions are shown in Table 2. In order to deliver high service quality, the determinants have to be identified. The SQBOK identifies the following knowledge areas to be able to control, monitor, and deliver a high service quality. These knowledge areas build the framework to support service quality management:

1. **Leadership.** Service quality planning requires the sponsorship and commitment of corporate leadership. Leadership is ultimately responsible for charting out a service vision identifying quality culture, corporate social responsibility, and ethical standards. A service quality vision plays an important role in streamlining the leadership focus, aligning internal quality efforts with customer experience, documenting policy regarding ethical and legal behavior, and developing corporatewide quality standards. A service vision statement can be specific to an individual service, or it can be generally applied to a service offering portfolio. Identifying core values is an important strategic step that is typically revisited every two to three years to ensure their relevancy. Corporate social responsibility, another core value of a service enterprise, is a quality attribute used by some customers when making purchasing decisions. The four core concepts of the SQBOK provide guidelines to leadership in identifying these core values.
2. **Strategic development and deployment.** Activities such as capability modeling and competitive analysis are conducted following customer segmentation to achieve service differentiation. Different strategies that promote customer retention, such as monitoring

customer feedback, incentives, and assessment methodologies, are also discussed.

3. **Service management systems.** The system could be based on standard frameworks such as CMMI, ISO 9001, and Baldrige. Requirements are gathered to ensure customer satisfaction stays at higher levels. The delivery system is planned based on various concepts such as lean principles and queuing theory.
4. **Process management.** The activities associated with service quality management processes are identified and monitored. Processes such as quality assurance, supplier management, process reviews, and feedback collection for continuous improvement are covered.
5. **Measurement and analysis.** This area provides metrics to all process owners and leadership on the outcome of service quality management endeavors. Data such as customer feedback outcomes from surveys and focus groups and customer lifetime value provide insight on service quality. Internal measurements such as cost of quality provide decision makers with crucial inputs.
6. **Information management.** In any service delivery system, a lot of data are collected from various sources. To be able to have a high customer confidence level, it is important for the organization to have a secure system. Customers' personal information should be handled with extra care. Communication of these safe internal policies provides customers with extra trust on the service quality management process. A knowledge management module can also be incorporated into the information system.
7. **Environment and infrastructure.** The environment and infrastructure provides to the organization an ease for service delivery. The organization should focus on productivity and collaboration and develop employee-friendly environments.

Delivering Service Quality as Per SQBOK

The four key concepts in conjunction with the seven quality management knowledge areas constitute a framework that organizations can apply. Leadership and service portfolio owners are responsible for service visioning, which incorporates culture definition and development and identification of core values. The core concepts of the SQBOK and knowledge areas will help fulfill this service vision. The first part of this section focused on four core concepts followed by a discussion on other decisions related to service quality management areas.

Quality Decisions Related to the Core Concepts

The customer and market focus key concept provides an important base for planning. By deploying the right process for stakeholder identification, the service organization will have a clear focus of the target that needs to be addressed. Conducting requirements and wants analysis on these stakeholders will then help the service organization further focus on the content that is expected from their target market. As a continuous improvement or innovation strategy, relationship management will help track customer feedback and inputs, which will help in improving the service further. Some service firms may follow a continuous improvement strategy using a Six Sigma approach, while others could seek certifications. The managers could use the concepts and knowledge areas presented in the SQBOK for some of these decisions. In this section, the authors illustrate a few examples of how SQBOK could be used for this purpose.

Service delivery design

Service delivery is one of the core concepts of the SQBOK. However, a design of an effective service delivery system touches areas represented by other

core concepts and knowledge areas. For example, the engagement of employees, communication strategy, and the extent of customer participation are some of the key questions that help managers design an effective service delivery system. Some other important drivers of the delivery system are choice of delivery channels, customer complaint management systems, and information systems. For example, at a financial services firm, decision makers need to decide which delivery channels should be used and what would be the ideal service capacity of each channel.

