

Exploring the Uniqueness of Child Nutrition Programs in Large School Districts



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National Food Service Management Institute The University of Mississippi

Building the Future Through Child Nutrition

The National Food Service Management Institute (NFSMI) 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 Technology Transfer 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.

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EXPLORING THE UNIQUENESS OF CHILD NUTRITION PROGRAMS IN LARGE SCHOOL DISTRICTS

EXECUTIVE SUMMARY

The largest public school districts in the United States are responsible for educating a high percentage of public school students in the nation; therefore, school nutrition programs in these districts have the greatest potential for influencing the nutritional health and wellbeing of children nationwide. Previous research has indicated that large school districts serve a demographically different student body, have a greater percentage of economically disadvantaged students, and operate in complex political and financial environments than smaller school districts (Casserly, 2005; Snipes, Doolittle & Herlihy, 2002).

Limited research exists on issues related to operating school nutrition (SN) programs in large school districts. To address this issue, the National Food Service Management Institute (NFSMI), Applied Research Division initiated a research study to identify the unique issues associated with school nutrition programs in large school districts. The specific objectives for the study were to determine operational issues and practices SN directors encounter in large school districts, identify characteristics and qualities needed to be a successful SN director in a large school district, and identify whether training is needed to develop these characteristics and qualities.

NFSMI researchers assembled an expert panel of SN directors from large school districts to ascertain their opinions regarding operational issues, challenges, and training needs specific to

those who operate SN programs in large school districts. NSFMI researchers developed a three-section survey from the qualitative data obtained during the expert panel discussion session. In the first section, participants indicated their agreement with 52 operational issues and practices related to SN operations in large school districts. Agreement was rated on a 4-point scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Participants also indicated how often each operational issue/practice was encountered or performed by use of a 5-point scale that ranged from 0 (*never*) to 4 (*daily*). In section two, participants indicated how important each of 33 characteristics or qualities was to being a successful SN director in a large school district and also specified their opinion of the importance of training to develop these characteristics/qualities. In both instances, importance was rated on a 4-point scale, ranging from 1 (*not important*) to 4 (*very important*). In section three, participants provided additional information about themselves and their SN operation.

For this research study, NFSMI researchers defined large school districts as those with 30,000 or more student enrollment which resulted in a study sample of 232 school districts in the seven USDA regions. Researchers mailed the survey, a cover letter, and a self-addressed, postage-paid return envelope to the study sample of 232 school nutrition directors. Researchers then sent a follow-up letter to all SN directors encouraging their response. These efforts resulted in a 42% response from the SN directors.

The majority of SN directors who responded to the survey were female (75.8%) with a Master's degree or higher (56.8%). They have worked in SN programs for 15 years or more (70.5%) and in their current position for less than ten years (59.9%). Over one-third (36.6%) had worked on the SN management team in their current district prior to taking the SN director position and 19.4% worked as a SN director in another large school district. Respondents were

from all USDA regions, with the highest percentages from the Southeast (30.9%), Western (23.4%), and Southwest (16.0%) regions. More than one-half (55.8%) of SN directors were employed in districts ranging in size from 30,000 – 49,000 students while 10.5% of respondents work in districts with greater than 100,000 students.

Results of this study suggest that the SN director position in a large school district is generally not an entry-level management position in SN and that those school district administrators who hire SN directors value prior management experience in large school districts. Current SN directors recognize the importance of experience on the SN management team in large districts as well as educational backgrounds in nutrition and/or business. Given the impending retirements of SN directors in large school districts and propensity of many SN directors to ascend from the ranks of the SN management team, there is a need to prepare middle management SN professionals and others to lead SN programs in large school districts.

The SN directors who responded to this survey were from all seven USDA regions and represented districts containing 20 to over 150 feeding sites and student enrollments ranging from 30,000 to over 100,000. Regardless of the size of school district, there was strong agreement in respect to the operational issues and practices encountered by SN directors in large school districts. In other words, SN directors, regardless of the size of their large school district, are encountering similar operational issues.

The SN directors who participated in this study rated 29 of the 33 characteristics and/or qualities needed by SN directors in large school districts 3.5 or greater on a 4-point scale, which signifies these characteristics and qualities are important or very important for a SN director to be successful. Regardless of school district size, there was strong agreement in respect to the characteristics and/or qualities needed by SN directors in large school districts. When asked to

indicate the importance of training to develop these characteristics and/or qualities, the SN directors rated 31 of the 33 characteristics and/or qualities phrases 3.0 or greater on a 4-point scale, suggesting that school nutrition directors recognize that training is important to assist in the development of these leadership qualities.

Over one-third (36.9%) of survey respondents indicated that they will be retiring in the next five years and another 14.7% are not sure if they will retire, indicating that there may be the impending retirement of 50% or more of these current directors of large SN programs within the next five years. The findings of this study suggest that education and training programs are needed to assist in the preparation of SN professionals to operate SN programs in large school districts. These programs should target SN professionals who work on management teams in large SN programs as well other SN directors from smaller school districts. The operational issues and practices related to SN operations in large school districts as well as the characteristics and qualities of directors operating SN programs in large school districts identified in this research study should provide the foundation for these education and training programs.

INTRODUCTION

In the 2003-04 school year, there were 17,512 public school districts, 98,213 public schools and over 49 million students in the United States and jurisdictions (Dalton, Sable & Hoffman, 2006). The 100 largest public school districts represent 0.6% of all school districts in the United States and are responsible for educating approximately 23% of all public school students. The 500 largest districts account for only 3% of public school districts and serve 43% of all public elementary and secondary students. In 2003-04, each of the 100 largest school districts had at least 46,594 students while 73% of all regular school districts had fewer than 2,500 students. The average school district has 5.6 schools, and in comparison, the 100 largest school districts average 161.8 schools per district (Dalton et al., 2006).

The 100 largest school districts are located in 32 states and jurisdictions. Texas has 15 districts among the 100 largest, and California and Florida have 13 each. Approximately three-fourths of the 100 largest districts are located in coastal and gulf coast states. These school districts tend to be in cities or counties with large populations and many districts are in states where the school districts have the same boundaries as counties (Dalton et al., 2006).

Several authors have characterized big-city school systems as being different from school districts in other settings (Casserly, 2005; Education Commission of the States, 2003; Snipes, Doolittle, & Herlihy, 2002). The 100 largest school districts had more students per school than the average school district, 697 compared with 503 students. Ten of the 100 largest districts have an average regular school size of over 1,000 students (Dalton et al., 2006).

These large school districts serve a demographically different student body than smaller systems (Casserly, 2005). The districts, many of which are located in urban areas, serve 40% of the country's minority students and 30% of the economically disadvantaged students (Snipes,

Doolittle, & Herlihy, 2002). Over 90% of urban districts have poverty rates above their statewide averages (Education Commission of the States, 2003). In a study of 65 large city school systems, Casserly (2005) reported that students in urban schools are more likely to come from non-English speaking homes. This study showed that 17% of students in these large city school districts are English language learners, compared with approximately 8% nationwide. Casserly (2005) also reported that 75% of these large urban school districts have higher percentages of students learning the English language than other school districts in their states.

