Service Quality Measurement in a Service Desk Environment

By Sue Conger, Ph.D.
Executive Summary

Ultimately, Service Desk quality is the extent to which the staff provides successful completion to a desired need, which may be a problem, information request, or other desire. Service Desk quality includes both process and outcome aspects. Service quality is evidenced in outcomes, -- not only in basic measures such as first call resolution but also in customer satisfaction, word of mouth, and intentions to continue using the service.

Organizations seek to measure their quality of Service Desks as a basis for improvements. Based on an extensive review of academic and professional research a Service Desk survey that includes measures for medium, information quality, and context was administered to 200 Service Desk users.

The results to date show that how the question 'what is service quality' is posed, will affect the results obtained. Thus, the first step in effectively measuring Service Desk quality is to carefully decide exactly what the expected outcomes are. Then, construct a survey to measure what is most meaningful to those outcomes.
Introduction

In business terms, a Service Desk is comprised of organizational capabilities and processes to deliver value to customers in the form of an experience. Characteristics usually defined as important to Service Desk quality are timely service that also responds successfully to some user need. At the 2010 Fusion conference, one speaker advocated use of SERVQUAL, a marketing instrument, to measure Service Desk quality and this suggestion motivated this research. This paper summarizes academic research to measure service quality, using business measures, such as first call resolution, also incorporating ideas from academic research, and customizing a survey that includes medium effects on Service Desk service delivery.

SERVQUAL is a marketing instrument designed to measure gaps between what was planned or expected in service delivery and what was experienced by a customer (Parasuraman, et al., 1988). The service quality measures include aspects relating to responsiveness, assurance, tangibles, empathy, and reliability (Parasuraman, et al., 1991). SERVQUAL enjoys widespread support with over 1,000 research papers using it as a basis for evaluating service quality. While not all replications using SERVQUAL have consistent results, SERVQUAL is at least partially validated in virtually every study in which it was used. SERVQUAL is not perfect, however, in that it assumes transactions are face-to-face and purchase related. Since these assumptions do not hold in Service Desks, further analysis of research relating to service delivery from marketing, service operations, and information systems was conducted to determine how to best measure service quality in Service Desks. SERVQUAL characteristics that were kept in this research related to service personnel responsiveness, empathy, and assurance.

In addition to marketing research on service quality, operations literature introduces the concept of the importance of time to service interactions (Xiao, et al., 2011). In addition, competent, creditable, consistent staff and timely interactions are viewed as important to service delivery quality (Seth, et al., 2005). The information systems research adds concepts relating to web site ease of use, information quality, and application reliability (DeLone and McLean, 2002, 2003; Loiacono, et al., 2007).

All of the marketing, operations, and information technology service quality research makes assumptions that are challengeable in a Service Desk environment. For instance, past research assumes that all interactions are sales-related, that all services are the same, that all media provide the same satisfaction for the same service, that media characteristics do not differ, that customer satisfaction is the only important outcome, and that satisfaction is not related to the medium used for service delivery.

As a result of the research analysis, the survey created includes questions that address service personnel characteristics, time of service delivery, and information and outcome quality. New questions relate to quality of both the experience and the process. Other additions include medium characteristics, expected quality, output quality, value derived from the interaction, user
control over the interactions, amount of user effort required, customer satisfaction, and intentions to reuse the service and promote it via word of mouth.

**Main Topic**

Data were collected from a random sample of 200 Service Desk interactions from a firm in the Southeastern United States. The data were analyzed in several theoretically-based models to develop understanding of the aspects of quality most important to driving different quality outcomes relating to Service Desk service delivery.

The models are summarized in Figure 1. Moving from right to left in the figure, based on all of the past theory, there should be at least four ways to think about service outcomes – overall satisfaction, perceived service quality, perceived service value, and behavioral intentions relating to word of mouth about the service and intentions to continue to use the service. The service outcomes should be strongly, positively related to perceived control over behavior in using the service, intentions and attitude toward the medium used, the amount of user effort involved in using the service, the efficacy of the medium, and the individual's expectations about service quality, performance, and output.

