

NFSMI Research Update

Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.

As the National Food Service Management Institute's (NFSMI) Applied Research Division staff continues to develop research expertise, specific research content areas have emerged.

Organizing research findings by topic is a logical next step in presenting this work to readers of *The Journal of Child Nutrition & Management*. Five topic areas represent the majority of the work conducted over the past few years: 1) Customer Satisfaction; 2) Job Functions, Competencies and Skills; 3) Management of Operations; 4) Healthy Meals and Environments; and 5) Financial Management. We are pleased to share research progress in each of these areas.

Customer Satisfaction

A series of five customer satisfaction surveys are now complete and available. The five surveys enable school foodservice directors to assess the attitudes of parents of K-2 children, students in grades 3-5, middle school/junior high students, high school students, and teachers and administrators. A consolidated user's guide, *School Foodservice Survey Guide R-55-02*, contains instructions for administering the surveys. Individual sections specific to each survey follow general survey instructions. The consolidated guide replaces the individual user guides previously developed.

Two related reports that may be of interest include the *Report on the Parent School Foodservice Survey R-47-01* and the *Report on Teacher/Administrator School Food Service Survey 2002 R-51-02*. The customer survey data set continues to grow through cooperation between The University of Southern Mississippi and NFSMI, Applied Research Division. The *Report on the Analysis of the NFSMI School Foodservice Survey Data 2002 R-52-02* contains trend information and numerous statistical tables summarizing customer service factors and variables.

Job Functions, Competencies, and Skills

Dynamic and changing management environments require that school foodservice job functions, competencies, and skills be defined and regularly reviewed and updated.

The *Competencies, Knowledge, and Skill Statements for District School Nutrition Directors/Supervisors 2001 R-50-01* is complete and available. This work replaces the previous set of competencies, knowledge, and skills first published in 1996. Job functional areas were reduced from 16 to 14, and a number of new competencies, knowledge, and skill statements were added, whereas others were revised or removed. The final document contains 14 functional areas, 41 competencies, and 624 knowledge statements.

The *Job Functions/Duties, Competencies, Knowledge, and Skills of Sponsor Monitors Participating in the Child and Adult Care Food Program 2002 R-53-02* will be complete and available in both print and PDF file formats. This document defines in detail the knowledge base and skill sets needed by those individuals who monitor in-home providers of family day care. Job descriptions, training programs, and performance assessments can be developed from the knowledge, competencies, and skills statements described in the document. This document completes the third phase of this research project. The expert panel used during Phase II of the

study to validate job functions and duties were used during Phase III to validate the draft competencies. A modified Delphi technique was used for the validation round. Because of an 80% or higher level of agreement on all competency statements, only a single round of review was necessary.

For a review of all three phases of this research project, see *Insight 18, Job Duties, Competencies, Knowledge, and Skills of Sponsor Monitors of Family Day Care Homes Participating in the Child and Adult Care Food Program, Spring 2002 R-118-02*. During 2002, NFMSI researchers were scheduled to identify family day care provider training materials currently available.

Revision of *The Manager's Competencies, Knowledge, and Skills* is in progress. This document was first published in July 1995. The first phase of the revision and update began in Spring 2002. Researchers will invite selected school foodservice directors and managers to participate in regional workgroup sessions. These sessions were scheduled in the following U.S. cities between September and November 2002: Baltimore, MD; Knoxville, TN; Omaha, NE; and Phoenix, AZ. Workgroup participants were to rate the importance of existing competencies, knowledge, and skill statements prior to the workgroup session. Each workgroup session was to be used to review those items with dissimilar ratings and to identify new competencies, knowledge, or skills. These reviews and workgroups will provide the basis for a draft revision to the manager's competencies, knowledge, and skill statements. In a second phase (planned for 2003), an expert panel will be convened to review and refine competencies, knowledge, and skill statements. The expert panel will include state agency personnel, academic, content, and other educational experts.

Management of Operations

Projects in three operational areas are in progress. The technical report, *Issues Related to Implementation of the After-School Snack Service 2001 R-49-01*, is complete and available on the National Food Service Management Institute's Web site. The report identifies school foodservice directors' concerns related to food safety, nutritional content of snacks, and accountability and program review requirements. Additional research to identify strategies and approaches to facilitate the implementation of after-school care program snack service is the next phase of this project.

