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## Agent Performance and Customer Satisfaction

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## Agent Performance and Customer Satisfaction

### Abstract

To fulfill its mission, Extension must develop programs that are relevant and high quality, and improve the lives of clients. Customer satisfaction surveys are used in Florida to collect data about these attributes. It is also important to understand how employee performance affects customer satisfaction. Our findings show that customer satisfaction was not significantly influenced by agent performance and that Florida Cooperative Extension benefits from the experience of its workforce. Given the importance of customer satisfaction as Extension's performance measure for the Florida Legislature, we suggest that administrators should emphasize customer satisfaction as a major factor in employee performance scores.

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## Introduction

Given the importance of ensuring program relevance, quality, and impacts, as well as the use of customer satisfaction surveys in accountability, understanding the relationship that exists between employee performance and customer satisfaction is critical to identifying how well an organization is fulfilling its mission. Thus, Cooperative Extension must deliver relevant, high-quality programs that, in turn, help improve the lives of clients (Ladewig, 1999).

In Florida, these attributes (relevance, quality, and impact) are measured, in part, using a statewide customer satisfaction survey. The survey includes questions about clients' experience with quality of service, short-term outcomes, and overall satisfaction with Extension. The survey was initiated in 1988 in response to the Florida Board of Regents' recommendation that Florida Cooperative Extension survey their clients to assess the quality of services delivered to the citizens of Florida (Florida Board of Regents, 1988).

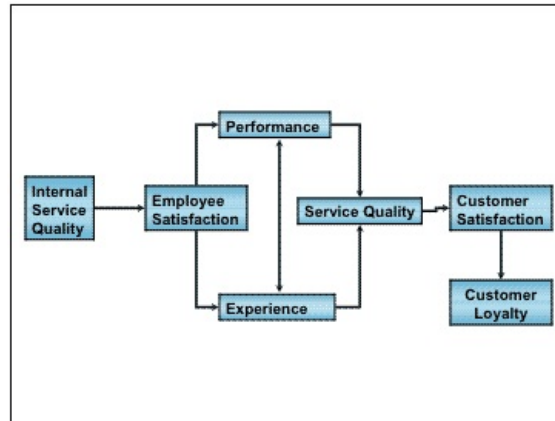
With the passage of the Government Performance and Accountability Act in 1994, Florida joined Oregon, Texas, and the federal government in requiring agencies to establish measurable performance objectives as part of the budget processes. Since 1997, the annual customer satisfaction survey has been used annually as part of the overall organizational evaluation system for the University of Florida. For Florida Cooperative Extension, the survey serves as the primary indicator of organizational performance. Specifically, the performance standard for Florida Cooperative Extension is that 98% of clientele will indicate that they are satisfied or very satisfied with the quality of service received.

In the study discussed here, we combined Florida customer satisfaction survey data with Extension personnel data to explore the relationship between customer satisfactions and agent performance.

## Background

The causes and consequences of customer satisfaction have become the focus of recent research. Of special interest is the link between employee performance and customer satisfaction. Heskett, Jones, Loveman, Sasser, and Schlesinger (1994) establish a framework in which internal service quality drives employee satisfaction, which, in turn, drives employee performance that generates service quality. Finally, service quality drives customer satisfaction that leads to customer retention and profits. This framework was used successfully to improve organizational objectives at Sears Roebuck Co. (Rucci, Kirn, & Quinn, 1998). Similarly, Frederick Reichheld (2000) concluded that employee performance is essential to customer satisfaction, which, in turn, creates customer loyalty (Figure 1).

**Figure 1.**  
Service-Profit Model



Among the factors that affect the quality of services delivered to clients are employee performance, experience, and the level of staffing. Employee performance is key to the success of most organizations and must therefore be evaluated. Measuring job performance is the process of determining how closely a record of behaviors and/or outcomes that occurred during a specified period matches the most nearly perfect record that could have been achieved during the period and then assigning it a corresponding number (Kane & Freeman, 1997).

In addition to employee behavior, other factors affect employee performance. Functional experience accords employees the opportunity to develop the skills and competencies specific to a discipline or program area (e.g., youth development or crop production), as well as the expertise in the methods of working in an area (Gelekanycz & Black, 2001). Number of employees has often been associated with employee performance and organizational outcomes (Anderson, Hsieh, & Su, 1998).