Dalton et al. (2006) reported that the 100 largest school districts have a higher percentage of students eligible for free and reduced price meals relative to all public school districts. Among schools that reported free and reduced price eligibility, 47% of students in the 100 largest school districts were eligible, compared with 37% of students in all districts. Among the 94 of the 100 largest school districts reporting, 42 districts reported over 50% of their students were eligible for free and reduced price meals (Dalton et al., 2006).

Casserly's study of 65 urban school districts (2005) indicated that many districts operate in political and financial environments that are more complex, contentious, and competitive than smaller systems. In a study of school board members, Hess (2002) concluded that large-district school boards are fundamentally different from their smaller counterparts. In districts with 25,000 or more students, school boards are relatively political bodies, with more costly campaigns, attentive interest groups, politically oriented candidates, and hotly contested elections (Hess, 2002). In a survey of superintendents in large school districts, Fuller et al. (2003) found that the superintendents believe that the structure of the position prevents them from doing what they were hired to do, that they direct highly complex bureaucracies, and competing power centers in the school system attempt to control district agendas. Snipes,

Doolittle, and Herlihy (2002) described a common set of challenges faced by three large urban school districts. Included among these challenges are unsatisfactory academic achievement, political conflict, high student mobility within the district, and unsatisfactory business operations.

Limited research exists on issues related to operating school nutrition (SN) programs in large school districts. One study examining outcomes of the verification process found that the method of sampling, rather than size of school district, was the reason for the overall differences between small and large districts (Burghardt, Silva, and Hulsey, 2004).

Several directors operating school nutrition programs in large school districts were profiled in foodservice publications. Recurring themes in the profiles include the following: operates a business within the school setting, implements cost controls, develops staffing formulas, introduces new technology to improve productivity, employs a district-level management team, utilizes staff training to improve skills, maintains commitment to quality food, and sustains the nutritional integrity of program (FM Staff, 2006; Friedland, 2005; Lefebvre, 2005).

This research project attempts to address the void of research related to the operation of school nutrition programs in large school districts. The purpose of this study was to identify the unique issues associated with school nutrition programs in large school districts. The specific objectives for the study include the following:

- Determine operational issues and practices SN directors encounter in large school districts,
- Identify characteristics and qualities needed to be a successful SN director in a large school district, and

- Identify whether training is needed to develop the characteristics and qualities of a successful SN director in a large school district.

METHOD

Research Plan

The purpose of this research was to identify the unique issues associated with operating a school nutrition (SN) program in a large school district with 30,000 or greater student enrollment. To accomplish this goal, the operational issues and practices encountered in SN programs in large school districts, the characteristics of directors who lead SN programs, and the training needs associated with developing these characteristics were explored. An expert panel of SN directors from large school districts was convened to ascertain their opinions regarding operational issues and challenges, as well as identify training needs faced by those who operate SN programs in large school districts. The qualitative data gleaned from the expert panel were used to develop a survey instrument that was mailed to all SN directors in school districts with 30,000 or greater student enrollment.

Expert Panel

Seven SN professionals from districts with 30,000 or greater student enrollment were contacted by email and invited to participate in a day and a half discussion session (Appendix A). The SN professionals were selected based on their expertise, size and diversity of their school districts and SN programs, and geographic location. The expert panel was comprised of an assistant superintendent who was previously a SN director, four SN directors, and two members of the SN management team in their districts (Appendix B). These SN professionals were from school districts with student enrollments ranging from 32,000 to 160,000 with representation from all USDA regions. After panel members agreed to participate, confirmation

letters were mailed (Appendix C). Prior to the expert panel meeting, participants were mailed the NFSMI competencies, knowledge, and skill statements for district SN directors and supervisors as well as a sample job description template for district directors and supervisors. Panel members were asked to briefly review the documents prior to the meeting as there would be discussion to determine whether these documents are appropriate for professionals operating SN programs in large school districts.

The discussion session was facilitated by an NFSMI research scientist with an assistant moderator capturing the participants' comments on a flip chart. The agenda was planned to address issues related to the research objectives so that the resulting discussions would support survey development (Appendix D). Throughout the session, the research scientist used a structured approach to keep the discussion focused on the selected topics. At the end of each agenda section, the assistant moderator summarized responses and participants were invited to verify that the summary comments were an accurate depiction of the discussion.

Information concerning operational practices and challenges, as well as training practices and challenges encountered by SN directors in large school districts was collected in a systematic approach by asking semi-structured, open-ended questions. Participants were willing to openly and freely respond to the discussion questions. When asked if the NFSMI competencies, knowledge, and skill statements that were developed for district-level SN directors and supervisors were suitable for professionals operating SN programs in large school districts, participants agreed that the knowledge and skill statements were appropriate. Expert panel participants discussed operational issues and challenges that they face in their district. Several panel members indicated that they encounter the same operational issues as other SN directors but the volume and complexity of the issues may be greater, as well as the need for more

communication. Other panel members indicated that they were not involved in day-to-day school operations as they utilized a management team to deal with many operational issues. Panel participants also discussed training practices and challenges faced in their districts. Several panel members reported that they have individuals responsible for coordinating and conducting training programs. They indicated that district-level management of training programs is critical as consistency in training and continual updating of courses/programs is a necessity. As the discussion session progressed, panel members kept returning to a similar theme where they considered their positions as SN directors in large districts to be similar to chief executive officers or CEOs. Researchers asked panel members to describe characteristics or qualities of directors who operate SN programs in large school districts. Panel members strongly suggested that questions addressing these characteristics and qualities should be included in the survey.

Following the expert panel meeting, researchers summarized the discussion session and emailed the summaries to expert panel participants for comments. Researchers used these summaries to develop statements that were incorporated into the survey instrument.

Survey Development

The survey was developed from information acquired from the qualitative data obtained during the expert panel discussion session. The survey entitled, *Identification of the Unique Issues Associated with School Nutrition Programs in Large School Districts* consisted of three sections (Appendix E). In the first section of the survey, participants were asked to indicate their agreement with 52 operational issues and practices related to SN operations in large school districts. Agreement was rated on a 4 point scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Participants also were asked to indicate how often each operational issue/practice was encountered or performed by use of a 5 point scale that ranged from 0 (*never*)

to 4 (*daily*). In section two, 33 characteristics or qualities were listed. Participants were asked to indicate how important each characteristic/quality was to being a successful SN director in a large school district. In addition, participants were asked to indicate their opinion of the importance of training to develop the characteristics/qualities. In both instances, importance was rated on a 4 point scale, ranging from 1 (*not important*) to 4 (*very important*). In section three, participants were asked to provide additional information about themselves and their SN operation.

