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ScienceDirect
Information & Management 44 (2007) 104–113
INFORMATION & MANAGEMENT
www.elsevier.com/locate/im

A comparison of Magal's service quality instrument with SERVPERF

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Received 26 May 2005; received in revised form 8 April 2006; accepted 3 November 2006
Available online 11 December 2006

Abstract

The role of service quality has become critical to the success of organizations. Therefore, it is important to use a reliable instrument to measure information service quality. SERVQUAL is a popular instrument for doing this, but, though widely used, it has been criticized for its reliability and validity. Use of the performance measures from SERVQUAL to form SERVPERF has addressed some of these issues. However, Magal's instrument on information center success was found effective within a service context because of its service orientation.

In our study, we therefore compared Magal's instrument with the SERVPERF instrument in predicting satisfaction and usefulness; we found that Magal's instrument had predictive advantages in determining future usefulness and satisfaction. An important result was to show that our results supported the use of Magal's instrument as an alternative to SERVQUAL for researchers and managers interested in service quality assessment.

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Keywords: Service quality; Usefulness; User self-efficacy; Information quality; SERVQUAL; SERVPERF

1. Introduction

Service quality matters in every industry: all companies recognize its importance because it affects customer loyalty and satisfaction [24]. Thus, it is necessary to use a reliable instrument to measure information service quality. SERVQUAL has been applied to various settings and different users but it has been criticized for its reliability and validity [23,34,44]. Modified versions of SERVQUAL have only used its performance measures or SERVPERF. Magal's [27] instrument also addressed service quality. It could be applied to the information service industry and its validity has been proven. Also, while Magal's instrument uses 16 items, SERVPERF needs 21 items. We therefore decided to compare these instruments in an information service context to provide insight into the effectiveness of the two instruments.

Many researchers have suggested that service quality should be included as a measure of IS success [36,46] but despite numerous studies, few have performed empirical tests on the relationship between service quality and IS success factors. One notable exception was that of Landrum and Prybutok [25].

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doi:10.1016/j.im.2006.11.002

In this work we relied on portions of Landrum and Prybutok's instrument and built upon this prior work to further our understanding of service quality measures, we:

(1) validated Magal's and SERVPERF's dimensions,
(2) compared the predictive validity of Magal and the SERVPERF instrument using satisfaction and usefulness as the dependent variables.

2. Literature review

2.1. Service quality

The most influential instrument in measuring service quality has been SERVQUAL, developed in 1988 by Parasuraman et al. [33]; it contains 22 items and has been widely used for measuring service quality in marketing. It features five service dimensions—tangibles, reliability, responsiveness, assurance, and empathy. SERVQUAL was grounded in the Gaps Model [34] which stated that expectations are subjective and consist of user wishes or beliefs that a service provider should exhibit certain characteristics. Customers form their judgment of service performance through interaction with the providers. The gap or difference between customer expectations and perceptions about the provided service results in the customers' perceptions of service quality.

Many studies have validated the use of SERVQUAL in several applications; for example, Van Dyke et al. [45] suggest the use of an IS-context-modified version of the instrument to assess the quality of services supplied by an ISP. However, there are different beliefs on the appropriateness of using SERVQUAL in an IS context and there is some debate on the appropriateness of the instrument itself: prior studies have questioned its dimensionality; for example, Nitecki [29] used a three dimensional model rather than the five proposed by Zeithaml et al. [48]. Recently, Jiang et al. [22] surveyed IT professionals and concluded that four dimensions were more appropriate than five. Furthermore, Wright and Martin [47] investigation of service quality in the higher education sector using importance–performance technique determined that reliability was not significant but that contact, tangibles, and response were significant components of online library services.

In addition, others doubted the predictive power of using gap theory and preferred SERVPERF, the performance-only approach based simply on customers' perceptions of the service provider performance. They contended that performance alone provides better predictive power than SERVQUAL, which uses the gap-based scale: indeed many studies have provided evidence that performance scores exhibit better reliability and validity than do difference scores [3,5]. We therefore used only performance scores in examining SERVPERF for its dimensionality, convergent, and reliability measures.

2.2. Magal's instrument

Two instruments, one by Essex and Magal [13] for measuring information center success and another by Seddon and Kiew [40] for measuring IS success, were adapted in our study. Both were based on the well known instrument of Ives et al. [21] based on work by Bailey and Pearson [4] for measuring IS satisfaction. Magal made a number of modifications to the instrument to reflect aspects believed important to information center success and also changed the scale from a semantic differential to a seven-point Likert scale ranging from low to high for both importance and performance of each item.

Magal's model was based on three dimensions: quality of information center staff service, quality of user-developed applications, and user self-sufficiency. Substituting information quality for quality of user-developed applications, the dimensions for success of libraries became: quality of library staff service, quality of information received, and user self-sufficiency. Because of the nature of information, it is difficult to separate the tangible from the intangible process of delivery [17]. However, since information was the product or outcome, it could be considered separate from, and not a subset of service. In a study of a library reference service, Murfin and Gugelchuk [28] found that library customers appeared to distinguish between satisfaction with service provided and satisfaction with the information received. In our work, service therefore referred to the delivery process, and the variables associated with service were related to how the service was delivered by the staff. Variables associated with information, on the other hand, referred to the outcome or nature of the information product, such as its comprehensiveness or accuracy.

2.3. Service quality and satisfaction

Customer satisfaction is the result of a product or service exceeding what the customers expected [31,32]. Hernon and Whitman defined satisfaction as a sense of contentment that arose from an actual experience [18]. Several researchers, such as Pitt et al. [37], proposed

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