## Purpose and Objectives

In the study, we explored the relationship between customer satisfaction and employee performance. Specifically, a logistic regression model was created to examine the effects that the determinants of service quality and employee performance indicators have on overall customer satisfaction. In keeping with the current research on customer loyalty, the study compared satisfied customers with very satisfied customers. It is the authors' belief that in the public sector it is very satisfied customers who will continually use services of Extension a manner similar to repeat private sector.

## Methods

### Data

The analysis is based upon data collected from Extension clientele from 1997 to 2000 using a customer satisfaction survey. A sample of Extension clientele from 47 of 67 Florida counties yielded 2,028 useable responses. Information from administrative records, including employee performance scores (ratings range from 1 to 7), employee experience (years of service), and the number of agents in a particular county, was linked with the client surveys based on the content of the information provided to clients. The data collected for the research represent 147 agents with an average of 14 survey responses per agent.

### Survey Instrument

A questionnaire was originally developed using Bennett's (1982) Rapid Appraisal of Programs model and later revised to obtain service quality feedback from Extension clientele, type of clientele contact, and demographic information, including age, race, gender, educational attainment, and previous experience with Extension. This is consistent with Parasuraman, Zeithaml, and Berry's (1985) and Cronin and Taylor's (1992) work, which stressed the importance of collecting customer perceptions of service quality relating to reliability, responsiveness, competence, communication, and knowing the customer.

To ascertain clientele perceptions of service quality, the survey included five questions related to their experiences with Florida Cooperative Extension. These included:

1. Was the information accurate and up-to-date? (coded as "yes" or "no/don't know");
2. Was the information you received relevant to your situation? ("yes" or "no/don't know");
3. Did you have an opportunity to use the information? ("yes" or "no");
4. Did the information solve your problem or meet your need? ("yes" or "no/don't know"); and
5. Did you share the information with anyone else? ("yes" or "no").

A sixth question asked clients, "How do you rate the quality of the service you received?" to obtain an overall assessment of customer satisfaction. For the study, only the "satisfied" and "very satisfied" responses were used. The survey also included questions about respondents' age (in years), gender, race-ethnicity (coded as "white, non-Hispanic" or "non-white"), education ("high school or less," "some college," "college degree," or "graduate or professional degree"), and employment status ("employed," "unemployed," or "not in the labor force").

## Survey Procedures

To generate a representative sample of Extension clientele, a procedure was to collect the names, addresses, phone numbers, and nature of the information provided (the procedures are detailed in Israel, 2000). For a 30-day period, sign-in sheets for visitors to the Extension office were established. Telephone logs collected client contacts by phone. Finally, agents presenting planned programs (e.g., demonstrations, field days, and workshops) collected client information prior to each program. At the end of the contact collection process, a sample of 60 clients was selected using a systematic random sample methodology for each county.

Approximately 1 month after the initial clientele contact, county faculty, support staff, and volunteers interviewed customers over the telephone. Responses were recorded, and completed surveys were mailed to Program Development and Evaluation Center (PDEC) for coding and analysis. The telephone survey produced an unadjusted response rate of 72%.

Analysis of the data included descriptive statistics, distribution of client responses by agent attribute, bivariate analysis, and logistic regression (a multi-variate technique to compare "satisfied" with "very satisfied" responses).

## Findings

Tabulations for the five service quality determinants showed that respondents indicated that the information was up-to-date and accurate (94%), and relevant (93%), that they had the opportunity to use it (76%), that the information solved the problem for those using it (81%), and that they shared information with others (66%). Twenty percent of respondents indicated they were satisfied, and 80% were very satisfied with the service received. These results are similar to those reported for Extension clients in South Carolina and Texas (Radhakrishna, 2002).

In addition, the "typical" agent in the study had 13.5 years of experience and an evaluation score of 5.3 out of a possible score of 7. Also, a "typical" county office included a staff of approximately six agents.

Our initial analysis examined each agent attribute and overall customer satisfaction. The results indicate that a statistical relationship exists between customer satisfaction and both agent experience and evaluation score (Table 1). The distribution of clientele responses for agent experience indicated that the percentage that was very satisfied dropped substantially among agents having 20 or more years of experience. Agents with 5 to 19 years of experience had the highest percentage of very satisfied clients. With the exception of agents with an evaluation score of three, clientele were less likely to indicate that they were very satisfied compared to satisfied as an agent's evaluation score increased.

