



Insight

A Publication for Child Nutrition Professionals from the National Food Service Management Institute

High School Students and School Nutrition Directors Help Develop Surveys for Increasing Participation and Satisfaction with the National School Lunch Program

O Participation in the National School Lunch Program (NSLP) has steadily declined over the years, particularly at the high school level. This trend not only negatively impacts the bottom line, it also shows that the program is not achieving its goal of providing nutritionally balanced meals for all of the nation's school-aged children. It is important for school nutrition (SN) directors and other SN professionals to understand the factors that drive this declining participation trend. Doing so will help in developing strategies to encourage students to avail of themselves the nutritional service that is readily accessible to them.

R Research conducted by the National Food Service Management Institute, Applied Research Division (NFSMI, ARD) showed through a series of focus groups with high school students that students who eat school lunch frequently (three or more times per week) have different concerns from students who eat less frequently (two or less times per week). It was evident that different measurement tools were needed to address these concerns. Two high school foodservice surveys were developed as a result: *The School Lunch Experience Survey* and *The Non-Participation Survey*. An Expert panel of SN directors assisted in pilot-testing the surveys and in later developing the *High School Student Satisfaction and Non-Participation Survey Guide*. The guide was developed to provide step-by-step instructions for using the surveys and developing action plans framed around the Continuous Quality Improvement process.

OBJECTIVES

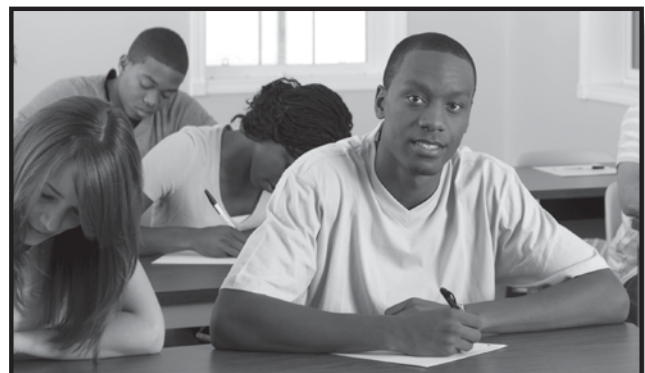
The objectives of these studies were to:

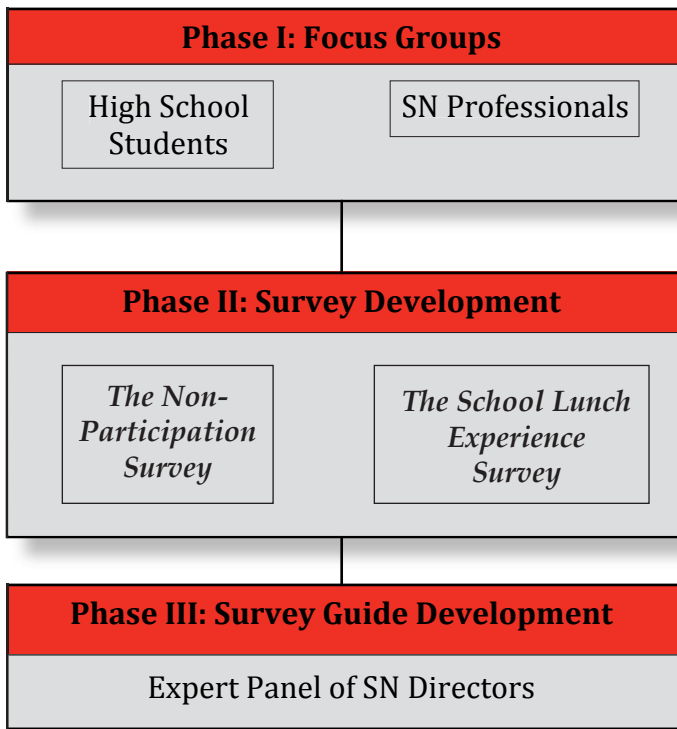
- Increase participation by developing and validating *The Non-Participation Survey* to assess the reasons

- why high school students choose not to eat in the school lunch program at their high school;
- Improve student satisfaction by developing *The School Lunch Experience Survey* to assess the perceptions of high school students regarding their dining experience and provide SN directors a tool to use for internal benchmarking;
- Develop a step-by-step guide for administering the survey, interpreting results, and creating continuous quality improvement action plans to address student concerns; and
- Provide the surveys and guide to SN directors and other SN professionals in an accessible, downloadable format on the NFSMI Web site.

