

School Foodservice Employee and Student Perceptions of Service Quality: Application of the Boundary Spanner Theory

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ABSTRACT

Purpose/Objectives

This study examines the relationships between the quality of service that school foodservice employees think students receive and the quality of service reported by students.

Methods

Surveys were collected from 8,580 Sixth, Seventh, and Eighth Grade students and 209 school foodservice employees from 34 schools, nationwide. The unit of analysis was school to school due to the disparity of sample size for students and employees. This intra-group study compared means using student t-test values ($p < 0.05$), linear correlations, and multiple regression to test relationships.

Results

Differences were found in 12 of the 34 schools when mean scores of foodservice employees and students were compared for overall satisfaction in their school foodservice program. Across all schools, school foodservice employee satisfaction mean scores were higher than student mean scores. Additionally, the 34 employee mean scores for food quality, ambiance, and staff factors were higher than the student mean scores.

Applications to Child Nutrition Professionals

In regards to school foodservice employees and students, findings of this study do not support the Boundary Spanner Theory, which highlights the psychological relationships that occur in a service-client relationship. As a result, employee evaluations of the school foodservice programs should be cautiously used as a surrogate for student perceptions.

INTRODUCTION

The exchange of both tangible products (food) and intangible actions (services) in school foodservice and nutrition programs occurs face-to-face, at the point of customer contact between frontline employees and students. According to the Boundary-Spanning Theory (Sneider & Bowen, 1995), there are three aspects, or tiers, associated with service relationships: the customer, the "boundary spanners," and the coordination.

Frontline workers, known as "boundary spanners," provide services to students in the boundary tier. According to the Boundary-Spanning Theory, employees who work in an open system within the boundary tier are both physically and psychologically close to their customers. The boundary spanner is involved in a constant exchange of information with the customer. As a result, the boundary spanner internalizes information about customer attitudes, wants, and needs that is then shared with the coordination tier to enhance organizational competitive strategies and

service quality. Previous research suggests that including data from boundary spanners is important when conducting customer retention research (Jones et al., 2000; Schneider & Bowen, 1985). In school foodservice, boundary spanners may have daily contact with the same students for several years, thus providing a unique, firsthand perspective on student views concerning service quality.

Marketing studies have shown that frontline service employees are a critical source of information about the customer. Researchers interviewed hotel, restaurant, and airline employees and obtained 774 incidents of critical service encounters. Results from these studies uphold frontline employees' understanding of customers and support employee participation in guiding an organization's attempts to improve service (Bittner et al., 1994). In a separate hotel study, employee evaluations of service quality were correlated highly with guest satisfaction ratings of making guest feel welcome, and being helpful and responsive to their needs (King & Carey, 1997). In the banking industry, employee mean service quality scores were highly correlated to customer ideas of service quality (Schneider et al., 1980). In a study of life insurance employees, similarity was found between customer ratings of service quality and employee predictions of those customer ratings (Gatewood & Riordan, 1997). These findings support that boundary spanners accurately perceive the level of service quality provided by their organization.

Although the Boundary Spanner Theory has been utilized in several service organizations, it has not been applied to foodservice operations. Unanswered questions lie in the boundary spanners' evaluations of service quality offered in school foodservice and nutrition programs and the potential use of employee ratings as surrogate measures of student satisfaction.

METHODS

Protocols for this study were approved by The University of Southern Mississippi Human Subjects Protection Review Committee. The voluntary nature of the study and precautions for confidentiality were explained to students and employees prior to conducting the surveys.

Survey Instruments

The National Food Service Management Institute (NFSMI) Middle/Junior High School Foodservice Survey was used to measure student perceptions of school foodservice and the overall level of satisfaction. Reliability, validity, and structure of the instrument were established prior to administration (Meyer & Conklin, 1998; Meyer, 1998). The survey was established through factor analysis that identified "food quality," "staff," "ambiance," "time," and "price" as factors. The middle/junior high school foodservice employee survey was modeled after the NFSMI Middle/Junior High School Foodservice Survey and tested for validity prior to distribution. Cronbach's alpha reliability coefficients were found for food quality (0.92), staff (0.84), time (0.82), price (0.81), and ambiance (0.77). Employees, chosen from the same schools as the students surveyed, were asked to answer the survey as they thought students would. Both surveys were measured on a scale of 1 (strongly disagree) to 7 (strongly agree). In addition, an "I don't know" response was provided.

Sample

During a six-month period, 41 schools that contracted with the Foodservice Analysis and

Benchmarking Service (FABS) to analyze the NFSMI Middle/Junior High School Foodservice Survey were asked to participate in an employee survey. Employees were asked to complete the employee survey during a staff meeting or during a break. Employees were read instructions for completing the survey by either the manager or foodservice director and told that results would remain confidential. Students in selected Sixth, Seventh, Eighth, and Ninth Grade classes completed the student survey in a classroom setting. Both survey processes were coordinated through either the school foodservice director or school foodservice manager. Students and employees completed the survey within the same month. Participating school districts were located in California, Georgia, Louisiana, Michigan, South Dakota, Texas, Vermont, and Virginia.

Surveys were returned from 37 of the 41 schools in the sample and three schools failed to return student data in time to be included in the analysis. Therefore, 34 schools were included in the study.