Employee engagement and innovation

Employee engagement, especially in services, plays an important role in the quality planning process. Some service organizations, for example, Southwest Airlines, go to the extent of calling their employees their number-one customer of the organization. Employee engagement not only has a direct impact on customer retention, but it can also be used to strengthen the innovation process, as employees are often a source of innovative ideas. Typically, a service organization can define appropriate mechanisms for the right staffing, equipping employees with the right tools, and training to deliver a quality service. At the same time, the organization can define tangible and achievable goals to create an environment of satisfaction and empowerment, thereby retaining employees. Empowerment of employees by means of feedback gathering, professional development, and motivational techniques such as rewards, recognition, and incentives would increase employee retention, and in turn reduce human resources costs.

Customer feedback and complaint management

The SQBOK provides guidelines on customer complaint management under the core concepts of service delivery as well as customer and market focus. In order to provide high-quality service, firms need to capture customer feedback, and should have an effective complaint management system. Contemporary thinking on customer complaints has shifted from the orientation that complaints represent errors and have to be minimized to the recognition that complaints are a valuable source of learning and should be encouraged. Customer complaints are received in the form of solicited and unsolicited feedback.

Most unsolicited feedback is often negative. This is mainly because satisfied customers lack motivation and/or the feedback process is too difficult to follow. To overcome low motivation, some firms make it very easy for customers to provide feedback. For example, Procter & Gamble prints an 800 number on every product package. A theme park in Minnesota provides every 50th guest with two tokens ("Special Thanks Awards") as they enter the park and invites them to hand them out to any employee who makes a special effort to make the guest's visit enjoyable. Customer dissatisfaction information can be used to generate short-term corrective actions and longer-term improvement to the delivery system.

The firm should acknowledge the complaint promptly and should empathize with the client. Often, service recovery includes some form of compensation to the customer. This compensation may be in the form of additional services, a coupon for a discount on future services, or a discount on the services that were not deemed acceptable. Compensation will generally not impact the perception of services rendered but may well impact the perception of the service provider and its ability to provide future services.

Communication

A blend of social media technologies can be a valuable commercial asset for a service organization due to its interactive nature and allowance for instant feedback. As an emerging phenomena, it is one in which the speaker and the decision makers have little control over the context in which their communication might eventually be viewed. Therefore, the service firms need to have a strategy for communications. Customers, employees, and stakeholders could

make use of mediums such as Facebook, Twitter, blogs, and similar social interaction. Such technology assists in the sharing of information and knowledge and accommodates the globalization of business operations. For example, Dell uses the creative power of customer feedback on its dedicated and moderated website (www.ideastorm.com) for this purpose. The feedback is directly used by Dell, often resulting in the delivery of new services to its customers.

Quality-related business decisions

The SQBOK encourages a strategic and comprehensive approach to service quality. This approach emphasizes better business decision making. Some of these business decisions are related to more than one quality management area. For example, continuous improvement would touch the areas of service management systems, measurement and analysis, and process management. Similarly, performance management could touch the areas of measurement and analysis, strategic development, and deployment and information systems. Partnership and strategic alliance decisions could touch the areas of leadership, environment, and infrastructure, and strategic development and deployment. Three important quality decisions that cut across knowledge management areas include the design of a performance management system, the pursuit of continuous improvement, and engagement in partnerships and strategic alliances.

Performance management system

Quality measures should be developed to assess the effectiveness of delivering the service vision as proposed by leadership. Managers and leaders need to define and identify measures to track the performance of service quality endeavors. However, identifying measures in the service environment is a challenge due to intangibility. These measures could be internal/external, leading/lagging, and subjective/objective in nature. Some service firms may decide to have a comprehensive performance measurement system. The SQBOK can be used as a resource to help design such a system. The challenge is to identify appropriate measures that directly impact service quality and to provide a universally accepted definition that could be used across value chain partners and within an organization. For example, definition of courtesy and professionalism could vary from one service firm to another. But each one should identify the individual elements of these intangible dimensions of service quality and create customized standards. Standards may be kept internal or communicated to prospective customers to set expectations. For example, UBS bank has published an internal 40-page dress code standard providing recommendations to employees. In this case, the dress code is expected to present a professional image of the employees. The color, fabric, and design of uniforms do not only establish an organization's corporate image and brand within a competitive market, but they also induce the sensory and emotive appeal of potential and existing clients and employees. While service standards measure outcomes, improvement comes from focusing on the behaviors that lead to the results.

