

NFSMI Research Summary

Mary Frances Nettles, PhD, RD
Director of Applied Research Division
Mary.Nettles@usm.edu

Please note that this study was published before the SY2014-15 implementation of the Smart Snacks Nutrition Standards for Competitive Food in Schools, as required by the Healthy, Hunger-Free Kids Act of 2010. As such, certain research relating to food in schools may not be relevant today.

This research has been produced by the National Food Service Management Institute, Applied Research Division (NFSMI, ARD), 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 in cooperation with The University of Southern Mississippi. The mission of NFSMI is to provide information and services that promote the continuous improvement of Child Nutrition Programs, such as: School Meals Programs, Summer Food Service Program, and Child and Adult Care Food Program.

The NFSMI Research Summary is a continuing series of summaries reporting recently completed research and research-based resources funded by the National Food Service Management Institute.

Recently Completed Research

Going Green! A Case Study Approach Examining Green and Environmental Conservation Practices in School Nutrition Programs

The purpose of this research project was to describe green/environmental conservation (GEC) approaches in school nutrition (SN) programs. Research objectives were to identify practices, perceptions, and barriers to implementing environmental conservation approaches in SN programs. This project also explored the commonalities relating environmental conservation initiatives in various school settings.

To accomplish these objectives, this project used a multi-phase descriptive case study method to examine GEC approaches in SN programs. In Phase I, researchers utilized a virtual expert panel of SN professionals to collect information supporting the research objectives that would be used to develop the case study instruments for Phase II of the project. In Phase II, a holistic, multiple-case study design with a literal replication format was used during visits to four school districts in four states, representing four of the seven United States Department of Agriculture (USDA) regions. The first case study site visit served as the pilot to assess the case study process and instruments. Results from the pilot were used to refine the data collection process and instruments for the remaining three site visits. The three subsequent site visits were completed, and the data from all four site visits and interviews were analyzed using constant comparison methods to review the interview transcripts, observation reports, and GEC documents and policies provided by stakeholders at each case study site.

The information gathered from Phase I and Phase II of the study unveiled more than 30 GEC practices in SN programs with recycling/waste management being the predominant GEC practice. SN directors and staff served various roles in the implementation and dissemination of GEC practices, including leadership, mentoring, education, and training roles throughout school district.

School nutrition programs that had successful, sustainable GEC practices had support from their school's/school district's administrators and school staff and believed that the long-term benefits of their efforts were for the health and wellbeing of the students they served. Lack of funding and school district administration and school staff support were the primary barriers to sustaining SN

programs GEC practices. Additional research is needed to examine this phenomena and sustainable GEC practices in SN programs on a national level.

Determining the Job Functions of Child Care Providers in CACFP Operations

The purpose of this project was to identify the job duties/responsibilities of child care providers participating in the Child and Adult Care Food Program (CACFP). To accomplish this purpose, CACFP professionals participated in either a work-group session or served on a national review panel to systematically confirm, combine, and create descriptions for job duties and responsibilities for child care center directors and staff participating in the CACFP.

Seven CACFP professionals were selected to participate in a work-group session to accomplish the following: review the wording of each job duty and responsibility, classify statements under the appropriate research-based functional area; and group similar statements into functional areas. Expert panel members reviewed the results of the work-group session using a guided evaluation form. Then, members confirmed the list of job duties and responsibilities.

The modified list of job duties and responsibilities was revised using the suggestions of expert panel members. A final guided evaluation was completed by a review panel of CACFP professionals, with a response rate of 22.9%. A review and contextual analysis of the national review panel responses resulted in the following actions being taken:

- The number of functional areas was decreased from eight (8) to seven (7).
- The number of job duties and responsibilities was increased from 31 to 59.
- The food safety and sanitation functional area and the health and safety functional areas were combined.
- A set of definitions for each functional area was developed.

The information gained from this project will be used to provide structure for the development of job descriptions and training modules. It will also be used to identify job functions, training needs, and skills necessary for child care providers.

Exploring Green/Environmental Conservation in the School Nutrition Setting: Results of a National Survey

School nutrition operations expend large amounts of resources (food, energy, water, metal, paper, and plastic products) to meet students' nutritional needs. School nutrition professionals take these, and many other factors, under consideration when adopting and sustaining GEC practices within the SN departments and for their school community. Building on previous case study research, the researchers conducted a two-phased study to examine common GEC practices and the attitudes and behaviors of SN directors who adopt GEC practices.

In the first phase of the study, six SN professionals involved in GEC approaches in SN programs participated in an expert panel to provide insight into GEC practices, benefits, and barriers of sustainability. In the second phase of the study, qualitative data from the expert panel was used to draft a survey. The survey was evaluated by a review panel of SN professionals and was revised according to the review panel's recommendations. The final survey was distributed to a random

sample of 700 SN directors in all seven USDA regions across the country. A total of 223 surveys (31.8%) were returned.

From the surveys received, 42.9% of respondents reported that their SN department/school district was involved in GEC efforts, and 25.0% indicated that they were in the process of planning GEC initiatives. The six GEC practices that were being planned or sustained at the time of data collection were the following: recycling; energy conservation; air and water conservation; resource conservation; GEC building renovations and construction practices; and other GEC practices, such as purchasing locally grown foods and school gardening projects.