Attracting and keeping long-term successful employees continues to be a high priority issue related to human resource management. During early 2002, 500 school foodservice directors were surveyed to define a long-term successful employee and to identify the characteristics necessary to meet that definition. The technical report, *Characteristics of Successful Long-Term Employees 2002 R-56-02*, describes the research methodology and survey results. Survey respondents defined a long-term employee as an individual who had worked in foodservice five or more years. Ten characteristics identified with the highest mean scores included: free of infectious disease, shows dependability, follows instructions, enjoys children, is honest, relates to the child as a customer, is clean and dressed appropriately, gets along with others, and respects others. Respondents reported that the four most frequently used retention methods were verbal praise, certification supplement, training, and pay raises. Developing marketing strategies to attract and keep long-term employees is the next stage of this project. A pilot focus group was

conducted during the American School Food Service Association's Annual National Conference in Minneapolis in July 2002. Additional regional focus group sessions were conducted in Fall 2002. Innovative approaches and marketing strategies will be identified during the focus group sessions. These ideas and strategies will be published sometime in 2003.

Two plate waste studies are underway with support from Texas Tech University and Central Washington University. Researchers at Texas Tech University are investigating the *Relationships of the Physical Dining Environment and Service Styles to Plate Waste in Middle/Junior High Schools*. The study began during Fall 2001. Noise, light, temperature, and humidity levels were measured for comparison with plate waste. Measurements were taken in four middle/junior high schools over two non-consecutive weeks in each participating school. These data were analyzed to assess the dining environment factors, service styles, and opportunity time to eat that affect the plate waste of reimbursable meal components during lunch. Preliminary results from this study are pending.

The second plate waste study began Spring 2002 in cooperation with researchers at Central Washington University. Plate waste studies were to begin this fall in Yakima School District to evaluate the *Relationship of Meal and Recess Schedules to Plate Waste in Elementary Schools*. Results for this study are expected in May 2003. Elementary schools participating in this study vary in the percentage of free and reduced-price meals, as well as in the time recess is scheduled. Some schools schedule recess prior to lunch, whereas other schools schedule recess following lunch. The time lunch is initiated also is being evaluated. Plate waste will be weighed at the conclusion of the meal. Data will be collected for a full week of lunch meals (5 days) in each participating school.

Healthy Meals and Environment

The pilot test of the Healthy School Nutrition Environment survey was conducted in January 2002. Surveys were sent to seven groups of individuals: superintendents, principals, school business officials, coaches, teachers, school foodservice directors, and school foodservice managers. Fifty individuals in each group were randomly selected and mailed a survey. Of the 350 surveys mailed, 145 (41.4%) were returned. A healthy school nutrition environment was a high priority for 45% of the respondents. Six of the most important components of a healthy school environment identified by respondents included: meals that meet nutrition standards set forth by the U.S. Department of Agriculture, as well as provide choices; adequate funds provided by local, state, and federal sources; a la carte menu items that contribute to healthy eating patterns; behavior-focused nutrition education; adequate time for children to enjoy meals with friends; and involvement of students and parents in developing a food and nutrition policy. The survey instrument required minor adjustment following the pilot test. A full survey with 500 randomly selected participants in each of the seven groups (3,500 surveys total) was conducted in Fall 2002. Final results of this survey should be available Spring 2003.

Financial Management

A software tool to help a school foodservice director implement the Financial Management Information System (FMIS) model finally is available. The software tool, *FUNDamentals ET36-02*, takes the concepts, formulas, and reporting formats described in *Financial Management Information System (Preliminary Report) R43-01*, and translates those concepts into tables, files,

and standardized reports that can be used at the local school district level. Included with the operational software are a step-by-step tutorial and a user's manual. The software tool is available on CD-ROM or can be downloaded from NFSMI's Web site. The tool was designed for small- to medium-size school districts and is not intended to replace other financial accounting systems available at either the district or state levels. *Insight 19, Quality Financial Decision Making Spring 02, R-119-02* reviews the development of the FMIS model and application of accounting principles to financial decisionmaking.

Development of a database and a financial information data set is now possible with the production of a standardized model for accounting and record-keeping. As an extension of the *FUNDamentals* software tool, a database application was designed that can use information stored within *FUNDamentals* for comparison across school districts. The database application includes a number of standardized reports and searching capabilities to sort and display various financial and statistical data. The preliminary design of the database is complete, with testing that began in Summer 2002. Collecting and compiling data will continue through 2002 and 2003. As *FUNDamentals* was distributed during Summer 2002 and used during the 2002-03 school year, the first set of end-of-the-year data should be available in June/July 2003. Participation in the database project is voluntary. Researchers at NFSMI hope to construct a rigorous data set that can support research, as well as informational and comparison reporting.

Other Research Activities

Check the NFSMI Web site, <http://www.nfsmi.org>, for updated annotated bibliographies of state agency-funded research and unpublished dissertations and theses in child nutrition programs. *Insight 20 Meeting the Needs of Aspiring Child Nutrition Professionals, Spring 2002* was scheduled for release in June 2002. The third Research Agenda Conference has been scheduled for June 5-8, 2003. During Fall 2002, preliminary Research Agenda Conference work was to begin through chat room or threaded discussion sessions.

BIOGRAPHY

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