Survey Evaluation

Expert panel members (N = 7) were asked to review the draft survey. Each panel member was emailed the draft survey and a survey evaluation form (Appendix F). Expert panel members were instructed to review all of the questions on the survey. Additionally, they were asked to use the evaluation form to record their comments, suggestions, or revisions for the directions, survey statements, and response categories. Six (86%) expert panel members returned the survey evaluation form. Minor wording changes for clarity recommended by the expert panel were incorporated into the final version of the survey.

Sample

The sample for the research study consisted of school nutrition directors in large public school districts. Researchers found several descriptions as to what constitutes a large school district. USDA defines the largest school food authorities (SFA) as the two largest SFAs in each state and all others with greater than 40,000 student enrollment (S. Garnett, personal communication, July 27, 2005). The School Nutrition Association describes the major city membership category as where professionals work in large school districts with an enrollment of 40,000 or more or city population is 200,000 or more (School Nutrition Association, n.d.). The

National Center for Education Statistics (Dalton et al., 2006) reports that in the 2003-04 school year, each of the 100 largest public school districts had at least 46,000 students, and the 500 largest districts had at least 15,000 students. Upon examination of these descriptions, researchers determined that, for this research study, large school districts would be defined as those public school districts with 30,000 or more student enrollment.

A listing of states in each USDA region was provided to Market Data Retrieval, a company that specializes in the school market. The resulting list of mailing labels identified the number of school districts with student enrollment of 30,000 or greater within the seven USDA regions and each district school nutrition director's contact information. The total school districts reporting student enrollment of 30,000 or greater included 232 in the seven USDA regions with 51 districts in the Western region, 17 districts in the Mountain Plains region, 17 districts in the Midwest region, 4 districts in the Northeast region, 25 districts in the Mid-Atlantic region, 71 districts in the Southeast, and 47 districts in the Southwest region. All school nutrition directors in the school districts from the Market Data Retrieval listing were included in the study sample (N = 232).

Survey Distribution

The survey, a one-page cover letter, and a self-addressed, postage-paid return envelope were mailed to the 232 school nutrition directors in the study sample. The cover letter informed participants of the purpose of the study, asked for their participation, assured them of confidentiality of their responses, and provided researchers' contact information for questions and concerns (Appendix G). No identifying codes were placed on the surveys, thus preserving the anonymity of all respondents. Approximately two weeks later, a follow-up letter was mailed to all SN directors encouraging them to complete and return the surveys (Appendix H).

Informed Consent

The researchers followed informed consent procedures established by the Human Subjects Protection Review Committee at The University of Southern Mississippi for the research study.

Data Analysis

Surveys were analyzed using the statistical package SPSS Version 13.0 for Windows. Descriptive statistics included means, standard deviations, and frequencies of total responses. Additional statistical analyses were planned. The researchers performed principal components factor analysis using the operational issues statements and the characteristics/qualities of successful SN directors. No cognitive factors were derived in either case; therefore, factor analysis is not reported. Additionally, independent *t* tests were conducted to explore group differences based on school district enrollment for the operational issues statements and the characteristics/qualities of successful SN directors. No significant differences were found. Results of *t* tests, therefore, are not reported.

RESULTS AND DISCUSSION

Researchers mailed surveys to the 232 SN directors in public school districts with student enrollments of 30,000 or greater selected to participate in the research study. One survey was returned indicating that the school district did not have a SN director at this time, thus reducing the sample to 231. Ninety-eight (42%) directors responded to the survey. Two surveys were not used in the data analysis as responses on the survey indicated that they did not meet the 30,000 student enrollment criteria. An additional survey was also not used in the data analysis as it arrived too late to be included.

Characteristics of School Nutrition Directors

Demographic data for the responding SN directors are presented in Table 1. The majority of SN directors are female (75.8%) with a Master's degree or higher (56.8%). Respondents indicated their primary area of study to be Nutrition and Dietetics (27.2%), Business (21.0%), Food and Nutrition (16.0%), or Food Service Management (14.8%). When asked about their certification or credentialed status, 39.4% of SN directors indicated they were SFNS credentialed, 37.2% were SNA certified, and 29.8% were Registered Dietitians.

The majority of respondents have worked in SN programs for 15 years or more (70.5%) and in their current position for less than ten years (59.9%). Over one-third (36.6%) of SN directors had worked on the SN management team in their current district prior to taking the SN director position and 19.4% worked as a SN director in another large school district. Over one-third (36.9%) of respondents will be retiring in the next five years. When asked the type of education and experience they would recommend for their successor, 68.8% of SN directors

Table 1

Personal Characteristics of Respondents

Question	Frequency^a	%
What is your gender?		
Female	72	75.8
Male	23	24.2
What is your highest level of education?		
Master's degree	35	36.8
Baccalaureate degree	28	29.5
Graduate hours beyond Master's	14	14.7
Some graduate credits	8	8.4
Associate degree	5	5.3
Doctoral degree	5	5.3
What has been your primary area of study?		
Nutrition and Dietetics	22	27.2
Business	17	21.0
Food and Nutrition	13	16.0
Food Service Management	12	14.8
Other	8	9.9
Child Nutrition and Management	6	7.4
Hospitality Management	2	2.5
Culinary Food Service	1	1.2
What is your certification/credentialed status? ^b		
SFNS credentialed	37	39.4
SNA certified	35	37.2
Registered Dietitian	28	29.8
Not certified	16	17.0
State Department of Education certified	16	17.0
Licensed Dietitian/Nutritionist	11	11.7
Other	10	10.6
How many years have you worked in school nutrition (SN) programs?		
Greater than 20 years	46	48.4
16 to 20 years	21	22.1
11 to 15 years	17	17.9
6 to 10 years	8	8.4
1 to 5 years	3	3.2

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 1 (*continued*)*Personal Characteristics of Respondents*

Question	Frequency^a	%
How long have you been in your current position?		
1 to 5 years	35	36.9
6 to 10 years	18	18.9
16 to 20 years	18	18.9
11 to 15 years	11	11.6
Greater than 20 years	9	9.5
Less than one year	4	4.2
Prior to taking your current position, did you work		
On the SN management team in current district	34	36.6
As a SN director in another large school district	18	19.3
Other	12	12.9
On the SN management team in another large school district	10	10.8
As a SN director in a small school district	10	10.8
As a healthcare foodservice director	7	7.5
As a restaurant manager	2	2.1
Will you be retiring in the next five years?		
No	46	48.4
Yes	35	36.9
Not Sure	14	14.7
In choosing a successor for your position, would you recommend ^b		
Experience on the SN management team in a large district	64	68.8
Undergraduate degree in nutrition	47	50.5
Undergraduate degree in business	45	48.4
Graduate degree	43	46.2
Experience on the SN management team in this district	36	38.7
Experience as a SN director in a smaller district	34	36.6
Other	9	9.7
Experience in foodservice management in healthcare	4	4.3
In seeking resources/information to assist in the operation of your SNP, do you prefer		
Both print-based and web-based resources	74	79.6
Web-based resources	12	12.9
Print-based resources	7	7.5