School nutrition professionals perceived “environmental conservation” as supporting and promoting the protection of the environment, and believed that the sustainability of GEC practices depended upon administrative support. School nutrition directors indicated that their primary roles in GEC efforts were as nutrition educator and role model. The top perceived benefits of implementing and sustaining GEC practices included: providing a safe and healthier environment for students and encouraging students to adopt lifelong conservation behaviors. The top perceived barriers that have prevented the implementation and sustainability of GEC practices in SN programs/schools included : the lack of equipment and/or resources to support GEC practices and cost. Findings from this study will be used to develop a Web-based GEC resource for SN professionals who wish to implement or sustain GEC practices.

Exploring the Role of the School Nutrition Program in the Sustainability of School Wellness Policy Initiatives in the Middle School Setting

In 2004, the Child Nutrition and WIC Reauthorization Act of 2004 mandated that all school districts participating in federally funded child nutrition programs must establish a local wellness policy (LWP) by the beginning of the 2006-2007 academic year. Research has shown that a supportive infrastructure sustains wellness practices and that a supportive infrastructure includes employing qualified teachers, providing ongoing professional development, and using a standards-based curriculum. Research has also shown that LWP programs should involve parents, families, and communities to be sustainable. The purpose of this project was to investigate the sustainability of an LWP by identifying school districts that have successfully implemented an LWP; characteristics of an LWP that students respond to well; barriers to implementation of an LWP; barriers to sustainability of an LWP; and strategies, resources and successful practices for sustaining a wellness initiative.

A holistic, multiple-case study methodology with a literal replication design was utilized. To select the school districts to serve as case study sites, child nutrition state agency directors were asked to recommend SN directors who administer exemplary SN programs that are actively involved in the implementation of successful school wellness policies. From the pool of SN directors, four SN directors were selected and invited to serve as case study sites.

Data were gathered in two modes. In the first mode, data were collected by SN directors one month prior to site visits. In the second mode, data were collected by researchers during site visits. All site visits were performed by two researchers. Four case study site visits were conducted in three geographical regions as defined by the USDA. The site visits were completed in one day with four different activities involved: (1) structured interview with SN director, (2) structured interview(s) with other school and/or district personnel involved in the wellness team, (3) focus group with middle school students, and (4) field observations.

The results from each data gathering phase of this study indicated that all of the participating schools had made strides towards implementing the LWP in their school districts, and as a result, generally positive outcomes were found. The following conclusions can be drawn from examining these four school districts:

- Successful strategies for sustaining wellness initiatives included firm commitment and support from the districts’ senior administration.

- Strong leadership on an active wellness committee and communication of the LWP to staff and stakeholders is also essential.
- Barriers to the implementation and sustainability of the LWP emerged. The resistance from teachers and parents to follow guidelines can undermine efforts to promote wellness to students. The perception of lack of funding or time can be a detriment to success. Lack of accountability for implementation and proper evaluation of LWP program can also inhibit success.
- The students in these districts responded well to the availability of healthy foods such as fruits, vegetables, and whole grains. Student input in menu planning promoted student acceptance of the LWP guidelines, which helps lead to sustainability.

Job Functions and Training Needs of State Agency Child Nutrition Professionals

The passage of the National School Lunch Act of 1946 initiated an ongoing partnership among the federal government, states, and local school districts to provide healthy, nutritious meals and snacks to the nation's children. The role of the USDA is to define state responsibility, establish national standards, and maintain general supervision. State agencies receive federal rules and regulations governing each nutrition assistance program from the USDA, Food and Nutrition Service (FNS). State agencies assist program sponsors and coordinate/provide training and technical assistance to program sponsors. Career professionals are employed by state agencies to oversee the child nutrition (CN) programs. Their responsibilities include planning, administering, implementing, monitoring, and evaluating all aspects of the CN programs to ensure that meals served to clients by local school districts and other program sponsors are nutritious, age appropriate, appealing, and cost effective. The objectives of this research were to identify job functions, job responsibilities, training needs, and training preferences of CN professionals working in state agencies.

This research was conducted in two phases. In Phase I, an expert panel of state agency CN professionals participated in a modified Delphi process to identify the functional areas encompassing the job responsibilities of state agency CN professionals. During a work group session, the expert panel agreed on the responsibilities needed by state agency CN professionals, sorted the responsibilities into the appropriate functional areas, and discussed training needs and preferences. In Phase II, a nationwide review panel completed an electronic survey to verify the job responsibilities and training needs and preferences developed by the expert panel.

Six functional areas encompassing the job responsibilities of state agency CN professionals were identified: financial management; personnel management; program and regulatory compliance; program management; technology and data management; and training, technical assistance, and outreach. Definitions were developed for each functional area, and 39 job responsibilities related to the functional areas were identified and confirmed. Most state agency CN professionals rely upon training, resources, and on-the-job training provided by the USDA, FNS.

