A Study of Government e-Services Quality and Its Effect on Public Satisfaction

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摘要：政界和学界人士已经认识到电子政务的服务质量对公众的网上与网下行为都有着重要的影响。随着大陆网民不断增加，中国政府也更加关注政府网站的服务质量。本研究主要有两个目标，一是分析电子政务服务质量的维度，二是探讨电子政务服务质量和公众满意度的关系。通过对 557 份有效问卷进行定量分析，本研究发现电子政务的服务质量可以分为结果质量和过程质量，前者包括服务的有形性、保证性、可靠性三个要素，后者包括服务的响应性、移情性两个要素。两个维度都正向影响公众满意度，其中结果质量对公众满意度的影响更强。

关键词：服务质量；公众满意度；电子政务；政府网站

Abstract： Both government service practitioners and academic researchers have recognized the major influence that e-service quality has on public on-line and off-line behavior. Mainland China has recently shown an interest in their government website service quality, especially, when the amount of Chinese netizen grows faster. The present study has two primary objectives, firstly, to investigate the dimensionality of government e-services quality, secondly, to explore the relationship between government e-services quality and public satisfaction. 557 effective answered questionnaires were analyzed and the former objective was undertaken by factor analysis, while the latter by regressive analysis. The results show that the government e-service quality has two dimensions, namely, result quality and process quality. The former has three factors: tangibility, assurance and reliability, while the latter has two factors: responsiveness and empathy. They both affect customer satisfaction obversely, while service result quality has more stronger effect.

Key words: service quality, public satisfaction, e-serveices, governement website

1. Introduction

Since the implementation of e-government project of Mainland China in year 2000, the construction of Chinese government portal website has achieved rapid development: Up to June 30, 2008, the amount of Chinese government portal website has reached 40,831 (CNNIC, 2008), meanwhile, government organizations in all levels are no longer satisfied with government portal website having the only function of online government image, but expect to see it transform to practical websites with functions of releasing government information, providing public e-services, and expanding interactive way of online communication. Therefore, it is essential to improve government portal site quality, especially e-service quality, to fulfill new mission of the government, thus public satisfaction can be improved, visit frequency of government portal site can increase, and e-government project can develop in a smooth and healthy way.

2. Literature Review

Currently, there are two scholar schools in the field of service quality: one is North America school represented by Parasuraman, Zeithaml, etc., whose Service Gap Theory and SERVQUAL method have been widely used in theory and in practice, the other is Nordic school represented by Grönroos, etc., whose customer perceived quality theory and three-factor quality model were discussed in theory more than in practice.

Parasuraman, Zeithaml and Berry, the representatives of North America school, clarified the conception of service quality, and adopted qualitative research method to generalize ten service quality dimensions, and they further simplified the service quality into five dimensions, which were tangibility, assurance, reliability, responsiveness and empathy. They also stated SERVQUAL model, and develop 22 measurable items of service quality(Parasuraman, Zeithaml & Berry, 1985). Cronin and Taylor

introduced SERVPERF assessment model of service quality according to customer’s perceived service form customer’s perspective(Cronin & Taylor, 1992). Furthermore, the subsequent scholars had two important findings. The first finding was that 22 quality assessment items could appropriately describe every aspects of service quality.The second finding was that quality assessment dimensions may various in different service sector, for instance, Getty and Thompson (1994) found that tangibility and reliability of service quality in hospitality belonged to the same dimension. Gefen (2002) reported that electronic service quality had three dimensions. He found that assurance, reliability and responsiveness were belonging to a single dimension. Bai and Chen (2005) found public sector service quality included function quality and service process quality.

The representative of Nordic School, Grönroos attributed service quality to the questions of “what” and “how” (Grönroos, 1984), the former is technology quality which focus mainly on what customers could get from service, the latter is function quality which focus mainly on how customers could get service. Based on technology quality and function quality, Grönroos brought forward image quality, the third dimension of service quality. Function quality and technology quality are the prerequisite of image quality. In this way, Lehtinen and Lehtinen（1991）introduced three dimensions of service quality, they were physical quality, interaction quality and organization image. Physical quality described service result, while interaction quality described service process.

The brief analysis above showed that both of the two scholar schools figured that perceived service quality was the function of service expectation and perceived performance, and expectation incongruence theory was the core theory of quality assessment model, however, great divergence existed in these two schools, for example, in study view and in operation process of assessment model, the Nordic School adopted the theory of quality perceiving incongruence, while the North America adopted the model of development discordance (quality = perceive – expectation) in the early period, later, SERVPERF model made up this divergence. This paper attempted to link the theories of these two schools, use empirical analysis to discuss the quality assessment of government e-service, and find ways to improve e-service quatlity and public satisfaction.