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 1 (*continued*)*Personal Characteristics of Respondents*

Question	Frequency^a	%
What form of continuing education do you prefer? ^b		
Meeting or conference	88	93.6
Professional development publication/article	58	61.7
Preconference program	40	42.6
Blended learning (face-to-face and online)	26	27.7
Online course/distance education	23	24.5
Academic course work	22	23.2
Small study group	22	23.4
Self study program	20	21.3
Independent study (CD ROM, internet)	20	21.3
Satellite Seminar	19	20.2
Independent study (video, manuals)	17	18.1
Home study course	11	11.7
Poster session	10	10.6
Interactive multimedia modules	9	9.6
Other	1	1.1

^a Total N varies based on responses for each question^b Total exceed 100% since respondents could select more than one response

recommended experience on the SN management team in a large district followed by an undergraduate degree in nutrition (50.5%), undergraduate degree in business (48.4%), and a graduate degree (46.2%).

Two survey questions addressed SN directors' preferences regarding accessing SN resources and continuing education formats. When seeking resources or information to assist in the operation of their SN program, over three-fourths (79.6%) of SN directors indicated that they prefer both print-based and Web-based resources. The highest rated continuing education formats reported by SN directors were meeting or conference (93.6%), professional development publication/article (61.7%), and pre-conference program (42.6%).

Characteristics of School Nutrition Programs

SN directors responded to several questions intended to describe their districts' SN programs (Table 2). Respondents were from all USDA regions, with the highest percentages from the Southeast (30.9%), Western (23.4%), and Southwest (16.0%) regions. These percentages closely mirror the percentages for the USDA regions represented in the research sample. More than one-half (55.8%) of SN directors were employed in districts ranging in size from 30,000 – 49,000 students while 10.5% of respondents work in districts with greater than 100,000 students. Almost two-thirds (65.8%) of directors reported serving 40 to 99 feeding sites in their districts while another 10.5% directors served 150 or more sites. One-quarter (25.3%) of SN directors indicated that 46 – 60% of enrolled students in their districts were approved for free meals and 7 – 8% for reduced meals.

Almost all (98.9%) directors indicated use of district-level professional staff to oversee site-level operations with the majority (54.5%) responding that professional staff oversee 11 to 20 sites. Over one-third (35.5%) of directors reported annual SN budgets of \$10,000,001 to \$15,000,000 while another 23.4% had budgets of \$20,000,001 to \$30,000,000. Almost half (46.0%) of SN directors indicated that the percentage of total revenue budgeted for food ranged from 36% to 40% while 55.8% reported the percentage budgeted for labor ranged from 41% to 50%. When asked to describe the methods used to calculate meal equivalents that equate to a student reimbursable lunch, 63.4% used two breakfasts to equal one lunch, 35.7% counted three afterschool snacks to equal one lunch, and over half (52.4%) equated \$2.50 or less of non-reimbursable food sales (a la carte) to a reimbursable lunch.

Table 2

Characteristics of Respondents' School Nutrition (SN) Programs

Question	Frequency^a	%
In what USDA region do you work?		
Southeast	29	30.8
Western	22	23.4
Southwest	15	16.0
Mid-Atlantic	11	11.7
Mountain Plains	11	11.7
Midwest	4	4.3
Northeast	2	2.1
What is the total enrollment in your school district?		
30,000 to 39,999 students	29	30.5
40,000 to 49,000 students	24	25.3
50,000 to 69,999 students	23	24.2
100,000 or greater students	10	10.5
70,000 to 99,999 students	9	9.5
How many feeding sites do you serve?		
40 to 69 sites	40	42.1
70 to 99 sites	22	23.2
20 to 39 sites	14	14.7
150 or more sites	10	10.5
100 to 149 sites	9	9.5
What percentage of enrolled students in your district is approved for free meals?		
46% - 60%	21	25.3
26% - 35%	17	20.5
36% - 45%	17	20.5
25% or less	16	19.3
61% or greater	12	14.4

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 2 (*continued*)*Characteristics of Respondents' School Nutrition (SN) Programs*

Question	Frequency^a	%
What percentage of enrolled students in your district is approved for reduced meals?		
7 – 8%	21	25.3
9 – 10%	18	21.7
5 – 6%	16	19.3
15% or greater	11	13.3
11 – 14%	9	10.8
4% or less	8	9.6
How many district-level staff report directly to you?		
5 to 10	31	33.0
11 to 15	27	28.7
16 to 20	13	13.8
Greater than 20	13	13.8
Less than 5	10	10.7
Do you have district-level SN professional staff overseeing site-level operations?		
Yes	94	98.9
No	1	1.1
How many feeding sites does each SN professional staff oversee?		
16 to 20 sites	33	35.5
11 to 15 sites	27	29.0
21 or more sites	24	25.8
6 to 10 sites	6	6.5
Less than 5 sites	3	3.2
What is the approximate annual budget for your district SNP?		
\$10,000,001 to \$15,000,000	32	35.6
\$20,000,001 to \$30,000,000	21	23.4
\$15,000,001 to \$20,000,000	14	15.5
\$30,000,001 or greater	12	13.3
\$10,000,000 or less	11	12.2

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 2 (*continued*)*Characteristics of Respondents' School Nutrition (SN) Programs*

Question	Frequency^a	%
What percentage of total revenue do you budget for food?		
36% to 40%	40	46.0
35% or less	16	18.4
41% to 45%	14	16.1
46% to 50%	12	13.8
51% or greater	5	5.7
What percentage of total revenue do you budget for labor?		
46% to 50%	25	29.0
41% to 45%	23	26.8
36% to 40%	15	17.4
51% or greater	14	16.3
35% or less	9	10.5
Does your SN operation have a formalized marketing plan?		
No	56	58.9
Yes	39	41.1
Do you benchmark meals per labor hour among the schools in your district?		
Yes	85	92.4
No	7	7.6
What method are you using to calculate meal equivalents that equate to a student reimbursable lunch for breakfast?		
Two breakfasts equal one lunch	52	63.4
Three breakfasts equal one lunch	15	18.3
Other	15	18.3
What method are you using to calculate meal equivalents that equate to a student reimbursable lunch for after school snacks?		
Other	17	40.5
Three snacks equal one lunch	15	35.7
Four snacks equal one lunch	10	23.8

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 2 (*continued*)*Characteristics of Respondents' School Nutrition (SN) Programs*