But agent evaluation score was not significant after other predictors were included in the logistic regression model. Regarding the number of agents within a county, there was no pattern in the data, meaning there is not much difference between a large professional staff and a small one.

Our findings for agent evaluation score were similar to those found by Rucci, Kirn, and Quinn (1998) and Davis and Verma (1993). These studies could not establish a direct relationship between employee performance and overall customer satisfaction. However, the findings for employee experience differ somewhat from those of other studies. Geletkanycz and Black (2000) found that agent experience accords employees the opportunity to develop skills and competencies specific to their discipline. While this is probably true during the initial period of employment, long-tenured agents showed markedly lower client satisfaction.

**Table 1.**  
Distribution of Client Responses by Agent Attribute

	<b>Satisfied</b>	<b>Very Satisfied</b>	<b>P-Value*</b>
<b>Agent Evaluation Score</b>			.219
Evaluation Score of 3	23.4%	76.6%	
Evaluation Score of 4	12.2%	87.8%	
Evaluation Score of 5	21.1%	78.9%	
Evaluation Score of 6	22.4%	77.6%	
Evaluation Score of 7	27.6%	72.4%	
<b>Agent Experience</b>			.0007
Agent with < 5 Years Experience	24.5%	75.5%	
Agent with 5 to 9 Years Experience	18.6%	81.4%	
Agent with 10 to 14 Years Experience	16.9%	83.1%	
Agent with 15 to 19 Years Experience	20.4%	79.6%	
Agent with 20 to 24 Years Experience	29.4%	70.6%	
Agent with more than 24 Years Experience	27.8%	72.2%	
<b>Number of Agents in the County</b>			.177
1 Extension Agent	32.5%	67.5%	
2 Extension Agents	19.8%	80.3%	
3 Extension Agents	24.9%	75.1%	
4 Extension Agents	19.2%	80.8%	
5 to 9 Extension Agents	24.3%	75.8%	
10 or more Extension Agents	18.3%	81.7%	

\*The P-value indicates the significance level for a given attribute while controlling for other predictors (based on logistic regression results).

The relationship between the service quality determinants and overall customer satisfaction were examined similarly. The results in Table 2 indicate that all of the service quality determinants except whether clientele had the opportunity to use the information have a statistically significant relationship with overall satisfaction. When information is up-to-date and accurate, clientele are 21 percentage points more likely to indicate that they are very satisfied compared to satisfied. When information is relevant to a respondent's situation, results conclude that respondents are 34 percentage points more likely to indicate that they are very satisfied compared to only satisfied. When information solves a client's problem, they are 18 percentage points more likely to indicate that they are very satisfied versus satisfied. Finally, respondents who share information with others indicated that they were 16 percentage points more likely to be very satisfied.

**Table 2.**  
Service Quality Determinants

	<b>Satisfied</b>	<b>Very Satisfied</b>	<b>P-Value*</b>
<b>Up-to-date and accurate information</b>			
Yes	22.0%	78.0%	.013
No	43.0%	57.0%	
<b>Relevant information</b>			
Yes	21.4%	78.6%	<.001
No	55.8%	44.2%	
<b>Opportunity to use information</b>			
Yes	19.3%	80.7%	.194
No	35.2%	64.8%	
<b>Information solved a problem</b>			
Yes	17.4%	82.6%	<.0001
No	35.9%	64.1%	
<b>Information was shared with others</b>			
Yes	17.6%	82.4%	<.0001
No	33.7%	66.3%	
*The P-value indicates the significance level for a given attribute while controlling for other predictors (based on logistic regression results).			

In addition to service quality determinants and agent attributes, client attributes were included in

the bivariate analysis and logistic regression to determine if there were any sub-groups of clientele who were less well served. Findings show that respondent education and age are statistically significant with overall satisfaction (Table 3). The distribution of responses shows that clientele who have obtained more formal education also are more likely to indicate that they are very satisfied compared to satisfied. Similarly, more of the older respondents were very satisfied than were younger ones. Distributions for gender and race did not indicate that any particular group was more or less satisfied. This is consistent with similar studies conducted by South Carolina Cooperative Extension (Nielson, 1999).

