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Quality Clusters: Dimensions of Email Responses by Luxury Hotels

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Abstract

A growing body of research investigates hospitality Internet use, but usually focuses on websites rather than the most popular Internet application, email. This study uses cluster analysis and the SERVQUAL-P service quality model to help address gaps in both academic and applied research of email use in the hospitality industry. The cluster analysis of email responses to a mystery guest survey by luxury hotels identified four hotel clusters. The clusters showed significant differences across all 24 email response variables and support four dimensions of email service quality corresponding to SERVQUAL-P's four dimensions.

Keywords: Email Responses, Internet, Luxury Hotels, Cluster Analysis, Customer Service

1. Introduction

While it may have been possible last century, it is nigh impossible for hospitality operators to ignore the Internet this century. Although operators seem to emphasize websites, they should also consider the most popular Internet application, email. Email provides a unique opportunity for personalized and intimate interactions with guests, thus enhancing customer relationships. In particular, when current or potential customers email the hotel, the hotel should respond properly. Just as hotels should respond professionally to telephone calls, surface mail and faxes, hotels should treat email as business communication.

Yet a review of five hospitality email studies showed non-response rates from 18% to 55%, replies within a day from 26% to 81% and other shortcomings in replying professionally (Schegg, Liebrich, Liu, & Murphy, 2006). A review of dozens of website evaluation studies

concludes that hospitality website evaluation is in its early stages (Morrison, Taylor, & Douglas, 2004). Given the dearth of email studies, email evaluation is similarly nascent. Unlike previous studies that test hypotheses on the presence of quality email response features, this Research Note uses cluster analysis to examine underlying dimensions of hotel email responses by clustering hotels on their email response quality.

2. Literature Review

For decades, researchers have acknowledged a positive relationship between service quality (SQ) and customer satisfaction, often using the SERVQUAL model of service quality (Coulthard, 2004). Over a dozen studies have adapted SERVQUAL to websites, usually developing about a half-dozen dimensions of electronic service but noting a limitation that people-delivered services dominate extant SQ literature (Parasuraman, Zeithaml, & Malhotra, 2005).

Yet consumers have non-routine encounters with websites, such as service recovery or special requests. This shortcoming led Parasuraman et al. (2005) to develop two scales of electronic service, a main scale E-S-Qual, and a second scale for service recovery, E-RecS-Qual. A small sample however, limited validation of E-RecS-Qual. Furthermore, this scale applied to service recovery rather than email customer service.

Despite the importance of customer service and prevalence of email, to the authors' knowledge no study has assessed the underlying dimensions of email customer service. The few studies of email customer service group the dimensions on an ad hoc basis (Schegg et al., 2006). This paper follows a suggestion in the seminal SERVQUAL paper, to group organizations into clusters of varying quality images. Examining the different clusters should reveal key attributes of quality service (Parasuraman, Zeithaml, & Berry, 1988, p. 35).

3. Methodology

This research uses and extends data from a study of email responses by 491 luxury chain hotels (Schegg, Murphy, & Leuenberger, 2003). Using a mystery guest methodology, a fictitious customer emailed the hotels, requesting information about room availability for a honeymoon

weekend, special events and nearby medical facilities. The study found that hotels in North America and hotels affiliated with smaller chains outperformed their South American and larger chain counterparts in a few email response features. A content analysis of email replies in that study (see Table 1 later for the 24 variables) yielded the data for this study. After eliminating hotels that did not respond or had missing email response variables, the data set contained 317 hotels.

Two complementary techniques, multivariate and artificial neural networks (ANN), clustered the hotels on 24 email response features. Comparing multivariate and ANN results reduces the inherent subjectivity of cluster analysis and profits from ANN's flexible data assumptions (Kim, Wei , & Ruys, 2003; Kohonen, 2001). This study used SPSS for the multivariate clustering and NeuroShell 2 for the Kohonen networks.

4. Results

The multivariate Ward hierarchical technique (Everitt, 1993) clustered the 317 hotels on the presence of 24 features (binary variables). After testing three, four, and five cluster solutions, four clusters best distinguished among groups. The Kohonen network produced a similar result to the multivariate solution, with a significant relationship ($\chi^2=518$, $df=9$, $p<.001$) and 76% agreement. The multivariate solutions showed significant ($p < .05$) cluster differences on 21 response features, but the Kohonen solution showed significant differences across all features.