METHODOLOGY

The research for this study spanned three phases: Focus Groups, Survey Development, and Survey Guide Development. In Phase I, focus groups were conducted with high school students and SN professionals to explore perceptions of school meals and barriers to participation. In Phase II, two survey instruments were developed using qualitative data from Phase I: a survey for high school students who eat three or more times a week, and a survey for students who eat two or less times per week. In Phase III, an expert panel of SN directors assisted in developing the survey guide.





who ate school lunches two or less times per week (eight or less times per month). Three rounds of pilot tests were performed, and the survey was administered to 944 high school students from 25 high schools (16 school districts) across the seven USDA regions.

- School districts that participated in *The School Lunch Experience Survey* were instructed to select students who ate school lunches three or more times per week. Two rounds of pilot tests were performed, and the survey was administered to 1,281 students from 19 high schools (15 school districts) across the seven USDA regions.
- For every round, the SN director in each school district identified the students who met the study criteria and selected a random sample of 30 to 50 students per high school. SN directors (or their authorized representatives) administered the pilot survey to the students in each high school.
- Exploratory and confirmatory factor analyses were used to statistically collapse responses into meaningful categories reflecting factors affecting student participation in the NSLP and student perceptions of the school lunch experience.

Focus Groups

- Eight focus groups of six to 11 participants were completed in four school districts located in different geographic regions as defined by the United States Department of Agriculture (USDA).
- Each school district hosted a pair of focus group sessions, one group composed of high school students and one composed of SN professionals.
- High school student focus groups focused on why students chose to eat or not eat school meals; their definitions of quality, value, healthy meals, and choice; characteristics that they liked or did not like about school lunches; and other expectations and/or concerns they had about school lunches.
- Questions for SN professionals focused on their role in providing a satisfactory lunch experience for the students, perceived reasons for non-participation, and their efforts to address participation issues at the high school level.

Survey Development

- Qualitative data from focus groups were transcribed, summarized, and classified into common themes that were the basis for the development of (1) *The Non-Participation Survey* exploring barriers to participation for students who eat lunch two or less times per week, and (2) *The School Lunch Experience Survey* exploring factors that impact the dining experience and satisfaction of students who eat lunch three or more times per week.
- Two sets of pilot tests were conducted to refine and validate the surveys.
- School districts chosen for *The Non-Participation Survey* pilot tests were required to have the capability to generate non-participation reports identifying students

Survey Guide Development

- Results from survey development and research-based resources on customer service and continuous quality improvement were used to draft an accompanying resource to guide SN professionals in administering and interpreting results from *The School Lunch Experience Survey* and *The Non-Participation Survey*.
- Seven SN directors participated in a facilitated expert panel meeting to evaluate the draft survey guide for content, readability, clarity, and organization; discuss implications of results obtained from using the surveys; and identify gaps to ensure that the guide was comprehensive and useful for SN professionals.
- Expert panel members were asked to provide comments and/or suggestions by answering structured, open-ended questions regarding each section of the guide. Data collected were summarized and utilized to revise the survey guide prior to Web release.

RESULTS

Focus Groups

- 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). It was evident that these two groups have different perceptions and concerns about participation in the NSLP.
- Reasons provided by students for non-participation were categorized into eight themes: (1) lack of choices/variety, (2) taste, (3) appearance, (4) customer service environment, (5) quality, (6) nutrition, (7) value, and (8) don't want to eat.

- Reasons for non-participation, as perceived by the SN staff, could be collapsed into five categories: (1) social influence and negative stigma, (2) time constraints (i.e., not enough time to eat after being served), (3) overcrowding in the dining area, (4) perceived poor quality and healthfulness of menu items, and (5) open-campus/open option policy.
- Results indicated that there are seven primary reasons why high school students choose to participate in the NSLP: (1) convenience, (2) hunger, (3) good value, (4) food quality, (5) food preference, (6) socialization, and (7) having no other choice.
- Students evaluated the menu and/or food items offered through the NSLP based primarily on the consistency of the following characteristics: serving portions, quality, taste, and availability.
- Results implied that satisfaction with the school lunch experience is also affected by the attitude of staff (e.g., friendliness, positive disposition, openness to suggestions), service recovery (i.e., how the staff respond to customer complaints), and staff efficiency (e.g., speed of service).

