

University of Massachusetts Amherst  
**ScholarWorks@UMass Amherst**

---

Travel and Tourism Research Association:  
Advancing Tourism Research Globally

2009 ttra International Conference

---

# Effects of Culture and Service Quality on Affective Service Experience Quality of Guests

Joong-won Lee PhD

*Department of Recreation, Sport, and Tourism Management, University of St. Francis*

Linda S. Ralston PhD

*Department of Parks, Recreation, and Tourism, University of Utah*

Gary D. Ellis PhD

*Department of Recreation, Park, and Tourism Sciences, Texas A&M University*

Follow this and additional works at: <https://scholarworks.umass.edu/ttra>

---

Lee, Joong-won PhD; Ralston, Linda S. PhD; and Ellis, Gary D. PhD, "Effects of Culture and Service Quality on Affective Service Experience Quality of Guests" (2016). *Travel and Tourism Research Association: Advancing Tourism Research Globally*. 20.  
[https://scholarworks.umass.edu/ttra/2009/Presented\\_Papers/20](https://scholarworks.umass.edu/ttra/2009/Presented_Papers/20)

This is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Travel and Tourism Research Association: Advancing Tourism Research Globally by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

# Effects of Culture and Service Quality on Affective Service Experience Quality of Guests

Joong-won Lee, Ph.D.  
Dept. of Recreation, Sport, and Tourism Management  
University of St. Francis  
Joliet, IL USA

Linda S. Ralston, Ph.D.  
Dept. of Parks, Recreation, and Tourism  
University of Utah  
Salt Lake City, UT USA

Gary D. Ellis, Ph.D.  
Dept. of Recreation, Park, and Tourism Sciences  
Texas A & M University  
College Station, Texas USA

## ABSTRACT

*This study examined the effect of culture and dimensions of service quality on positive affect, negative affect and satisfaction of hotel guests following a service encounter. Each of 82 participants viewed eight video clips of staged service encounters. Video clips ranged from 5-8 minutes in duration. Based on an orthogonal design, each video depicted a unique combination of levels of five service quality dimensions: reliability, responsiveness, empathy, tangibles, and assurance (Parasuraman, Zeithaml, and Berry 1988). Following each clip, participants completed self-report measures of affect and satisfaction. Data were analyzed using hierarchical linear modeling techniques (Raudenbush and Bryk 2002; Luke, 2004). The presence or absence of each service quality dimension in the model was indicated with dummy vectors. Results indicate that service experience of guests is substantially affected by the five service quality dimensions, but, in the population included in the experiment, those dimensions do not interact with culture. This study suggests that service providers might optimize guest experiences by focusing on preparation of staff to meet empathy and assurance needs of guests, in addition to the other service quality dimensions.*

## INTRODUCTION

The tourism and hospitality industry depends heavily on the quality of affective guest experiences that result from service encounters (e.g., Williams and Buswell 2003). As a result, a significant body of literature has been developed to describe service quality strategies that may ensure that guest experiences are positive. Among the more notable of these strategies are derived from the SERVQUAL (Parasuraman, Zeithaml, and Berry 1988) and SERVPERF (Cronin and Taylor 1994) perspectives. These models underscore the importance of five dimensions of service quality: reliability, responsiveness, assurance, tangibles, and empathy. When services are provided correctly (reliability), timely (responsiveness), with a sense of competence and commitment (assurance), with obvious concern for the individual guest (empathy), and in an attractive, orderly, and functional setting, guests are expected to exhibit

pleasure (positive affect) and a sense of satisfaction with the service encounter. In the absence of such service performances, negative affect is expected, along with low positive affect and low satisfaction.

The five service quality factors that are assumed to elicit these immediate guest experiences may, however, function very differently, depending on the values and expectations of guests from different cultures (Hofstede 1980). Both Matilla (1999) and Donthu and Yoo (1998) have found specific service quality dimensions to be of particular importance to people of different cultures. As such, it is reasonable to assume that culture may interact with service quality dimensions in terms of its effect on immediate affective experiences of guests. An important question for service quality in the tourism industry, then, is identification of service quality performance elements that are particularly sensitive to people from different cultures. With such information, hosts may structure encounters that produce optimal experiences for guests with diverse cultural backgrounds.