**Table 3.**  
Client Attributes

	<b>Satisfied</b>	<b>Very Satisfied</b>	<b>P- Value*</b>
<b>Education</b>			.015
Some High School or less	33.1%	66.9%	
High School graduate	24.5%	75.5%	
Some college	21.6%	78.4%	
College degree	19.5%	80.5%	
Postgraduate degree	17.3%	82.7%	
<b>Age</b>			.0003
29 years old or less	33.1%	66.9%	
30 to 39 years old	24.8%	75.2%	
40 to 49 years old	21.6%	78.4%	
50 to 64 years old	19.4%	80.6%	
65 years or older	19.2%	80.8%	
<b>Gender</b>			.358
Male	24.8%	75.2%	
Female	21.6%	78.4%	
<b>Race</b>			.416
White, Non-Hispanic	21.9%	78.1%	
Non-White	26.8%	73.2%	
*The P-value indicates the significance level for a given attribute while			

## Discussion

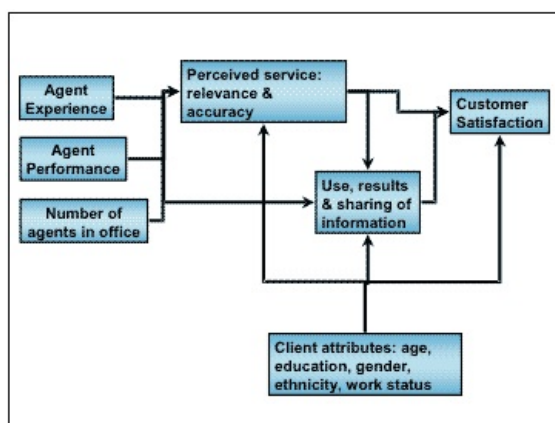
The study discussed here focused on the relationships between employee performance and customer satisfaction in Florida Cooperative Extension. Agent attributes, service quality determinants, and clientele attributes were examined in order to understand their relationship with overall customer satisfaction. We found that customer satisfaction was not significantly influenced by agent performance (as measured by the annual evaluation score).

This finding contradicts conventional wisdom that Extension's top performers have the highest quality programs and, in turn, generate the greatest benefits for clients. This raises questions about whether the current employee evaluation system adequately measures aspects of agents' performance that are important to the mission of the organization. Given that the organization has established the importance of customer satisfaction as *the* performance measure for the Florida Legislature, we suggest that the annual performance assessment process use customer satisfaction as a major factor in assigning employee performance scores.

We also found that Florida Cooperative Extension benefits from the experience of its workforce (at least up to a point) and therefore should examine policies that increase employee satisfaction. This might include compensation, benefits, and work environment. In addition, hiring practices should be reviewed to emphasize relevant experience as criteria for employment in the organization.

We found that service quality determinants have a substantial effect on overall satisfaction. Though only one of the agent attributes was statistically significant in the logistic regression model, it is likely that these have an indirect influence on customer satisfaction via the service quality determinants (Figure 2). While we found that increasing experience had a positive effect for agents who were relatively new to Extension, long-time agents showed lower levels of customer satisfaction. Further study also is needed to identify reasons why this is the case so that professional development opportunities can be developed to address this area of concern.

**Figure 2.**  
Service-Satisfaction Model for Extension



In addition to employee performance, service quality, as defined by the five determinants, was the most important determinant for overall customer satisfaction. This means that county agents must develop and maintain skills in assessing and responding to the needs of clientele, which can ensure that clientele receive the most current and accurate information. Additionally, it has become increasingly important for agents to review planned programs for accuracy and timeliness, and to include evaluation components to determine if information received by clientele actually solved problems or met a need. Finally, it will become increasingly important to find delivery methods that can address needs within the time period expected by our clientele.

Our data showed that Extension clientele have a high degree of education, and, the higher their education level, the greater their likelihood of satisfaction. The challenge for agents will be to identify where program improvements can be made to attract and maintain a clientele that have less formal education. Further assessments are necessary to identify the needs of this group, and additional training for Extension agents is necessary to meet these needs.

Finally, age is another important factor in overall customer satisfaction. The results showed that older Extension clientele are also more satisfied compared to younger clientele, controlling for agent attributes and service quality determinants. It will be necessary to develop strategies for recruiting younger clientele, and this will entail further studies to better understand the dynamics of this market segment.

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