Continuous improvement

For continuous improvement, managers have a choice of various tools and techniques such as Six Sigma, ISO 9000, Capability Maturity Models (specific for software development), and lean. The SQBOK provides a knowledge base to support the implementation of such tools and techniques. For example, the knowledge area of the SQBOK-Service Management System explicitly describes these standard frameworks and initiatives and provides a discussion on how to adapt these techniques to services. Six Sigma and lean concepts were initially developed for the manufacturing sector. Recently, these concepts have been adapted to the service sector. However, often a cookie-cutter approach has been used for the implementation.

Partner and strategic alliances

The decision whether to partner or go alone is an important strategy consideration in terms of owning

customers and quality implications. However, it is becoming increasingly common for service firms to provide services in cooperation with their partners. For example, a hotel may provide airline check-in services in the lobby. Singapore Airlines provides baggage check-in services at hotels located in downtown Singapore and also provides a short tour of the city. The objective is to work together toward a common outcome of providing a good quality service. Therefore, partner selection and strategic alliances play an important role in delivering a good quality service to clients. Partners often offer specialized skills, reputation, and/ or cost savings while adding coordination complexity. The SQBOK provides some guideline on developing standards, partner selection process, and service-level agreements.

The relationship between leadership and quality management decisions is incorporated into traditional frameworks such as the Baldrige Award criteria. However, the interdependence of these management decisions and core concepts (or the culture of service quality) is not so clearly articulated in other frameworks. For example, the design of a performance management system will have interdependence with the customer and market focus and service delivery strategy. Similarly, continuous improvement will have a relationship with service delivery and employee focus. At this point, the authors can only identify the hypotheses regarding these interrelationships. Further research will quantify the nature and direction of these relationships.

FURTHER DEVELOPMENT AND RESEARCH DIRECTION

As this stream of research aims to bridge the gap between academic research and real-world application, the follow-up work could broadly be classified into two categories: academic research and work aimed at practitioners. Comprehensive data-driven analysis work will lead to managerial implications helping to improve decision making in the field. Specifically, the further research should:

- Test the relative and individual importance of each key concept and knowledge area and its impact on the performance of the service organization. Fine tune the integrated model combining all four key concepts and knowledge areas to study the impact on corporate performance.
- Identify and analyze contextual differences, for example differences for sub-sectors and types of services. The framework needs to be adapted for specific sub contexts. Develop specific in-depth cases using the framework.

The four key concepts and the seven service quality knowledge management areas provide a generalized framework for service quality professionals to deliver high service quality. However, descriptive hypotheses of strategic service quality management and delivery based on these concepts and knowledge areas have to be developed and tested. One way to identify the relationship hypothesis between (and within) these key elements is through survey-based data collection and the use of advanced statistical analysis. Researchers could advance the SQBOK framework validity by developing propositions and linkages similar to previous studies done for the Baldrige criteria (Evans 1997; Ford and Evans 2000) and Six Sigma methodology (Foster 2007). To counter the criticism that Six Sigma simply puts traditional quality management practices in a new package, Zu, Fredendall, and Douglas (2008) identified three critical practices for Six Sigma: role structure, structured improvement procedures, and focus on metrics. Schroeder et al. (2008) used the grounded theory approach to propose an initial definition and theory of Six Sigma. Researchers could take the lead from the aforementioned stream of research to develop theory and validate the SQBOK framework.