Question	Frequency^a	%
What method are you using to calculate meal equivalents that equate to a student reimbursable lunch for non-reimbursable food sales (a la carte)?		
\$2.01 to \$2.50 equals one lunch	23	28.0
\$2.00 or less equals one lunch	20	24.4
Other	19	23.2
\$2.51 to \$3.00 equals one lunch	15	18.3
\$3.01 or greater equals one lunch	5	6.1
What types of foodservice operations are used in your district? ^b		
Onsite kitchens	80	86.0
Centralized kitchen serving both offsite and onsite	39	41.9
Central kitchen with no onsite service	15	16.1
For hot and/or cold that is prepared centrally, how is the food transported? ^b		
Cold foods delivered in bulk	39	49.4
Hot foods delivered in bulk	33	41.8
Cold foods delivered preplated/preportioned	27	34.2
Hot foods delivered preplated/preportioned	18	22.8
Hot foods delivered hot	17	21.5
Hot foods delivered cold to be rethermalized onsite	14	17.7
Is a central warehouse for storage of food and supplies used in your district?		
Yes	65	69.9
No	28	30.1
How does your SN operation manage foodservice equipment maintenance issues?		
SN department employs their own maintenance staff to service equipment	32	33.7
SN department relies on district-level maintenance staff for equipment service	32	33.7
SN department uses a combination of the three options provided on the survey	22	23.2
SN department contracts with an outside firm for equipment service	9	9.4

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 2 continued

Characteristics of Respondents' School Nutrition (SN) Programs

Question	Frequency^a	%
How does your SN operation handle technology support issues?		
SN employs their own technology staff	41	43.1
SN department uses a combination of the three options provided on the survey	29	30.5
SN department relies on district-level technology staff for support	24	25.3
SN department contracts with an outside firm for technology support	1	1.1
Is your SN operation using point-of-sale software?		
Yes	94	98.9
No	1	1.1
Is the point-of-sale software a		
Pre-developed SN software package	85	92.4
Custom-designed software package for your SN operation	5	5.4
Combination of pre-developed and custom-designed software	2	2.2
Is your SN operation using software to support production and other back-of-the-house activities?		
Yes	65	69.1
No	29	30.9
Is the back-of-the-house software a		
Pre-developed SN software package	49	76.6
Custom-designed software package for your SN operation	11	17.2
Combination of pre-developed and custom-designed software	4	6.2
Considering the ethnic diversity of today's labor pool, do you have employees who speak little or no English?		
Yes	78	83.9
No	15	16.1

^a Total N varies based on responses for each question

(table continues)

^b Total exceed 100% since respondents could select more than one response

Table 2 (*continued*)*Characteristics of Respondents' School Nutrition (SN) Programs*

Question	Frequency^a	%
Approximately what percentage does this comprise of labor force?		
Less than 4%	19	25.7
5 – 9%	18	24.3
10 – 19%	16	21.6
Greater than 40%	12	16.2
20 – 39%	9	12.2
How would you describe your school district over the last five years?		
Increasing enrollment	58	62.4
Enrollment steady	20	21.5
Decreasing enrollment	15	16.1
In the last five years, is your school district ^b		
Renovating existing schools	82	86.3
Building new schools	79	83.2
Closing schools	14	14.9
If your school district is building schools, is the SNP contributing funds toward the new SN department in the schools (i.e., equipment, dining furniture, etc)?		
No	62	68.9
Yes	28	31.1
If your school district is renovating schools, is the SNP contributing funds toward the renovated SN department in the schools (i.e., equipment, dining furniture, etc)?		
Yes	56	60.2
No	37	39.8
Is the management of your district SNP		
Self-operated	88	94.6
Contracted by a food service management company	5	5.4

^a Total N varies based on responses for each question^b Total exceed 100% since respondents could select more than one response

Eighty-six percent of SN directors indicated the use of onsite kitchens in their districts and 69.9% reported central warehouse was utilized for the storage of food and supplies. When asked how their SN operation manages foodservice equipment maintenance issues, 33.7% of the SN departments employ maintenance staff to service equipment while another 33.7% relies on district-level maintenance staff. Almost half (43.1%) of SN directors responded that their SN department employs technology staff to handle technology support issues. Almost all (98.9%) SN operations are using point-of-sale software and many (69.1%) are also utilizing software to support food production and other back-of-the-house activities.

Over half (62.4%) of SN directors described their districts as increasing student enrollment over the last five years with 86.3% of districts renovating existing schools and another 83.2% building new schools. Respondents were asked if the SN program has contributed funds toward the new or renovated SN departments. Over two-thirds (68.9%) of the directors with new construction had not contributed any SN funds, while 60.2% were contributing funds to purchase items such as foodservice equipment or dining furniture for renovated SN departments.

Operational Issues and Practices

Respondents were provided with 52 statements regarding operational issues and practices related to SN operations in large school districts and were asked to indicate their agreement with each statement using a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Table 3 presents the means and standard deviations for the 52 statements in descending order of agreement. Eighteen of the 52 statements had mean ratings greater than 3.5 and another nine statements had mean ratings greater than 3.0 suggesting that school nutrition directors agreed with these operational issues.

Table 3

*Mean Agreement Ratings and Standard Deviations for Operational Issues/Practices
Encountered by School Nutrition Directors in Large School Districts*

Statement	N	Mean^a	SD
3. Putting together an effective management team is critical to the operational success of the SN department.	95	4.0	0.1
4. I serve as the SN representative with district administration.	94	3.9	0.3
7. I operate the SN department as a business within the school setting.	94	3.9	0.3
2. The SN department employs district-level professional staff to oversee site-level operations.	94	3.9	0.4
5. Menus are standardized throughout the district.	92	3.8	0.4
35. I view the SN department as a business within the school setting.	95	3.8	0.4
15. Menus are developed by district-level SN professional staff.	95	3.8	0.5
48. I view my leadership skills as impacting the success of the SNP.	95	3.8	0.5
6. The cost of technology for School Nutrition Programs (SNP) continues to increase.	94	3.8	0.5
9. The school district has a district-wide technology infrastructure.	95	3.8	0.5
37. I directly supervise district-level SN professional staff.	92	3.7	0.7
18. I consider my SN job responsibilities similar to those of a Chief Executive Officer (CEO).	93	3.6	0.5
52. I seek professional development opportunities beyond what my school district provides to improve my leadership skills.	94	3.6	0.6
1. The SN department performs human resource functions for SN employees.	94	3.6	0.06

^a Scale = 1, strongly disagree to 4, strongly agree

(table continues)

Table 3 (*continued*)

*Mean Agreement Ratings and Standard Deviations for Operational Issues/Practices
Encountered by School Nutrition Directors in Large School Districts*