In one study of the effect of culture on service quality judgments, Shih (2006) found a significant effect of culture on guest reports of service quality in a Taiwanese restaurant. That design, however, failed to take into account the confounding effect of the habit of Western travelers to provide gratuities to service providers. This study extended previous research on service quality and culture by using an experimental design and controlling for nuisance variables that have not been previously controlled in correlational investigations of the relationships among service quality, culture, and guest experiences. Specifically, this study examined the effect of culture and dimensions of service quality on positive affect, negative affect and satisfaction of tourists following a service encounter.

## METHODS

The sample consisted of international and domestic students of a university in the United States. The sample included students with United States citizenship ( $n=34$ ) and students from three Eastern countries: Korea, China, and Japan ( $n= 48$ ). The university student sample was considered to be appropriate because students are frequent travelers and guests of hotels. The average number of days of staying at hotel in the past year for the sample was 8.79 days. The average age of the sample was 29 years old (range from 19 to 50 years old).

Outcome measures included five-item measures of positivity of affect and negativity of affect (Watson and Clark 1994), along with a single item measure of satisfaction. Examples of positivity of affect items included “happy,” “friendly,” and “pleased.” The alpha reliability coefficient for the positivity of affect scale was .94.

Five items were also used to assess negativity of affect (Watson and Clark 1994). Examples of these items included “upset,” “hostile,” and “distressed.” Cronbach’s alpha for this scale was .88. Based generally on Kano’s model (Kano, Serku, Takahashi, and Tsuji 1984), a single-item satisfaction scale was created by using a graphic of a temperature thermometer. Kano’s model of guest satisfaction asserts that product features that deliver unanticipated value elicit delight; a state of high satisfaction. These features have been described as “Exciting Quality” features in the Six Sigma Literature (e.g., Pyzdek, 2003). An example of an Exciting Quality

Feature would be the unexpected addition of a free breakfast or an upgraded, contour pillow following purchase of a hotel room. Five descriptors of satisfaction levels were positioned at different “mercury levels” on the thermometer: “fully delighted”, “satisfied,” “indifferent,” “dissatisfied,” and “disgusted.” Scores on the single-item measure of satisfaction could range from 0 to 10.

Each participant viewed eight video clips of staged service encounters and reported her or his experiences (affect measures and satisfaction) following viewing of each clip. Video clips ranged from 5-8 minutes in duration. Based on an orthogonal design (See Table 1.), each video depicted a unique combination of levels of five service quality dimensions: reliability, responsiveness, empathy, tangibles, and assurance (Parasuraman, Zeithaml, and Berry 1988). This design implies that all main effects are uncorrelated. In a given clip, for example, reliability was high, responsiveness was low, empathy was high, assurance was low, and tangibles were high. All clips included the same actors, the same service encounter, and the same setting, but the script and set were modified to manipulate the service quality dimensions. The video clips were professionally produced. Actors in the video were three volunteers. After each video clip, students were asked to complete the questionnaire containing the positive and negative affect items and the single item measure of satisfaction. Table 1 includes the eight orthogonal design scenarios.

Table 1. Card Used in Orthogonal Design

Card ID	Tangibles	Reliability	Responsiveness	Assurance	Empathy
1	Good	Good	Bad	Bad	Bad
2	Good	Good	Good	Good	Good
3	Bad	Bad	Good	Bad	Bad
4	Bad	Good	Bad	Good	Bad
5	Good	Bad	Bad	Bad	Good
6	Bad	Good	Good	Bad	Good
7	Good	Bad	Good	Good	Bad
8	Bad	Bad	Bad	Good	Good

Data were analyzed using hierarchical linear modeling techniques (Raudenbush and Bryk 2002; Luke, 2004). The presence or absence of each service quality dimension in the model was indicated with dummy vectors. Product vectors between each of these and a vector representing nationality (United States citizen vs. citizens of Eastern countries) were used to represent the service quality-by-culture interaction effect.

In order to minimize the accumulation of experimental error across multiple statistical tests, the analysis strategy involved calculation of three models for each of the three outcome variables: positivity of affect, negativity of affect, and satisfaction. The first model constructed for each of these variables was a null model, which yielded a measure of “random effects” variability in the outcomes as a function of individual differences among study participants. A partial model was then constructed to examine the main effects of culture and service quality.