Statistical Analyses

Analysis protocols, established for the NFSMI Middle/Junior High School Foodservice Survey, were followed for this study (Meyer, 1998). Only three of the five factors identified in the original study were used as they related directly to the Boundary Spanner Theory and the service related nature of the responsibilities. Factors analyzed were food quality, staff, and ambiance.

Student t-tests were used to determine the statistical significance of data collected from employee and student responses to the overall satisfaction question. The unit of analysis was school to school due to the disparity of sample size for students and employees. An independent sample t-test was performed to compare overall employee and student mean scores for perceptions of service factors. One mean score for employees and students was calculated to avoid violating equality of variance assumptions. Pearson product moment correlations were used to measure the strength of correlation between student perceptions of food quality, ambiance, and staff and overall satisfaction. The relationship between employee perceptions of these service factors to overall satisfaction also was determined. The software package, SPSS 10 for Windows, was used for data analyses and a confidence level of $p < 0.05$ was used for statistical significance.

RESULTS

Perception of Overall Satisfaction

The question, "How happy are you with the school foodservice overall," was posed to students while employees were asked, "How happy do you think students are with the school foodservice overall?" Analysis was performed to determine if a difference existed between the mean scores for these questions for the two groups. The mean employee score at 12 of the schools was higher than the mean score for students. Employees perceived students to have a greater level of overall satisfaction with their school foodservice and nutrition program than reported by students. However, there was no difference between employee and student mean scores for overall satisfaction in 19 schools. Mean comparisons could not be reported in three schools due to omitted responses to this question. When comparing perceptions of employee and student

satisfaction by school, data suggest that some congruency did exist. Results are shown in Table 1.

Comparison of Scores by Service Factors Among Schools

The aggregate mean scores for employee perception of overall satisfaction and the service factors were greater than the student mean scores. Across all 34 schools, employees believed students' perceptions of food quality ($p < 0.001$), ambiance ($p < 0.01$), and staff ($p < 0.001$) to be greater than that reported by students. These results may indicate that school foodservice employee perceptions are not congruent with students' perceptions of these three factors. Table 2 shows the complete results.

Pearson product moment correlations were used to measure the relationship between students' scores for service factors and overall satisfaction. The students' perception of food quality was correlated ($p < 0.01$) with ambiance ($r = 0.58$) and staff ($r = 0.64$). Ambiance also was correlated ($p < 0.01$) with staff. No significant correlations existed between employee scores for food quality, ambiance, and staff and their perception of student overall satisfaction. Employee responses to how they thought students felt about food quality did correlate ($r = 0.71$, $p < 0.01$) with how they thought students rated staff. This may indicate that employees thought students equated the staff's performance with the quality of the food.

Limitations

The first limitation of this study was the size difference between the larger student population sampled and the school foodservice employee sample. However, properly stated desired levels for significance and adjustments in the statistical tests (using average school scores) assured a reasonable probability of detecting a difference when a difference existed. The second limitation of this study was the small sample size of schools. Although the sample represented a geographic dispersion, it may not be representative of the total population of middle/junior high schools nationwide. Third, schools used in this study made the decision to survey students and were contracted with FABS for analyses and, thus, were not selected at random. Reasons for surveying students and the nature of the school foodservice program could have influenced student responses to the survey.

DISCUSSION

Participation rates have declined in National School Lunch Programs despite increased school enrollments (United States Department of Agriculture [USDA], 2002; United States Department of Education [USDE], 2002). Considering the emphasis found in the literature on the boundary spanners' role in service transactions and customer satisfaction ratings, school foodservice employees play a vital role in students' experiences in our nation's School Lunch Program (Bowen & Sneider, 1985; Mattila, 2001). However, this study indicated that employees have an inflated opinion of what students think about their programs.

When results by schools with no difference in scores between the employees and students are reviewed, mean scores were found to be consistent with Gatewood and Riordan's (1997) study of insurance companies. When comparing mean scores across all schools, employee mean scores were significantly higher than student mean scores for overall satisfaction and the three service

factors. In comparison, a classic study conducted by Schneider et al. (1980) examined 23 bank branches and found a high correlation between the mean scores for employees and customers. King and Garey (1997) used a seven-point scale in a survey to evaluate a chain of 12 hotels and found that employee evaluations of service quality strongly correlated with guest satisfaction ratings. Although this study represented 34 schools, no positive correlations were found between employee evaluations and middle/junior high school student ratings of service quality factors and overall satisfaction.

Contrary to results found in commercial settings, the outcome of this study showed school foodservice employee ratings should not be used as surrogate measures of student satisfaction. The study results suggest a minimal amount of congruence between some school foodservice employees and students in select schools, however, further research is needed to determine what characteristics differentiate these schools and other facilities where congruence does not exist. This study's objectives did not include measuring geographic, age, race, or cultural differences; employee to student ratios; or parental and peer influences, which may explain the existence or lack of congruency.

APPLICATION

Practitioners in school foodservice should cautiously use the perceptions of foodservice employees about school meal programs as a basis for continuous improvement. Employee perceptions may not be an accurate representation of student perceptions, as proposed by the Boundary Spanner Theory.

Continued testing of the Boundary Spanner Theory is required to help explain differences between schools that have or do not have congruency between employee and student mean satisfaction and service factor.

Training on customer satisfaction, communication, and service could help school foodservice employees better understand the wants and needs of their student customers. When the wants and needs of students are fully understood, practices to meet them can be applied to improve satisfaction and increase participation.

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BIOGRAPHY

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