Statement	N	Mean^a	SD
49. My work schedule is greater than 40 hours per week.	95	3.6	0.7
8. I value the importance of implementing a marketing plan for my SN operation.	95	3.6	0.5
25. District-level SN coordinators/supervisors review site-level employee records and document work performance, training, attendance, etc.	93	3.6	0.6
26. Menus are planned to meet the needs of a diverse student body.	95	3.6	0.5
50. SN department is current with technology practices.	94	3.3	0.7
51. The volume and the complexity of meeting the special nutrition needs of children is a challenge.	95	3.3	0.7
38. District-level SN professional staff assures consistency in implementing the marketing plan for all school sites.	95	3.3	0.7
47. Recruiting and retaining qualified SN site-level staff is difficult.	95	3.2	0.7
29. The cost of maintaining current software and hardware in all feeding sites is a financial challenge	94	3.2	0.7
27. I have supervisory responsibilities with site-level employees.	92	3.1	0.1
11. District administrators support the contribution provided by the SN department.	94	3.1	0.7
12. Recruiting and retaining qualified SN professional staff is difficult.	94	3.0	0.8
28. District administrators view the SN department as a business within the school setting.	95	3.0	0.9

^a Scale = 1, strongly disagree to 4, strongly agree

(table continues)

Table 3 (*continued*)

*Mean Agreement Ratings and Standard Deviations for Operational Issues/Practices
Encountered by School Nutrition Directors in Large School Districts*

Statement	N	Mean^a	SD
30. I am faced with financial challenges to support marketing activities.	94	2.9	0.8
42. I am faced with district political challenges in operating the SNP.	95	2.8	0.8
17. I am faced with communication challenges due to the numerous organizational layers in the school district.	94	2.8	0.7
19. My school district provides professional development opportunities that support my leadership growth.	95	2.8	0.9
43. I face operational challenges with inadequate cafeteria dining facilities.	95	2.8	0.9
31. The installation of current software for all feeding sites is a time management challenge.	95	2.8	0.8
16. I am faced with SN staff challenges to implement a successful marketing plan.	94	2.8	0.7
22. I encounter funding challenges related to the food production/transport systems used in my district.	93	2.8	0.9
33. I am faced with community political challenges in operating the SNP.	95	2.8	0.9
36. Retaining competent maintenance staff is a challenge.	88	2.7	0.9
24. The SN department encounters challenges when trying to utilize SN software with the district-level technology.	94	2.6	0.8
39. Lack of understanding of SN program needs by district-level technology staff presents challenges.	95	2.6	0.8
14. Dealing with labor unions presents challenges.	88	2.6	1.0

^a Scale = 1, strongly disagree to 4, strongly agree

(table continues)

Table 3 (*continued*)

*Mean Agreement Ratings and Standard Deviations for Operational Issues/Practices
Encountered by School Nutrition Directors in Large School Districts*

Statement	N	Mean^a	SD
23. I often encounter challenges with district-level support when trying to address disciplinary issues with employees.	93	2.6	0.9
46. Understanding the financial aspect of operating the SNP is a challenge.	95	2.5	0.9
32. Frequent turnover in district-level administration presents challenges.	95	2.5	0.9
40. I am faced with communication challenges due to the numerous organizational layers in the SNP.	95	2.5	0.8
45. Retaining competent technology staff is a challenge.	93	2.5	0.9
10. I am challenged with employee issues due to lack of support from Human Resources.	94	2.4	1.0
34. I face operational challenges with inadequate foodservice equipment.	95	2.3	0.9
13. I face operational challenges with inadequate food preparation facilities.	94	2.2	1.0
21. Oversight is required to ensure that the temp agency complies with district Human Resource policies.	81	1.9	1.2
20. The SN department utilizes a temp agency for site-level substitute staff.	92	1.8	1.1
41. The SN department performs human resource functions for other district departments.	95	1.6	0.8

^a Scale = 1, strongly disagree to 4, strongly agree

Operational issues with the highest mean ratings were: “putting together an effective management team is critical to the operational success of the SN department” (4.0 ± 0.1), “I serve as the SN representative with district administration” (3.9 ± 0.3), “I operate the SN department as a business within the school setting” (3.9 ± 0.3), and “the SN department employs a district-level professional staff to oversee site-level operations” (3.9 ± 0.4). Operational issues with the lowest mean ratings were: “the SN department performs human resource functions for other district departments” (1.6 ± 0.8), “the SN department utilizes a temp agency for site-level substitute staff” (1.8 ± 1.1), “oversight is required to ensure that the temp agency complies with district Human Resource policies” (1.9 ± 1.2), and “I face operational challenges with inadequate food preparation facilities” (2.2 ± 1.0).

The researchers planned additional statistical analyses to further examine the SN directors’ responses to the operational issues statements. Principal components factor analysis was performed using the operational issues section of the survey to determine whether the statements could be grouped into a smaller number of factors. No cognitive factors were derived; therefore, factor analysis is not reported. Additionally, independent *t* tests were conducted to explore group differences based on school district enrollment. No significant differences were found; therefore, results of *t* tests are not reported.

Directors were also asked to indicate how often they encounter or perform each operational issue using a scale ranging from 0 (*never*) to 4 (*daily*). Table 4 depicts the frequency of performance or how often each operational issue or practice is encountered by the responding SN directors. The statements in this table are listed in the same descending order as the agreement means in Table 3.

Table 4

<i>Frequency of Performance of Operational Issues/Practices</i>					
Statement ^a	Never ^b	Occasionally	Monthly	Weekly	Daily
3. Putting together an effective management team is critical to the operational success of the SN department.		4 ^c (4.8)	1 (1.2)	6 (7.1)	73 (86.9)
4. I serve as the SN representative with district administration.		1 (1.1)	5 (5.7)	10 (11.4)	72 (81.8)
7. I operate the SN department as a business within the school setting.		1 (1.1)		2 (2.3)	85 (96.6)
2. The SN department employs district-level professional staff to oversee site-level operations.		4 (4.3)	3 (3.3)	3 (3.3)	82 (89.1)
5. Menus are standardized throughout the district.		2 (2.3)	18 (20.9)	6 (7.0)	60 (69.8)
35. I view the SN department as a business within the school setting.		2 (2.4)	4 (4.8)	4 (4.8)	73 (88.0)
15. Menus are developed by district-level SN professional staff.	1 (1.1)	1 (1.1)	48 (54.6)	6 (6.8)	32 (36.4)
48. I view my leadership skills as impacting the success of the SNP.		4 (4.9)	1 (1.2)	6 (7.3)	71 (86.6)
6. The cost of technology for School Nutrition Programs (SNP) continues to increase.	1 (1.3)	27 (34.2)	20 (25.3)	2 (2.5)	29 (36.7)
9. The school district has a district-wide technology infrastructure.		3 (3.8)	3 (3.8)	4 (5.1)	69 (87.3)
37. I directly supervise district-level SN professional staff.	1 (1.3)	2 (2.5)	1 (1.2)	1 (1.2)	75 (93.8)

^a Items are reported in the same order used in Table 3.