Finally, a full-model was constructed that included the random effects (null model), the main effects of service quality and culture (partial model), and interactions between culture and the service quality factors. Differences between these models were evaluated using likelihood functions and the chi square distribution. The hierarchical linear models for these analyses (Positive affect, Negative affect, and satisfaction) are as follows:

Positive affect/Negative affect/Satisfaction

Null model

$$\text{Level 1 : } PAF/NAF/Satisfaction = \pi_{00} + e_i$$

$$\text{Level 2 : } \pi_{00} = \beta_{00} + \gamma_0$$

Partial model

Level 1

$$PAF/NAF/Satisfaction = \pi_{00} + \pi_1 (Tangible) + \pi_2 (Assurance) + \pi_3 (Reliability) + \pi_4 (Responsiveness) + \pi_5 (Empathy) + e_i$$

Level 2

$$\pi_{00} = \beta_{00} + \gamma_0$$

$$\pi_1 = \beta_{10}$$

$$\pi_2 = \beta_{20}$$

$$\pi_3 = \beta_{30}$$

$$\pi_4 = \beta_{40}$$

$$\pi_5 = \beta_{50}$$

Full model

Level 1

$$PAF/NAF/Satisfaction = \pi_{00} + \pi_1 (Tangible) + \pi_2 (Assurance) + \pi_3 (Reliability) + \pi_4 (Responsiveness) + \pi_5 (Empathy) + e_i$$

Level 2

$$\pi_{00} = \beta_{00} + \gamma_0$$

$$\pi_1 = \beta_{10} + \beta_{11} (Nationality)$$

$$\pi_2 = \beta_{20} + \beta_{21} (Nationality)$$

$$\pi_3 = \beta_{30} + \beta_{31} (Nationality)$$

$$\pi_4 = \beta_{40} + \beta_{41} (Nationality)$$

$$\pi_5 = \beta_{50} + \beta_{51} (Nationality)$$

## RESULTS

Evaluation of the null model revealed that the variance component associated with the effect of individual differences was significant ( $\chi^2 = 147.493, p < .001$ ) for positive affect, significant ( $\chi^2 = 233.952, p < .001$ ) for negative affect, and significant ( $\chi^2 = 112.889, p < .001$ ) for satisfaction. Intraclass correlations were .09, .18, and .05 for positivity of affect, negativity of affect, and satisfaction, respectively.

Comparisons between null models and partial models for all dependent variables indicated that the models were significantly different for positive affect ( $\chi^2 = 575.04, p < .01$ ); negative affect ( $\chi^2 = 343.17, p < .01$ ) and satisfaction ( $\chi^2 = 492.96, p < .01$ ). However, no significant differences were found in comparisons of the partial models with the full models (positive affect,  $\chi^2 = 13.48, p > .01$ ; negative affect,  $\chi^2 = 15.02, p > .01$ ; satisfaction,  $\chi^2 = 8.46, p > .01$ ). The  $R^2_{PRE}$  (proportional reduction in error) associated with positive affect from null model to partial model was .510 and from null model to full model was only .002 units higher, .512. Similarly, the  $R^2_{PRE}$  association with negative affect from null model to partial model was .332 and from null model to full model was only .337. The  $R^2_{PRE}$  association with satisfaction from null model to partial model was .494 and from null model to full model was .498. These results indicate that service experience of guests is substantially affected by the five service quality dimensions, but, in the population included in the experiment, those dimensions do not interact with culture.

Table 2. Model Fit Test Results

Response	Deviance			$R^2_{PRE}$		$\chi^2$	
	Null	Partial	Full	Null to	Null to	Null to	Partial to
	Model <sup>a</sup>	Model <sup>a</sup>	Model <sup>a</sup>	Partial	Full	Partial	Full
	Model	Model	Model	Model	Model	Model	Model
Positive Affect	3908.8842	3333.8406	3320.3615	.510	.512	575.04*	13.48
Negative Affect	3614.4499	3271.2728	3256.2533	.332	.337	343.17*	15.02
Delightedness	2874.4663	2381.5020	2373.0441	.494	.498	492.96*	8.46
Number of Parameters	4	14	19			<i>df</i>	10
							5

( $p < .01$ )  
Critical value for  $df = 10$  is 23.21; Critical value for  $df = 5$  is 15.086

<sup>a</sup> The null model is an intercept-only model, the partial model includes main effect of service quality, and the full model includes the main effects of service quality and cross-level interaction between service quality and culture.

