Investigation of Factors Impacting Participation of High School Students in the National School Lunch Program

National Food Service Management Institute
The University of Mississippi
1-800-321-3054

2008
This publication has been produced by the National Food Service Management Institute – Applied Research Division, located at The University of Southern Mississippi with headquarters at The University of Mississippi. Funding for the Institute has been provided with federal funds from the U.S. Department of Agriculture, Food and Nutrition Service, to The University of Mississippi. The contents of this publication do not necessarily reflect the views or policies of The University of Mississippi or the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The information provided in this publication is the result of independent research produced by NFSMI and is not necessarily in accordance with U.S. Department of Agriculture Food and Nutrition Service (FNS) policy. FNS is the federal agency responsible for all federal domestic child nutrition programs including the National School Lunch Program, the Child and Adult Care Food Program, and the Summer Food Service Program. Individuals are encouraged to contact their local child nutrition program sponsor and/or their Child Nutrition State Agency should there appear to be a conflict with the information contained herein, and any state or federal policy that governs the associated Child Nutrition Program. For more information on the federal Child Nutrition Programs please visit www.fns.usda.gov/cnd.
The National Food Service Management Institute was authorized by Congress in 1989 and established in 1990 at The University of Mississippi in Oxford. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

**PURPOSE**
The purpose of NFSMI is to improve the operation of Child Nutrition Programs through research, education and training, and information dissemination. The Administrative Offices and Divisions of Information Services and Education and Training are located in Oxford. The Division of Applied Research is located at The University of Southern Mississippi in Hattiesburg.

**MISSION**
The mission of the NFSMI is to provide information and services that promote the continuous improvement of Child Nutrition Programs.

**VISION**
The vision of the NFSMI is to be the leader in providing education, research, and resources to promote excellence in Child Nutrition Programs.

**CONTACT INFORMATION**

**Headquarters**
The University of Mississippi
Phone: 800-321-3054
Fax: 800-321-3061
www.nfsmi.org

**Education and Training Division**
Information Services Division
The University of Mississippi
6 Jeanette Phillips Drive
P.O. Drawer 188
University, MS 38677-0188

**Applied Research Division**
The University of Southern Mississippi
118 College Drive #10077
Hattiesburg, MS 39406-0001
Phone: 601-266-5773
Fax: 888-262-9631
Acknowledgments

WRITTEN AND DEVELOPED BY

Amelia Estepa Asperin, PhD
Research Scientist
Mary Frances Nettles, PhD, RD
Research Scientist
Deborah Carr, PhD, RD
Director
Applied Research Division
The University of Southern Mississippi

NFSMI EXECUTIVE DIRECTOR
Charlotte B. Oakley, PhD, RD, FADA
EXECUTIVE SUMMARY

Participation in the National School Lunch Program (NSLP) has steadily declined over the years, particularly at the high school level. This is a major concern for school nutrition (SN) professionals because participation is critical to program success, especially for SN programs to be financially solvent. A low participation rate becomes an even greater challenge for school districts that do not have elementary or middle school revenue to offset the loss at the high school level.

The purpose of this research was to identify factors associated with the non-participation of high school students in the NSLP. To accomplish the project goal, the research was conducted in two phases. Qualitative data from Phase I focus groups explored the perceptions and barriers to participation as identified both by high school students and by SN professionals. Responses were transcribed, summarized, and classified into common themes that were the basis for survey development. In Phase II, a three-stage series of pilot tests were conducted to refine and validate the instrument prior to making it available for use by SN directors nationwide.

The focus group discussions with high school students revealed that SN programs have two distinct types of high school customers: those who eat school meals frequently (at least three times a week) and those who eat infrequently (two or less times per week, or about eight times or less per month). Students who eat school lunch frequently have different concerns from students who eat less frequently, if at all. Measuring satisfaction issues addresses the concerns of the first group, while measuring factors that affect non-participation addresses the concerns of the second
group. In addition, high school focus group responses indicated that reasons for non-participation can be categorized into eight themes: “Choices and Variety,” “Taste,” “Appearance,” “Customer Service Environment,” “Quality,” “Nutrition,” “Value,” and “Don’t Want to Eat.”

In contrast, focus groups with SN staff showed that reasons for non-participation can be collapsed into five categories: “Social Influence and Negative Stigma”; “Time Constraints (Not Enough Time to Eat After Being Served)”; “Overcrowding in the Dining Area”; “Perceived Poor Quality and Healthfulness of Menu Items”; and “Open-Campus/Open Option Policy.” There was general consensus that addressing participation issues on the high school level is more challenging than it is for the elementary and/or middle schools. This is particularly difficult for high schools with open campuses. Several SN professionals indicated the importance of addressing student needs from a commercial foodservice perspective because that is what the students expect. A majority of focus group participants agreed that seeking feedback from students is a critical and proactive effort towards increasing participation.

Findings from these focus groups provided the foundation for developing a needs assessment survey that explored the reasons why non-participants chose not to eat school lunch. Across the three-stage pilot test, a total of 1,636 surveys were sent to SN directors, 944 (58%) of which were completed and returned from 16 districts (25 high schools) representing the seven regions of the United States Department of Agriculture (USDA). School districts participating in the survey pilot tests were chosen for their variation in demographics (free and reduced price percentage, district size, ethnic diversity, and geographic location) and the capability to generate non-participants reports which identified the students who ate school lunches two or less times per week (eight or less times per month). Exploratory and confirmatory factor analyses were
used to statistically condense the survey and collapse responses into meaningful categories reflecting factors affecting non-participation.

Factor analyses showed that low participation can be attributed to six key issues, some of which are external to the SN program. Operationally controllable issues arise mainly from food quality, staff, and access to food. Issues beyond the SN director's immediate control include dining area capacity, food from home, and schoolwork. Among these factors, students stated that they would be most likely to participate if they saw improvements in the following attributes: overall quality of the food, variety of menu items from day to day, and time spent waiting in line. Based on statistical analyses and feedback from participating SN directors, the survey instrument was finalized after three rounds of pilot tests.

The validated questionnaire is composed of three parts. Section One of the survey provides specific reasons why students do not participate in the NSLP. Students are instructed to use the phrase “My reason for not eating school lunches is that…” before each of 27 statements about SN program attributes, and then indicate their level of agreement with each statement by using a 5-point scale, ranging from 5 (strongly agree) to 1 (strongly disagree). In Section Two, students are asked to use the phrase, “I would be more likely to eat school lunches if…” before each of 13 statements, and then rate their level of agreement by using the scale 5 (strongly agree) to 1 (strongly disagree). This section provides the SN director a quick snapshot of key factors that will influence the student's decision to start eating school lunches more frequently. Section Three includes questions on grade level and gender to provide the SN director demographic information to further understand trends within the subgroups of students. A question on frequency of participation per week ensures that the student is appropriate for the sample.
The survey developed in this study specifically targets students who eat in the school cafeteria two or less times a week, thus results will be useful in helping SN professionals identify the specific issues that can be improved to increase participation. Use of the survey can assist SN directors, managers, and staff in establishing internal benchmarks for the SN. Valid and reliable data guides decision making and empowers the SN director and staff to address customer service issues in the effort to increase participation. Although planning and administering the survey may take considerable time, effort, and coordination, results provide a launching point for creating improvement plans that will focus on key factors that can influence the student’s decision to start eating school meals more frequently.