Validated Surveys

- High schools that participated in the survey pilot tests were chosen for their variation in demographics in relation to enrollment, average daily participation in the NSLP, free and reduced price percentages (high or low), location (rural, suburban, urban), and USDA region (Western, Mountain Plains, Midwest, Northeast, Mid-Atlantic, Southeast, and Southwest).

Program Demographics of Participating High Schools				
	The Non-Participation Survey		The School Lunch Experience Survey	
Number of high schools surveyed	25		19	
Number of surveys completed	944		1,281	
Number of usable surveys	854		1,221	
	Range		Range	
	Min.	Max.	Min.	Max.
Enrollment	371	2,334	616	3,200
Average Daily Attendance	81%	97%	83%	98%
Average Daily Participation (ADP)	6%	94%	13%	74%
Percent of students eligible				
Free	16%	66%	6%	73%
Reduced price	4%	28%	1%	12%
ADP per benefit category				
Free	16%	89%	8%	81%
Reduced price	4%	64%	2%	35%
Paid	<1%	79%	6%	90%
Lunch price	Free	\$2.20	\$1.25	\$3.13

The Non-Participation Survey

- Factor analyses showed that low participation can be attributed to six key issues. Operationally controllable issues included food quality, staff, and access to food. Issues external to the SN program included seating capacity of facilities, food brought from home, and schoolwork.
- The foremost factor influencing participation is “Food Quality,” which addressed the tangible characteristics of the food (e.g., appearance, taste, aroma), food choices, and overall quality.
- The next most important factor affecting participation was “Food Access,” which referred to the appropriateness of serving portions and the availability of food throughout the serving period.
- “Dining Area Capacity” or the available dining space and seating also affected the students’ decision to eat school lunch.
- “Food from Home” showed that some students prefer not to eat school lunches because they (or their parents) prefer that they bring their own lunch.
- “Staff” included the interaction and behavior of the staff toward the students. Interestingly, students attribute the cleanliness of the dining area to staff rather than considering it a general characteristic of the dining space.
- “Schoolwork,” although not a strong predictor, indicated that academic responsibilities for some students took precedence over choosing to eat lunch in the cafeteria.
- 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.
- The validated survey is composed of three parts. Section I 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 indicate their level of agreement with each statement by using a 5-point scale, ranging from 5 (strongly agree) to 1 (strongly disagree). Section II provides SN professionals a quick snapshot of key factors that may influence the student's decision to start eating school lunches more frequently. Students are asked to use the phrase, "I would be more likely to eat school lunches if..." before each of 13 statements, rating their level of agreement by using the scale 5 (strongly agree) to 1 (strongly disagree). Section III includes demographic information to further understand trends within subgroups of students.

- Program reliability reflects student expectations on the delivery of food and services in a consistent, timely, and reliable manner.
- Staff responsiveness and empathy include student concerns regarding staff attitudes toward work, service efficiency, and staff behavior toward students. Results suggest that SN directors and managers should also focus on staff friendliness and attitude toward work, because these have the greatest effects on the students' evaluation of the overall service quality.
- The top five reasons for eating school lunch were: "I am hungry"; "I didn't bring anything to eat"; "It's convenient"; "I have no choice"; and "My friends eat school lunches."
- The validated questionnaire is composed of three parts. Section I provides student perceptions of specific program characteristics that contribute to the dining experience of high school students. Students are instructed to use the phrase "When I eat school lunches..." before each of 24 statements about SN program characteristics and indicate their level of agreement with each statement by using a 5-point scale, ranging from 5 (strongly agree) to 1 (strongly disagree). The last three statements provide an overall evaluation of food quality, service, and student dining experience. Section II asks students to choose the top five (out of 14) statements that influence the decision to eat school lunches frequently. Section III includes questions on grade level, frequency of eating school lunches, and gender.