The functional areas, job responsibilities, and training needs and preferences identified in this project provide a picture of the role of CN professionals at the state level. Administrators can use this information to prepare job descriptions and evaluation criteria for state agency CN staff. These findings also can provide the basis for mentoring and other succession planning activities to prepare CN professionals for state-level responsibilities.

NFSMI Research Agenda Conference: Linking Research to Practice

Over 15 years ago, the NFSMI National Advisory Council recommended that the Applied Research Division develop a three-year research agenda to focus on the operational issues of concern to CN programs. Since this recommendation, the ARD has convened three research conferences to identify research needs of the CN program in 1995, 1999, and 2003. The most recent NFSMI, ARD research conference updated the research plan utilizing a facilitated group meeting. Participants included state agency directors, district school nutrition directors, university faculty, Child and Adult Care Food Program representatives, a representative from the Centers for Disease Control and Prevention, a representative from the Institute of Medicine (IOM), peer reviewed journal editors, a School Nutrition Association representative, a representative from the Center for Science in the

Public Interest, a representative from the Southern Rural Development, USDA representatives, and 10 NFSMI staff.

The conference attendees responded to a series of questions related to emerging issues and trends in CN programs, the role of research in addressing the trends, and appropriate partnerships to facilitate addressing the needs of the CN program. During the facilitated discussion process, many critical issues surfaced. Participants most frequently identified these emerging issues and trends in CN programs: professional development and training for staff (in a variety of topic areas), lack of or limited numbers of qualified staff, and lack of financial support to do what is needed to maintain the programs. When participants were asked to identify the solutions to these emerging issues and trends, the majority of the responses were training; collaboration with other agencies, CN programs, and universities; and access to resources. As for identifying the most important areas of needed research, four responses prevailed: succession planning, program evaluation (related to the impact of training/development, use of technology, qualified staff, and cafeteria environment on program outcomes), operation cost evaluation, and time and motion study. Participants also identified potential partnerships during the discussion, including CN programs partnering with professional organizations, colleges/universities, non-profit groups, and private foundations.

Recently Completed Research-Based Resources

Data-Driven Decision Making: Guide for School Nutrition Programs

School nutrition directors use information and data on a daily basis to make decisions in their SN programs from addressing late lunch lines, to staffing issues or justifications for major purchases. Having the right amount and type of data is critical for making operational decisions. Understanding the importance of objective information collected in a systematic process and analyzed appropriately can allow SN directors to make informed data-driven decisions in their operations. To aid in this process, the NFSMI, ARD, with the assistance of SN professionals, developed the resource, *Data-Driven Decision Making: Guide for School Nutrition Programs*.

The first section, *Setting the Stage for Data-Driven Decision Making*, includes topics such as: uses of data-driven decision making in SN programs; fundamental concepts essential to effective data-driven decision making; and application of data-driven decision making to SN programs. The second section, *Using Focus Groups to Gather Information for Decision Making*, covers topics, such as: when to use focus groups; planning focus groups; conducting focus groups; analyzing focus group results; and communicating focus group results.

School nutrition professionals can use this resource to: identify data they are already collecting in the SN program; identify types of issues that can be addressed using data; and identify strategies to communicate the findings.

Best Practices for Implementing and Evaluating Emergency Preparedness in School Nutrition Programs

The *NFSMI Emergency Preparedness Resource Guide for School Nutrition Professionals* is a self-assessment checklist designed for SN professionals who are implementing or assessing emergency preparedness practices in SN programs. The guide incorporates 87 practice statements and 17 goals within the four practice categories (*Prevention-Mitigation, Preparedness, Response, and Recovery*). Each practice statement is assessed using a 3-point scale, current status (*fully addressed, partially addressed, and not addressed*). This scale is an assessment tool to determine the current status of each practice statement as it pertains to the user's school nutrition program. Upon assessing the current status of the practices, SN professionals can establish a plan of action to address and prioritize those practices identified as needing attention. School nutrition professionals are advised to perform an annual review to assess the implementation of their plan of action. In addition, SN professionals are encouraged to align the school nutrition emergency preparedness plan with federal, state, and local plans and guidelines.

The measurable practices featured in this resource define achievable and effective emergency preparedness strategies. School nutrition professionals can use this assessment to develop and maintain a multi-faceted, comprehensive emergency plan for SN programs.

Greening the School Nutrition Scene! A Guide for Developing and Sustaining GEC Practices for SN Professionals

School nutrition departments and school districts using GEC practices have realized positive outcomes such as decreased solid waste, reduced utility costs, and opportunities to educate students and their community about the importance of conserving the environment. To support these efforts, the NFSMI, ARD developed a Web-based, self-assessment resource for SN professionals who would like to implement and/or sustain GEC practices in their SN program or school district. *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals* can be used to identify actions necessary for starting the “Go Green” process. The research-based tool was created from previous research conducted by NFSMI, ARD and SN professionals with experience implementing and maintaining successful GEC practices in school environments.

This guide can be used to: identify potential GEC practices that would benefit the SN program; identify internal and external stakeholders involved with GEC practices; assess resources needed for implementing a GEC practice; identify SN staff training needs to implement and sustain GEC practices; and develop approaches to build support for GEC practices.