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CUSTOMER LOYALTY TO AN ONLINE STORE: THE MEANING OF ONLINE SERVICE QUALITY

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Abstract

Service quality is crucial in retaining customers in both online and traditional stores. However, measuring online service quality is hampered because of the unique aspects of online service quality that are not part of the widely used service quality instrument, SERVQUAL. Identifying these dimensions and assessing their relative importance is the objective of this study.

New service dimensions are identified: lack of annoying banners, beneficial search engines, site security, quick response time, and customer recognition. Data dealing with Barnes & Noble.com (www.bn.com) indeed show that all five dimensions are correlated with increased customer loyalty. The data also show that service quality overrides the effects of perceived risk, cheaper prices, and cost to switch a vendor. Data dealing with the traditional Barnes & Noble bookshops and including the new dimension of customer recognition shows that these new dimensions do not contribute beyond SERVQUAL.

These preliminary results suggest that although SERVQUAL is a good instrument for assessing the service quality of traditional stores, additional dimensions are needed to capture some of the unique aspects of online service. The results also confirm that in both traditional and online shops, service quality reduces the effects of perceived risk, cost to switch, and relative price.

Keywords: Online service quality, customer loyalty.

MOTIVATION AND THEORETICAL FOUNDATIONS

Customer loyalty is a behavioral intention to return to the vendor for more business and to recommend it to others (Reichheld and Schefter 2000; Zeithaml et al. 1996). Because of this, increased customer loyalty typically leads to increased profit and growth (Chow and Reed 1997; Heskett et al. 1994). Some estimates even suggest that increasing the number of loyal customers by 5% can result in a 30% to 85% increase in profitability (Reichheld and Sasser 1990) among other reasons because loyal customers are more willing to pay a higher price (Chow and Reed 1997; Reichheld and Sasser 1990; Reichheld and Schefter 2000; Zeithaml et al. 1996) and are easier to satisfy (Heskett et al. 1994; Reichheld and Sasser 1990; Zeithaml et al. 1996). The same is true with online stores (Reichheld and Schefter 2000) where the success of some of the leading online brand names, such as Amazon.com, is attributed in part to their ability to master a high degree of customer loyalty (*The Economist* 2000).

Most of the profit that online stores make comes from purchases made by returning, that is loyal, customers. While this is true of traditional stores too, the need to retain customers is more acute among online stores because of the lower degree of customer loyalty on the Internet and the much higher cost, between 20% and 40% more, of attracting new customers to online stores. In fact, many online stores do not show a profit from an average new customer within the first year of repeat purchases by that customer because of the high cost of attracting new customers to online stores (Reichheld and Schefter 2000).

The key to retaining the customers of online stores, and thus having these stores show a profit, is improved service quality (Reichheld and Schefter 2000). Although service quality, in general, is important in creating loyal customers across industries (Hartline and Ferrell 1996; Heskett et al. 1994; Reichheld and Sasser 1990; Zeithaml et al. 1996), it is especially important in the case of online stores because of the ease with which customers can switch from one online store to another (Reichheld and Schefter 2000). Indeed, research suggests that inferior service quality may inhibit the growth of e-commerce websites (Jarvenpaa and Todd 1997), a fact that has not escaped the popular press which has suggested that inferior service quality may be at the root of the troubles of many online stores (Berman and Green 2000; Solomon 2000).

But defining service quality as it relates to *online stores*, and thus assessing the effectiveness of their service and enabling recommendations on how to improve this service, requires a definition of what constitutes the dimensions of service quality in the unique case of online stores. Applying the widely used current measure of service quality, SERVQUAL (Zeithaml et al. 1996), is somewhat problematic in that the measure does not capture the unique automated non-human interface that has become a standard in online stores. The primary objective of this study is to define and test additional dimensions of service quality as they apply to online stores, and to compare the importance of these new dimensions with the established dimensions of service quality as they appear in the widely validated measure, albeit not on the context of e-commerce, of SERVQUAL.

RESEARCH METHODOLOGY

Instrument Development and Pretest

Identifying new online service quality dimensions consisted of several steps. Initially, 17 structured interviews were conducted with experienced online shoppers, mainly executive MBA students. In these interviews, the shoppers were asked to list the five most important aspects of online shops' customer service and to explain what each aspect meant. The interviewees were not told of the research objective. The answers were transcribed and assessed by two judges, both of whom were themselves experienced online shoppers. The additional service quality dimensions that were identified dealt with lack of annoying banners, beneficial search engines, site security, quick response time, and customer recognition.