The Non-Participation Survey
Understanding Why High School Students Do Not Eat School Lunches

Completely fill in the circle of your answer. Use a #2 pencil.
Correct ●●● Incorrect ○○○○

Your School Nutrition Program is interested in understanding why high school students do not eat or do not eat frequently in the school lunch program. Please reflect on these statements and answer based on your own experience.

SECTION I: Reasons for not eating school lunches

Instructions:
Please read the statements regarding reasons for not eating (or not eating frequently) school lunches. As you respond, use the phrase "My reason for not eating school lunches is that" before each statement and then indicate your level of agreement by using the scale 5 (Strongly Agree) to 1 (Strongly Disagree).

My reason for not eating school lunches is that...	5	4	3	2	1
1. The food does not taste good.					
2. I prefer to eat what I bring from home.					
3. The amount of food is inadequate.					
4. There is not enough space in the dining room.					
5. The staff is not friendly.					
6. I do not like what is served.					
7. I bring my own food.					
8. The food does not appear nutritious.					
9. My parents purchase food for me to take to school.					
10. The food I like is gone before I get to the cafeteria.					
11. I need time to catch up on school work.					
12. I have to go to different lines to get the food I want.					
13. I can not recognize what the food is.					
14. The food choices do not change.					
15. The staff does not speak to me.					
16. The food does not appear fresh.					
17. The choices offered are not those on the menu.					
18. The food is not cooked correctly.					
19. There are not enough places to sit.					
20. The food does not look healthy.					
21. I'm busy with school projects.					
22. The food does not look appealing.					

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The School Lunch Experience Survey

- Results of the study showed that 21 key indicators impacting the dining experience of high school students factor into three dimensions, namely, "Food Quality," "Program Reliability," and "Staff Responsiveness and Empathy."
- Food quality includes characteristics that focus on variety, taste, freshness, appearance, aroma, and proper doneness of menu items. In addition, results indicated that food quality had the greatest effect on the students' evaluation of their overall dining experience. Enhancing the appearance, taste, and proper doneness of menu items will have the greatest effects on improving student evaluations of food quality in general.

The School Lunch Experience Survey
Making your opinions known

Completely fill in the circle of your answer. Use a #2 pencil.
Correct ●●● Incorrect ○○○○

We want to know what you think! This survey is your chance to let us know how we're doing. Please take a few minutes to provide feedback on the quality of your dining experience at the school cafeteria.

SECTION I: Your lunch experience

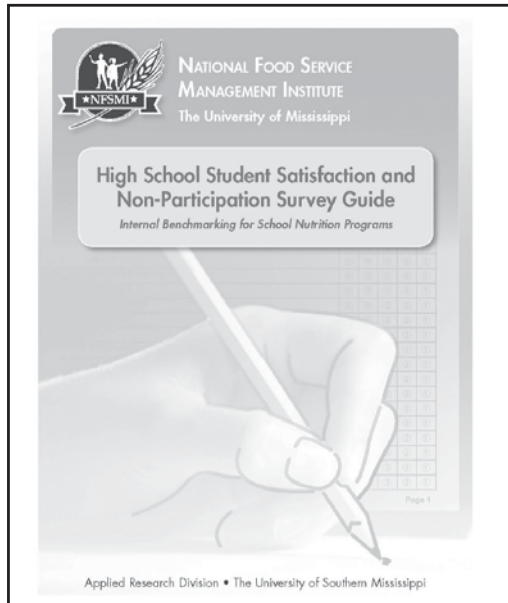
Instructions:
Listed below are several features of school lunch programs. As you respond, use the phrase, "When I eat school lunches..." before each statement and then indicate your level of agreement by using the scale 5 (Strongly Agree) to 1 (Strongly Disagree).