3．Method

We took the customer perceived quality perspective, focused on the characteristics of government portal website, introduced the preliminary dimension instruction of government portal website, Then revised the 22 items in SERVQUAL model, adopted seven scale Likert measurement to design the draft questionnaire, and finalized the questionnaire on the base of trial investigation. Questionnaire was put on several government portal websites. Public could directly answer the questionnaire online, and the result would be delivered to the website server computer. We designed a specialized software program in the website server computer to prompt participators to answer the questionnaire completely in order to guarantee the effectiveness of the answered questionnaires. One month later, we received 557 effective answered questionnaires.

4．Data Analysis

The sample included 363 male (65.2%), 194 female (34.8%). For the age, 268 people were more than 35 years old, accounting for 48.1%; for the education level, people with 2-year College and 4-year College education accounted for 34.8% and 37.5% respectively, which was the highest percentage (see table 1). This study used SPSS 11.5 software package to analyze the data and Cronbach α to test the reliability of all questionnaires and two dimensions respectively. The results were 0.8665，0.9648，

Table1: Sample Description

Variables		Frequency	Percentage
Gender	male	363	65.2%
	female	194	34.8%
Age	Under 24	30	5.4%
	25—29	80	14.4%
	30—35	179	32.1%
	Above 35	268	48.1%
Education	High school	78	14.0%
	2-year college	194	34.8%
	4-year college	209	37.5%
	Master degree	76	13.6%

Table2: Factor Analysis of Website Service Quality

Dimensions and question Items	Factor loading	Cumulate variance
Tangibility:		
Webpage design is nice and decent.	0.810	
Website style is concordant.	0.847	
Webpage is easy and clear to read.	0.788	
Website is accord with service content.	0.865	
Insurance:		
Service declared can be implemented.	0.815	
Website shows understanding and relief.	0.854	45.53%
Website information is reliable	0.813	
Website provides service on time.	0.835	
Website accurately records information.	0.862	
Reliability:		
Users trust website and their staffs.	0.825	
Users feel safe to enjoy service.	0.836	
Responses are polite and friendly.	0.851	
Website often upgrades service.	0.802	
Responsiveness:		
Website’s service is accurate.	0.782	
Users can receive feedback quickly.	0.828	
Website is willing to solve problems.	0.712	
Website gives feedback quickly.	0.673	
Empathy:		67.50%
Website care about users.	0.786	
Website gives users personal concern.	0.813	
Website understands users’ needs.	0.846	
Website considers the interest of users.	0.808	
Website provides a convenient way.	0.798	

Table 3: Results of Regressive Analysis

Dependent variable	Independent variables	Std. B	Sig.
public satisfaction	service result quality	0.764	0.000
	service process quality	0.225	0.000

0.9241，higher than 0.6, showing a high reliability of the questionnaire. Sample data was used to do KMO suitability test of quality assessment questions of government portal site, significantly loading on two different dimensions by exploratory factor analysis (See table 2). Factor analysis showed that the quality assessment of government portal website included two dimensions: service result quality and service process quality. The former was consisted by tangibility, assurance, reliability, and the other was consisted by responsiveness and empathy. A question item “my overall satisfaction to service quality of government portal website” was designed to test public satisfaction of government portal website. We used the factors of service result quality and service process quality as variables, and adopted stepwise regression to do regressive analysis. Both factors entered the regressive model (See table 2). The adjusted R^2 ratio was 0.634，which showed the regressive model had high reliability. Moreover, we found that service result quality contributed more to the public satisfaction comparing with service process quality.

5．CONCLUSION AND EXPECTATION

The study result showed that the service quality of government e-service quality could be measured by 22 measurement scales, and their dimensisons included service result quality and service process quality. As we can see, Service result quality had three factors, including tangibility, assurance, reliability of the government e-service, while service process quality has two factors, including responsiveness and empathy of the government e-service. Both two e-service quality dimensions have positvie effect on public satisfaction, while service result quality affected public satisfaction more than service process quality.

Based on the research result above, we thought the service of government portal website should especially concerning on service result quality, in another word, should concerning about what public can get from service to enhance government e-service quality. This is an important approach to improve public satisfaction and increase public visit frequency. In the current process of e-government building, some websites were built into “sleeping website” or “propagandistic webpage”, and had some common problems, such as setting service items according to the demand of government organizations, superficial in service contents, unscientific in service program classification, etc. These will definitely lower public’s participation in building e-government. In order to enhance government e-service quality, it is essential to strengthen the awareness of “user-centered”, communicate with users frequently, understand needs of users, analyze users’ preference, and explore service programs with strong practicability. On the other hand, it accounted for 86% that the participators with or above 2-year college education level in the study sample, while high school education level or below participants only accounted for 14%. As we can see, it reflected that structure of public who registered on government portal site were unbalance, and could not match the demography of more than two hundred and fifty million Chinese nitizen. Thereby, government should make great efforts in promoting the influence of government portal website and make more people enjoy government e-service.

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