Multi-items scales reflecting these themes were then created and pre-tested on a group of 41 undergraduate students who were asked to assess www.amazon.com. The predictive validity of the proposed scales was assessed against the validated scale of customer loyalty that Zeithaml et al. (1996) used to assess the predictive validity of SERVQUAL across industries. The pretest also included four items reflecting perceived risk of doing business with the vendor, another four items dealing with cost to switch to another vendor, and another four items dealing with the relative price of books at that vendor compared with the price at other shops. All of the items were measured on a five-point Likert scale ranging from strongly agree to strongly disagree. The items are presented in the Appendix.

In the pretest, the students were instructed to complete the questionnaire based on their experience and to refrain from completing the service quality items if they had no experience with the website or shop. Almost all of the students had previously bought at that site. The data analyses of the pretest data showed that the proposed new scales had good factorial validity and acceptable reliability. The pretest also verified that the proposed scales were significantly correlated with customer loyalty.

Main Data Collection

The survey was then adapted to deal with the bricks-and-mortar *Barnes & Noble* bookstores and with their online namesake, www.bn.com. The respondents, undergraduate and MBA students, were asked to assess each of the items in the Appendix on the same five-point Likert scale, except that the respondents in the main data collection were asked to assess both the online stores and the traditional bookstores side by side for each item. Here too the students were instructed to complete the questionnaire based on their experience and to refrain from completing the service quality items if they had no prior experience with the website or shop. The questionnaire was given to 190 students during class sessions; 176 completed questionnaires were returned.

Preliminary Data Analysis

The Online B&N Store

The data show good factorial validity. A principal components analysis showed five distinct factors for SERVQUAL, one each for the new five service aspects, and factors for loyalty, perceived risk, cost to switch vendor, and relative price of books. After

dropping four SERVQUAL items (5, 6, 17, and 19) all of the items loaded highly only on their related factor. The scales had coefficient Alpha above or near the .80 threshold.

The predictive validity of the new scales was assessed through correlation analyses. The correlations show that the five SERVQUAL dimensions as well as the five new dimensions are significantly correlated with increased customer loyalty, which is also significantly correlated with the relative price of books, and with reduced risk. Nonetheless, in a stepwise linear regression, only tangibles (SERVQUAL items 1 through 4) and secure communications were significant predictors of loyalty ($R^2 = 21\%$).

The Bricks-and-Mortar B&N Store

Annoying banners and site security are inappropriate in bricks-and-mortar stores and so were not included in this part of the data collection. The principal components analysis here resulted in two factors for SERVQUAL, tangibles (items 1 through 4) and all the rest, a factor for the new service quality aspect of customer recognition, and factors for loyalty, perceived risk, cost to switch vendor, and relative price of books. The other items of the new service aspects loaded on SERVQUAL, showing that these are not new service issues in existing stores. These additional items were dropped. All the scales have coefficient Alpha above or near the .80 threshold. Loyalty was significantly correlated with relative price of books, and with the two revealed dimensions of SERVQUAL alone. Nonetheless, in a stepwise linear regression, only the tangibles and the remaining items of SERVQUAL were significant predictors of loyalty ($R^2 = 24\%$).

PRELIMINARY CONCLUSIONS

The study identified five new online service quality aspects. While these do not add to SERVQUAL in capturing service quality in a bricks-and-mortar bookstore, they do capture additional aspects in an online store, most important among them communications security. Interestingly, service quality has different factors in online stores than in bricks-and-mortar stores and only the tangibles aspect of SERVQUAL seems to be important online. Apparently, both online and not, service quality overrides other issues that have been suggested possibly affecting customer loyalty, namely perceived risk, cost to switch, and relative price (Reichheld and Schefter 2000).