Classifying the features into SQ dimensions followed two steps. The first step used cluster membership to group features that showed particularly strong or weak presence in a cluster. The second step drew upon the 16 questions in SERVQUAL-P, a SERVQUAL iteration highlighting personalization (Mittal & Lassar, 1996), to group the features into dimensions resembling the four SERVQUAL-P dimensions – tangibles, responsiveness, personalization and reliability.

Most features fell neatly into a SERVQUAL-P dimension, based on both cluster membership and face validity. For example, personalization refers to courteous employees that recognize customers personally (Mittal & Lassar, 1996). The four corresponding email features refer to courtesy or personalization, and Cluster 3 was the top performer in all four features. Table 1 shows the Kohonen results with the presence of features, significant cluster differences, and four suggested dimensions of email service quality.

Table 1

Kohonen Cluster Profiles (317 hotels and 24 response variables)

Bold numbers signify a cluster leader and *Italics* signify a Cluster laggard

Hotel Response	Cluster 1 %	Cluster 2 %	Cluster 3 %	Cluster 4 %	Total %	Chi-Sq	p
Tangible Reply							
hotel name	100	98	86	46	81	97.50	<.001
telephone number	100	97	15	6	48	239.34	<.001
fax number	100	75	3	0	38	253.62	<.001
signature file	96	98	3	5	43	273.83	<.001
promotional information	75	28	47	7	39	80.66	<.001
hotel address	74	36	0	0	23	160.31	<.001
url	61	34	7	8	25	80.89	<.001
long message	52	16	36	1	26	60.62	<.001
with attachment	30	8	19	1	15	30.35	<.001
chain information	17	8	1	0	6	27.37	<.001
Process / Responsiveness							
within a day	83	33	57	62	59	34.67	<.001
credit card request	45	20	44	20	33	21.42	<.001
cancellation information	20	8	21	5	14	14.78	.002
provisional booking	9	0	7	1	4	9.72	.021
Personalization							
polite opening	74	83	96	67	81	27.24	<.001
guest's name	74	89	93	58	79	39.27	<.001
thank-you	81	69	82	38	67	49.44	<.001
disclaimer (negative)	7	20	3	21	12	19.53	<.001
Reliability							
room request	94	95	100	89	95	10.81	.013
sender's name	96	98	96	86	94	12.52	.006
sender's position	94	98	90	60	85	55.74	<.001
hospital information	68	67	83	66	72	8.57	.036
specials information	38	64	73	8	46	87.58	<.001
honeymoon information	28	47	47	18	35	22.71	<.001
Valid N	69	64	99	85			

The first dimension, *tangible reply*, gives information on the hotel and chain and corresponds to the SERVQUAL dimension of tangibility. *Process* includes a timely response and giving customers individual attention, or responsiveness. *Personalization*, as noted earlier, is courteous and personalized attention. The last dimension, *reliability*, refers to employees performing the service right the first time, such as answering the questions in customer's email.

Cluster 1 was a top performer on the seemingly routine dimensions of providing tangibility, but weak on the customer-focused dimensions of personalization and to a lesser extent, reliability. Cluster 2 performed tolerably on most dimensions except process. Cluster 3 led the other clusters in reliability and personalization, was a top performer in process, but was weak on the easy-to-implement tangible features. The last cluster had poor performance across all dimensions yet perhaps paradoxically, had the strongest presence of disclaimers.

5. Discussion and conclusions

SERVQUAL assumes people-delivered services and with few exceptions, online applications of SERVQUAL assume that websites deliver customer service (Parasuraman et al., 2005). Yet the pendulum is inching back towards including humans, such as the e-recovery service quality scale (Parasuraman et al., 2005). This Research Note continues the swing towards people-delivered services, applying the SERVQUAL-P dimensions to email customer service.

An early step in developing a scale and corresponding framework for electronic service quality is identifying antecedent cues (Parasuraman et al., 2005). This study takes a preliminary and exploratory step towards identifying antecedent cues as well as dimensions of email SQ. Future research should continue this process. Replicating the study with additional email response features would help generalize these results and explore other cues related to the four dimensions.

For practitioners, the 24 features serve as a guide for assessing and improving email SQ. For example, most tangible elements are easy to automate in outgoing emails via standardized signature files. Strategically, hoteliers should discuss at least two issues with their management. What cluster most resembles the hotel and what cluster should the hotel emulate? The first cluster seems a good model, but customers may prefer fewer tangible cues and a slower reply in exchange for the more personalized and polite reply by hotels in the third cluster. Answering the

first question is a simple process of reviewing past emails to customers. Answering the second question necessitates asking customers how these dimensions relate to outcomes such as satisfaction and purchase intentions – another future research avenue.

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