The impact of these quality areas on performance should also be explored. The relationship to the impact of service quality knowledge areas on the profitability of an organization is another area for further research. Several studies have been done on the profitability and economic value of service

value to customers (Zeithaml 2000). Prior research has focused on testing the causality of the Malcolm Baldrige National Quality Award using structural equation modeling (Wilson and Collier 2000). The EFQM Excellence model was also tested using structural equation modeling by Bou-Llusar et al. (2009). Similarly, Kamakura et al. (2002) tested the Service Profit Chain model using structural methodology. Alternate methodologies as presented in drawing relationships between TQM and a firm's performance (Powell 1995; Kaynak 2003) can be studied, and similar work can be done in the area for service quality to define the link between service quality and profitability.

The adaptation of the framework can be achieved once the relationships and priorities of the knowledge areas and concepts are determined. The adaptation could be based on the type of services (transactional, internal, and ongoing and continual) or by sector. As the framework will be adapted, one should also see new tools and methods being developed that could be used as resources by practitioners. Developing a comprehensive depository of tools and resources for practitioners is an important dimension of work that should be undertaken in the near future. Currently, tools from product quality literature are used and adapted for service quality environments. However, new tools should be developed specifically for service quality environments.

Every organization relies on internal (support) service to carry out day-to-day services. For example, a financial services firm may have in-house customer data processing centers, human resource-related processes, and mortgage loan application processes. Internal services are invisible to customers and reside in the background. Quality managers need to continually improve the efficiency of these internal services. Based on the length of the interaction period, services are categorized as transactional and interactional. Many services, such as utilities and Internet services, are delivered in a continuous fashion. Prominent service sectors such as healthcare, finance, and call centers are mentioned specifically in the SQBOK. Healthcare represents a large portion of the gross domestic production in most OECD countries. Healthcare providers, hospitals in particular, cover a wide variety of services such as emergency room services, surgical procedures, laboratory testing and analysis, and annual health checkups. Similarly, the financial services sector includes transactional services and more customized financial portfolio management.

SQBOK provides a holistic view of service quality and broadens the definition of services and service quality. The SQBOK provides a body of knowledge representing a unique perspective on the application of quality principles. Three types of services are recognized in the SQBOK: service in manufacturing (support services), internal service, and transactional, ongoing and continual service. Support services or services in manufacturing that accompany a product can be equally important as the product itself, such as financing (or leasing) services in the automotive industry or supply chain services for a food producer. The work on the SQBOK framework is not finished by any means and does require additional work to strengthen the tools and applications in specific service contexts.

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BIOGRAPHIES

Rajesh Kumar Tyagi is an assistant professor at HEC Montreal, Department of Logistics and Operations Management. Tyagi teaches service operations, operations management, and quality management. His current research and consulting interests are in the areas of optimal service delivery design, measurement of service quality, and applications of Six Sigma in services sector. He has more than 15 publications in science and technology journals and has presented at various national and international conferences. He is the co-author of *Six Sigma for Transactions and Service* (McGraw-Hill 2005) and *A Complete and Balanced Service Scorecard* (Financial Times 2008). Tyagi is a Senior ASQ member and SQBOK steering committee member. He obtained his doctorate in engineering at the University of Ottawa, Canada, and his MBA from The Kellogg School of Management, Northwestern University. He can be reached by email at rajesh-kumar.tyagi@hec.ca.

Nikhil Varma is a doctoral student at HEC Montreal, Department of Logistics and Operations Management. He has a master's degree in computer engineering from Concordia University, Montreal, and an MBA from HEC Montreal. He has extensive experience in project and product management. He has expert knowledge of enterprise business processes and is proficient in CMM methodologies. He is an active ASQ Student member.

Navneet Vidyarthi is an assistant professor in the Department of Decision Sciences and Management Information Systems at the John Molson School of Business. He joined Concordia University in July 2008. He holds a doctorate degree in management sciences with concentration in supply chain and operations management from the University of Waterloo. His research interests can be broadly categorized as strategic design and tactical planning in logistics and supply chain management with methodological interests in large-scale optimization, simulation-based optimization, and meta-heuristics. His works have appeared in *Transportation Science, IIE Transactions, International Journal of Production Research* and *Managerial Auditing Journal,* among others. His teaching interests are in the area of operations management, logistics and supply chain management, and operations research.