(table continues)

^b Responses were made using the scale, 0 = never; 1 = occasionally; 2 = monthly; 3 = weekly, 4 = daily^c Number responding (percentage)

Table 4 (*continued*)

<i>Frequency of Performance of Operational Issues/Practices</i>					
Statement ^a	Never ^b	Occasionally	Monthly	Weekly	Daily
18. I consider my SN job responsibilities similar to those of a Chief Executive Officer (CEO).	1 (1.2)	4 (4.9)	3 (3.7)	4 (4.8)	70 (85.4)
52. I seek professional development opportunities beyond what my school district provides to improve my leadership skills.	1 (1.2)	28 (33.3)	31 (36.9)	5 (6.0)	19 (22.6)
1. The SN department performs human resource functions for SN employees.		3 (3.2)	11 (11.8)	18 (19.4)	61 (65.6)
49. My work schedule is greater than 40 hours per week.	1 (1.2)	8 (9.9)	6 (7.4)	17 (21.0)	49 (60.5)
8. I value the importance of implementing a marketing plan for my SN operation.		7 (8.4)	24 (28.9)	10 (11.9)	42 (50.6)
25. District-level SN coordinators/supervisors review site-level employee records and document work performance, training, attendance, etc.	1 (1.2)	6 (7.0)	24 (27.9)	13 (15.1)	42 (48.8)
26. Menus are planned to meet the needs of a diverse student body.		5 (6.0)	41 (48.8)	4 (4.7)	34 (40.5)
50. SN department is current with technology practices.		9 (11.2)	9 (11.3)	10 (12.5)	52 (65.0)
51. The volume and the complexity of meeting the special nutrition needs of children is a challenge.		20 (24.7)	11 (13.6)	13 (16.0)	37 (45.7)

^a Items are reported in the same order used in Table 3.

(table continues)

^b Responses were made using the scale, 0 = never; 1 = occasionally; 2 = monthly; 3 = weekly, 4 = daily^c Number responding (percentage)

Table 4 (*continued*)

<i>Frequency of Performance of Operational Issues/Practices</i>					
Statement ^a	Never ^b	Occasionally	Monthly	Weekly	Daily
38. District-level SN professional staff assures consistency in implementing the marketing plan for all school sites.		11 (13.6)	16 (19.8)	10 (12.3)	44 (54.3)
47. Recruiting and retaining qualified SN site-level staff is difficult.		22 (27.2)	11 (13.5)	11 (13.6)	37 (45.7)
29. The cost of maintaining current software and hardware in all feeding sites is a financial challenge.	8 (9.9)	26 (32.1)	13 (16.0)	7 (8.7)	27 (33.3)
27. I have supervisory responsibilities with site-level employees.	10 (12.0)	24 (29.0)	6 (7.2)	8 (9.6)	35 (42.2)
11. District administrators support the contribution provided by the SN department.		19 (23.5)	16 (19.7)	14 (17.3)	32 (39.5)
12. Recruiting and retaining qualified SN professional staff is difficult.	3 (3.8)	24 (30.4)	9 (11.4)	13 (16.4)	30 (38.0)
28. District administrators view the SN department as a business within the school setting.	5 (6.2)	22 (27.2)	13 (16.0)	3 (3.7)	38 (46.9)
30. I am faced with financial challenges to support marketing activities.	7 (8.9)	32 (40.5)	14 (17.7)	6 (7.6)	20 (25.3)
42. I am faced with district political challenges in operating the SNP.	10 (12.2)	36 (43.9)	10 (12.2)	7 (8.5)	19 (23.2)
17. I am faced with communication challenges due to the numerous organizational layers in the school district.	4 (4.7)	38 (44.7)	15 (17.7)	12 (14.1)	16 (18.8)

^a Items are reported in the same order used in Table 3.

(table continues)

^b Responses were made using the scale, 0 = never; 1 = occasionally; 2 = monthly; 3 = weekly, 4 = daily^c Number responding (percentage)

Table 4 (*continued*)

<i>Frequency of Performance of Operational Issues/Practices</i>					
Statement ^a	Never ^b	Occasionally	Monthly	Weekly	Daily
19. My school district provides professional development opportunities that support my leadership growth.	8 (9.5)	48 (57.1)	11 (13.1)	5 (6.0)	12 (14.3)
43. I face operational challenges with inadequate cafeteria dining facilities.	13 (15.9)	30 (36.5)	8 (9.8)	4 (4.9)	27 (32.9)
31. The installation of current software for all feeding sites is a time management challenge.	8 (10.0)	37 (46.3)	10 (12.5)	7 (8.7)	18 (22.5)
16. I am faced with SN staff challenges to implement a successful marketing plan.	5 (6.0)	33 (39.3)	18 (21.4)	9 (10.7)	19 (22.6)
22. I encounter funding challenges related to the food production/transport systems used in my district.	12 (14.6)	34 (41.5)	11 (13.4)	3 (3.7)	22 (26.8)
33. I am faced with community political challenges in operating the SNP.	13 (15.1)	41 (47.7)	8 (9.3)	7 (8.1)	17 (19.8)
36. Retaining competent maintenance staff is a challenge.	11 (14.7)	35 (46.6)	11 (14.7)	5 (6.7)	13 (17.3)
24. The SN department encounters challenges when trying to utilize SN software with the district-level technology.	12 (14.1)	46 (54.2)	12 (14.1)	4 (4.7)	11 (12.9)
39. Lack of understanding of SN program needs by district-level technology staff presents challenges.	10 (12.2)	44 (53.6)	10 (12.2)	9 (11.0)	9 (11.0)
14. Dealing with labor unions presents challenges.	25 (31.3)	23 (28.7)	10 (12.5)	10 (12.5)	12 (15.0)

^a Items are reported in the same order used in Table 3.

(table continues)

^b Responses were made using the scale, 0 = never; 1 = occasionally; 2 = monthly; 3 = weekly, 4 = daily^c Number responding (percentage)

Table 4 (*continued*)

<i>Frequency of Performance of Operational Issues/Practices</i>					
Statement ^a	Never ^b	Occasionally	Monthly	Weekly	Daily
23. I often encounter challenges with district-level support when trying to address disciplinary issues with employees.	13 (15.9)	47 (57.3)	10 (12.2)	4 (4.8)	8 (9.8)
46. Understanding the financial aspect of operating the SNP is a challenge.	17 (21.8)	29 (37.2)	9 (11.5)	3 (3.9)	20 (25.6)
32. Frequent turnover in district-level administration presents challenges.	12 (14.6)	53 (64.7)	6 (7.3)	1 (1.2)	10 (12.2)
40. I am faced with communication challenges due to the numerous organizational layers in the SNP.	11 (13.6)	47 (58.0)	8 (9.9)	6 (7.4)	9 (11.1)
45. Retaining competent technology staff is a challenge.	12 (16.2)	38 (51.4)	7 (9.4)	4 (5.4)	13 (17.6)
10. I am challenged with employee issues due to lack of support from Human Resources.	16 (19.5)	32 (39.0)	5 (6.1)	14 (17.1)	15 (18.3)
34. I face operational challenges with inadequate foodservice equipment.	19 (23.8)	38 (47.5)	3 (3.7)	6 (7.5)	14 (17.5)
13. I face operational challenges with inadequate food preparation facilities.	19 (23.8)	34 (42.5)	4 (5.0)	3 (3.7)	20 (25.0)
21. Oversight is required to ensure that the temp agency complies with district Human Resource policies.	56 (73.7)	7 (9.2)		2 (2.6)	11 (14.5)

^a Items are reported in the same order used in Table 3.