With the exception of “responsiveness” in the partial model of negative affect, coefficients of all five service quality dimensions were significant in all three analyses. Because the design is orthogonal, the relative magnitude of the maximum likelihood regression coefficients suggests relative strength of effects among the five service quality dimensions. “Empathy,” was, by far, the most salient factor in all three of the analyses. In the analysis of positive affect, the coefficient for empathy was 6.80, while the coefficient of none of the other variables exceeded 2.0. In the analysis of negative affect, the coefficient for empathy was -4.17, and the second

largest coefficient was roughly half that magnitude in absolute value, -2.04. For satisfaction, the coefficient for empathy was 2.92, and the second highest was 1.09. “Assurance” was the second most salient predictor in the analyses of negative affect and satisfaction. In the analysis of positive affect, coefficients for assurance, responsiveness, and reliability were all approximately 1.90. These results suggest that service providers might optimize guest experiences by focusing on preparation of staff to meet empathy and assurance needs of guests, in addition to the other service quality dimensions.

## DISCUSSION

Mattila’s (1999) found that Western customers place more importance on tangible cues. Donthu and Yoo’s (1998) found that the “assurance” dimension is an important element for collectivist societies. In contrast, this study found no statistically significant service quality-by-culture interaction effect. Perhaps these inconsistent results are a function of different populations used across these studies. The population studied in this experiment included international university students who may have been more socialized into United States culture than other populations of travelers. An appropriate next step for this line of research would be to utilize the questionnaire and videos with representatives of the traveling public, preferably with travelers that may not have had any previous experience with western-style hotel service. A limitation of this study was dealing with participants’ fatigue. This study was held over 50 minutes without any break. Participants were guided to watch a film with eight scenarios which included a similar story continuously. The construction of the scenarios required the manipulation of the five variables within the eight scenarios, which might have contributed to the fatigue of the viewers. We observed increased levels of fidgeting and heavy sighs after the fifth scenario. After completing this study, a few participants expressed concerns about the length of this study.

In addition, the salience of the “empathy” and “assurance” dimensions is particularly notable. These results suggest that in preparing front-line personnel in the hospitality industry, managers must not only train workers to maintain an attractive and orderly environment and provide accurate and responsive service, but they must also attend to communication patterns that communicate assurance and empathy. Practices such as using guests’ names, sharing positive comments about their place of residence, and actively listening and responding to experiences that guests describe beyond the service encounter may be essential for optimizing affective experiences of guests.

## REFERENCES

- Cronin, J. J., and S. A. Taylor (1994). "SERVPERF versus SERVQUAL: Reconciling Performance-based and Perceptions-minus-expectations Measurement of Service Quality." *Journal of Marketing*, 58(1): 125-131.
- Donthu, N., and B. Yoo (1998). "Cultural Influences on Service Quality Expectation." *Journal of Service Research*, 1(2): 178-186.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-related Values*. Beverly Hills, CA: Sage.
- Kano, N., N. Serku, F. Takahashi, and S. Tsuji, (1984). "Attractive Quality and Must-be Quality." *The Journal of the Japanese Society for Quality Control*, 14(2): 39-48.
- Luke, D. A. (2004). *Multilevel Modeling*. Thousand Oaks, CA: Sage Publications.
- Mattila, A. S. (1999). "The Role of Culture in the Service Evaluation Process." *Journal of Service Research*, 1(3): 250-261.
- Parasuraman, A., V. A. Zeithaml, and L. L. Berry (1988). "SERVQUAL: A Multiple-item Scale for Measuring Consumer Perceptions of Service Quality." *Journal of Retailing*, 64(4): 12-40.
- Pyzdek, T. (2003). *The Six Sigma Handbook*. New York: McGraw-Hill.
- Raudenbush, Stephan. W., and Anthony. S. Bryk, (2002). *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks, CA: Sage Publications
- Shih, Ching-He. "Effects of Culture on Service Quality and Customer Satisfaction Ratings." (PhD diss., University of Utah, 2006).
- Watson, D., and L. A. Clark (1994). "*The PANAS-X: Manual for the Positive and Negative Affect Schedule—Expanded Form*." (Unpublished manuscript, University of Iowa, 1994).
- William, C., and J. Buswell (2003). *Service Quality in Leisure and Tourism*. Cambridge, MA: CABI Publishing.

### Contact Information:

Joong-won Lee, Ph.D.  
Department of Recreation, Sport, and Tourism Management  
University of St. Francis  
500 Wilcox St.  
Joliet, IL 60435  
815-740-3812  
815-740-6366 (Fax)  
[Jlee@stfrancis.edu](mailto:Jlee@stfrancis.edu)