References

- Berman, D. K., and Green, H. "Cliff-Hanger Christmas," *Business Week*, October 23, 2000, 2000, pp. EB30-EB50.
- Chin, W. W. "The Partial Least Squares Approach to Structural Equation Modeling," in *Modern Methods for Business Research*, G. A. Marcoulides (ed.), Lawrence Erlbaum Associates, Mahwah, NJ, 1998, pp. 295-336.
- Chow, S., and Reed, H. "Toward an Understanding of Loyalty: The Moderating Role of Trust," *Journal of Managerial Issues* (9:3), 1997, pp. 275-398.
- Gefen, D., Straub, D. W., and Boudreau, M.-C. "Structural Equation Modeling and Regression: Guidelines for Research Practice," *Communications of the AIS* (4:7), 2000, pp. 1-70.
- Hartline, M. D., and Ferrell, O. C. "The Management of Customer-Contact Service Employees: An Empirical Investigation," *Journal of Marketing* (60:October), 1996, pp. 52-70.
- Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E. J., and Schlesinger, L. A. "Putting the Service-Profit Chain to Work," *Harvard Business Review* (72:2), 1994, pp. 164-174.
- Jarvenpaa, S. L., and Todd, P. A. "Consumer Reactions to Electronic Shopping on the World Wide Web," *International Journal of Electronic Commerce* (1:2), 1997, pp. 59-88.
- Reichheld, F. F., and Sasser, W. E. J. "Zero Defections: Quality Comes to Services," *Harvard Business Review* (68:5), 1990, pp. 2-9.
- Reichheld, F. F., and Schefter, P. "E-Loyalty: Your Secret Weapon on the Web," *Harvard Business Review* (78:4), 2000, pp. 105-113.
- Solomon, M. "Service Beats Price on the Web, Study Finds," *Computerworld*, 2000 (http://www.computerworld.com/cwi/story/0,1199,NAV47_STO45848,00.html).
- The Economist*. "E-Commerce: Shopping Around the World," February 26, 2000, pp. 5-54.
- Zeithaml, V. A., Berry, L. L., and Parasuraman, A. "The Behavioral Consequences of Service Quality," *Journal of Marketing* (60:April), 1996, pp. 31-46.

Appendix: Items Used

Demographics

1. Gender
2. Age Group
3. How many time have you bought products on the World Wide Web *in the last 6 months*
4. How many times have you used Barnes & Noble.com to BUY books?
5. How many times have you used Barnes & Noble.com to INQUIRE about books?
6. How many times have you given your credit card number on the Web *in the last 6 months*?

Customer Loyalty (Zeithaml et al. 1996)

1. I would encourage others to use the vendor
2. I would consider the vendor as first choice when buying books
3. I am inclined do more business with the vendor

Perceived Risk with Vendor (new scale)

1. There is a significant threat doing business with the vendor
2. There is a significant chance of loss in doing business with the vendor
3. There is a significant risk in doing business with the vendor
4. My credit card information may not be secure with the vendor

Perceived Switching Costs (new scale)

1. Switching to another book vendor would be too expensive
2. Switching to another book vendor would take too long
3. Switching to another book vendor would cause too many problems
4. Switching to another book vendor would require too much learning
5. Switching to another book vendor would require too much effort

Perceived Relative Price of Books (new scale)

1. In my experience, books prices are generally cheaper at the vendor
2. I will probably not save money by buying books at another vendor
3. Book prices at the vendor are generally less costly
4. Overall, it is cheaper to buy books at the vendor

Existing Dimensions of Service Quality (SERVQUAL)

1. The website or shop has an up-to-date appearance
2. The website or shop is visually appealing
3. The products are neat in appearance
4. The appearance of the website or shop are in keeping with its services
5. When the vendor promises to do something by a certain time, it does
6. When I have a problem, the vendor has a sincere interest in solving it
7. The vendor is dependable
8. The vendor provides its services at the time it promises to do so
9. The vendor insists on error-free records
10. The vendor tells customers exactly when services will be performed
11. The vendor gives prompt service to customers
12. The vendor is always willing to help customers
13. The vendor is never too busy to respond to customer requests
14. The vendor's behavior instills confidence in customers
15. Customers feel safe in their transactions with the vendor
16. The vendor is consistently courteous with customers
17. The vendor has the knowledge to do its job
18. The vendor gives customers individual attention
19. The vendor has operating hours that are convenient to customers

20. The vendor gives customers personal attention
21. The vendor has the customers' best interests at heart
22. The vendor understands the specific needs of its customers

New Dimensions of Service Quality (New Items)

Lack of Annoying Banners

1. There are no annoying banners or ads at the vendor
2. The information needed is presented without annoying distractions
3. The vendor provides the services requested without un-requested ads.

Beneficial Search Engines

4. There are beneficial search engines at the vendor/website
5. There are additional beneficial features at the vendor/ website
6. The vendor provides helpful links

Site Security

7. The vendor/website is using a secure connection with my credit card
8. The information I enter is protected from eavesdroppers
9. The information I enter is secure

Quick Response Time

10. The website/vendor responds quickly
11. I do not have to wait long periods of time when at the website/vendor

Customer Recognition

12. The website/vendor remembers who I am
13. The website/vendor remembers my previous preferences
14. The website/vendor remembers my previous purchases
15. The website/vendor remembers my credit card number