![Figure 1. Expected Service Quality Relationships](image)

The relationships for each outcome measure were regressed individually. The results for overall satisfaction (see Figure 2) show that two aspects of service delivery are important to satisfaction – service quality performance and output. Service quality performance relates to personnel aspects of service delivery and includes the courtesy, trustworthiness, understanding, willingness, ability, and competence of personnel in providing the requested service. Service
quality output relates to the actual outcome of the interactions in that the issue presented is dealt with in a timely manner, with few interactions, and is actually resolved.

![Quality Output Diagram](image)

**Figure 2. Overall Satisfaction Measure**

In measuring overall Service Quality, the only construct of importance is performance (see Figure 3). The performance measure, as stated above, relates to characteristics of Service Desk personnel.

![Service Quality Diagram](image)

**Figure 3. Overall Service Quality Measure**
Service value shows a different set of relationships. Again, service quality performance is important but value is also related to perceived behavioral control and intentions toward the medium. Behavioral control relates to the ability of the user to control the interactions, use Service Desk technology successfully, and choose the Service Desk alternative. For service value, the strongest indicator of value is perceived behavioral control.

![Service Value Measure Diagram]

Figure 4. Service Value Measure

In addition to performance, intentions toward the medium are also related to service value. Intentions toward the medium include items that indicate the likelihood that the user would use the medium again and would also recommend the medium to other users. In evaluating details of intentions toward the medium, all respondents used either phone or email interactions. This relationship thus relates only to those forms of communication.

![Behavioral Intentions Measure Diagram]

Figure 5. Behavioral Intentions Measure
**Benefit 1**
There appear to be at least four ways to measure types of service quality – overall satisfaction, service quality, service value and behavioral intentions. Identifying the desired measure of service quality before setting out to actually measure that quality is important to getting usable results. While service quality performance relates to all four of the quality measures, providing users with behavioral control over the interactions and a medium they are willing and able to use are key to obtaining the desired behavioral intentions and a high rating of service value. If the desired measure is overall satisfaction, some indication of the successful resolution of the request would be required in addition to service quality performance.

**Benefit 2**
Knowing that users discriminate between the personnel characteristics they rate highly for service quality and the actual completion of their request is an important distinction. The research outcomes suggest that personnel training, development of a service culture, and the manner in which interactions unfold are key to all measures of service quality. Call center management practices such as providing a small mirror for every Service Desk employee to check for a smile before they answer a phone would also be warranted. In email interactions or interactions via database entries presented through web forms, issues such as good grammar, courteous indicators, and use of complete sentences should be emphasized.

**Benefit 3**
The lack of importance of user expectations to any of the possible measures of service quality is relevant because most measures, including SERVQUAL rely on expectations of quality to determine the extent to which quality was delivered. Since expectations are not important to any of the four service quality measures, organizations need not concern themselves overly much with their user expectations. However, it may be that in this particular sample, expectations were not materially different from service delivery perceptions and, as a result, expectations could be important if they were a complete mismatch to the perceptions of delivered service quality.

**Conclusions**
This paper introduces the notion that there are different concepts of service quality. In this paper, four ways to measure types of service quality were introduced, including overall satisfaction, service quality, service value and behavioral intentions. In addition to there being more than one way to measure service quality, each measure differs in its important antecedents. Thus, identifying the desired measure of service quality before setting out to actually measure that quality is important. Capable, courteous, and competent staff are critical to all forms of service quality. Providing users with behavioral control over the interactions and a medium they are willing and able to use are important to obtaining the desired behavioral intentions and a high rating of service value.
References


About the Author

Sue Conger, Ph.D., is on the faculty of University of Dallas as Director, Information & Technology Management program. She publishes extensively, speaks at conferences globally, is a Visiting Professor at Rhodes University in South Africa, and is currently an Erskine Fellow at Canterbury University, Christchurch, New Zealand. Dr. Conger is active in academic and industry associations, is on several editorial boards, and is on program and planning committees for several conferences. Her research interests are IT service management, IT-related privacy, emerging technologies, and innovative uses of IT in organizations. She authored The New Software Engineering (1994) and Planning & Designing Effective Web Sites (1997), and Process Mapping & Management (2011).

Note

This research was conducted with Drs. Stuart Galup, Ron Dattero, and W.E. Hefley, all of whom participated in survey design. Stuart Galup was responsible for collection of the data used in this analysis.