When I eat school lunches...	5	4	3	2	1
1. The food served is fresh.					
2. The staff understands my meal time needs.					
3. The food tastes good.					
4. There is a variety of food items that I can choose from.					
5. The food smells good.					
6. The menu provides healthy meal options.					
7. The amount of food I get is enough.					
8. The flavors of the food go well together.					
9. The staff look like they enjoy their work.					
10. There is variety in the menu from day to day.					
11. The food looks appealing.					
12. Food is cooked to the proper doneness.					
13. The food has a homemade quality.					
14. The service is friendly.					
15. I know that I can offer suggestions.					
16. There is enough seating space in the dining area.					
17. The serving portions are consistent.					
18. I know what is being served before I get to the cafeteria.					
19. I could purchase other items (a la carte) if I don't want the full meal.					
20. I have enough time to eat.					
21. The quality of the food is consistent.					
22. The overall quality (taste, appearance, temperature) of the food served is good.					
23. The overall quality of the service is good.					
24. The overall quality of my dining experience is good.					

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Survey Guide Development

Based on expert panel discussions and evaluations, guidelines for planning and administering the surveys were developed. The Web-based resource, *High School Student Satisfaction and Non-Participation Survey Guide: Internal Benchmarking for School Nutrition Programs*, contains seven sections that are designed to guide the SN director and/or manager through the survey process.



- **Introduction** provides a brief overview of the resource and the benefits of conducting the customer service surveys.
 - **Planning for Survey Administration** provides the SN director and/or manager guidance for choosing members of the survey team, timing of surveys, and frequency of survey administration.
 - **Survey Options** describes *The School Lunch Experience Survey* and *The Non-Participation Survey*, and provides guidance for deciding which survey to utilize and how to select participants.
 - **Administering the Survey** contains checklists for the SN director and/or survey team to refer to as they go through the survey process from pre-planning to the day after the survey is completed.
 - **Tabulating and Interpreting Results** provides step-by-step instructions for using the Microsoft Excel templates.
 - **Developing a Customer Service Action Plan Using the Continuous Quality Improvement Process** provides instructions for utilizing survey results to develop improvement plans.
 - **Appendices** include copies of the surveys, parental consent templates, student assent statements, and memos to principals and/or teachers for surveys.
- *The Non-Participation Survey* is appropriate for programs that have very low rates of participation or have low participation among free and reduced price eligible students. It is important that strategies be developed to promote the program and benefits to these eligible students. SN directors must prioritize which factors to address based on student feedback and the SN team's ability to change these at the local level.
 - *The School Lunch Experience Survey* is appropriate for programs that already have high rates of participation in the high school level and would like to retain students by increasing customer satisfaction. The survey is also suitable for programs that have low potential for growth (e.g., the cafeteria is not equipped to support a large increase in participation, but would like to keep students who already participate). In addition, the survey would be useful for programs that have large percentages of paying students at the high school level.
 - SN professionals can use information gained from *The School Lunch Experience Survey* to focus marketing efforts on promotional messages that will support the reasons why high school students choose to eat school lunches. A few examples of doing this are illustrated below:
 - Highlight that although high school students may not have the choice to leave campus, the SN program conveniently provides them a wide variety of lunch options when they participate in the NSLP.
 - For students whose main reason for participating is that their friends eat school lunches, promote the school lunch as an opportunity to engage in a social dining experience. In addition, design and/or decorate the dining area to support socialization among students.
 - Focus on marketing the convenience and variety that the SN program offers versus trying to market the "balanced meal."

PRACTICAL USE OF THIS INFORMATION

Use of the Web-based resource and implementation of the survey will aid SN professionals in establishing performance benchmarks and improving their programs based on customer feedback. Planning and administering the survey may take considerable time, effort, and coordination. However, results provide a launching point for creating improvement plans that will focus on key factors that may influence student participation in the NSLP and their perceptions of, and satisfaction with, their school lunch experience.

For More Information

- Asperin, A. E., Nettles, M. F., & Carr, D. H. (2009). *Exploring factors that affect the school lunch experience of high school students participating in the National School Lunch Program*. University, MS: National Food Service Management Institute.
- Asperin, A. E., Nettles, M. F., & Carr, D. H. (2008). *Investigation of factors impacting participation of high school students in the National School Lunch Program*. University, MS: National Food Service Management Institute.
- Asperin, A. E., & Carr, D. (2009). *High school student satisfaction and non-participation survey guide: Internal benchmarking for school nutrition programs*. University, MS: National Food Service Management Institute.



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