(table continues)

^b Responses were made using the scale, 0 = never; 1 = occasionally; 2 = monthly; 3 = weekly, 4 = daily^c Number responding (percentage)

Table 4 (*continued*)

<i>Frequency of Performance of Operational Issues/Practices</i>					
Statement ^a	Never ^b	Occasionally	Monthly	Weekly	Daily
20. The SN department utilizes a temp agency for site-level substitute staff.	66 (75.9)	3 (3.4)	2 (2.4)	3 (3.4)	13 (14.9)
41. The SN department performs human resource functions for other district departments.	67 (84.8)	6 (7.6)	1 (1.3)		5 (6.3)

^a Items are reported in the same order used in Table 3.

^b Responses were made using the scale, 0 = never; 1 = occasionally; 2 = monthly; 3 = weekly, 4 = daily

^c Number responding (percentage)

The majority of directors are performing or encountering the following issues on a daily basis:

“putting together an effective management team is critical to the operational success of the SN department” (86.9%), “I serve as the SN representative with district administration” (81.8%), “I operate the SN department as a business within the school setting” (96.6%), and “the SN department employs a district-level professional staff to oversee site-level operations” (89.1%).

When examining the following statements with the lowest mean ratings, most SN directors indicate that they are never encountering these issues: “the SN department performs human resource functions for other district departments” (84.8%), “the SN department utilizes a temp agency for site-level substitute staff” (75.9%), and “oversight is required to ensure that the temp agency complies with district Human Resource policies” (73.7%).

Characteristics/Qualities of SN Directors

Respondents were provided with a list of 33 phrases describing characteristics or qualities of directors operating SN programs in large school districts and were asked to rate the importance of each phrase to being a successful SN director using a scale ranging from 1 (*not important*) to 4 (*very important*). Table 5 presents the means and standard deviations for the 33 phrases in descending order of importance. Twenty-nine of the 33 phrases had mean ratings greater than 3.5, signifying that the majority of SN directors rated these phrases as “important” or “very important.” Characteristics with the highest mean ratings were: “maintains integrity” (3.9 ± 0.2), “finds solutions” (3.9 ± 0.2), “accepts responsibility” (3.9 ± 0.3), “creates a vision for their SN operation” (3.9 ± 0.3), “leads in an ethically appropriate manner” (3.9 ± 0.3), “supports open communication” (3.9 ± 0.3), “listens actively” (3.9 ± 0.3), and “leads others effectively” (3.9 ± 0.3). Characteristics with the lowest mean ratings were: “conducts applied research” (2.6 ± 0.9) and “micro-manages on rare occasions” (2.9 ± 0.9).

The researchers planned additional statistical analyses to further examine the SN directors’ responses to the characteristics and qualities of successful SN directors. Principal components factor analysis was performed using this section of the survey to determine whether the statements could be grouped into a smaller number of factors. No cognitive factors were derived; therefore, factor analysis is not reported. Additionally, independent *t* tests were conducted to explore group differences based on school district enrollment. No significant differences were found; therefore, results of *t* tests are not reported.

Table 5

Mean Importance Ratings and Standard Deviations for Characteristics and Qualities to be a Successful SN Director in a Large School District

Statement	N	Mean^a	SD
16 Maintains integrity	95	3.9	0.2
10 Finds solutions	95	3.9	0.2
9 Accepts responsibility	95	3.9	0.3
7 Creates a vision for their SN operation	95	3.9	0.3
15 Leads in an ethically appropriate manner	95	3.9	0.3
17 Supports open communication	95	3.9	0.3
6 Listens actively	95	3.9	0.3
23 Leads others effectively	95	3.9	0.3
3 Possesses ability to multi-task	95	3.8	0.4
33 Conveys passion for their SN operation	94	3.8	0.4
22 Recognizes strengths of others	95	3.8	0.4
18 Handles difficult people and different personalities	95	3.8	0.4
27 Makes decisions in a timely manner	95	3.8	0.4
14 Knows own strengths and weaknesses	95	3.8	0.4
5 Uses coaching skills effectively	95	3.8	0.4
1 Desires to gain new knowledge	95	3.8	0.5
21 Applies team building skills	95	3.8	0.4
24 Delegates tasks appropriately	95	3.8	0.5
20 Handles conflict effectively	95	3.8	0.4

^a Scale = 1, not important, to 4, very important

(table continues)

Table 5 (*continued*)

Mean Importance Ratings and Standard Deviations for Characteristics and Qualities to be a Successful SN Director in a Large School District

Statement	N	Mean^a	SD
29 Manages with confidence	95	3.7	0.5
4 Thinks independently	93	3.7	0.4
28 Possesses analytical skills	95	3.7	0.5
26 Strategize solutions for potential problems	95	3.7	0.5
30 Considers potential risks before making decisions	94	3.7	0.5
32 Seeks professional development opportunities to enhance knowledge and skills	95	3.7	0.5
25 Supports creativity in others	95	3.7	0.5
12 Manages with determination	94	3.6	0.5
31 Possesses political savvy	95	3.5	0.7
19 Changes management styles to fit situation	95	3.5	0.7
11 Takes risks	95	3.4	0.6
8 Has a global perspective	95	3.4	0.8
13 Micro-manages on rare occasions	95	2.9	0.9
2 Conducts applied research	95	2.6	0.9

^a Scale = 1, not important to 4, very important

SN directors were also asked to rate the importance of training to the development of these characteristics and qualities using a scale ranging from 1 (*very unimportant*) to 4 (*very important*). Table 6 depicts the means and standard deviations for the 33 characteristics and qualities in descending order of importance. Sixteen of the 33 characteristics and qualities phrases had mean ratings greater than 3.5 and another 15 phrases had mean ratings greater than 3.0 suggesting that school nutrition directors believe training programs were important to develop these qualities. Characteristics with the highest importance ratings for training include: “handles difficult people and different personalities” (3.7 ± 0.5), “applies team building skills” (3.7 ± 0.5), “creates a vision for their SN operation” (3.7 ± 0.6), and “handles conflict effectively” (3.7 ± 0.5). Characteristics with the lowest mean ratings for training were: “micro-manages on rare occasions” (2.2 ± 1.0) and “conducts applied research” (2.6 ± 0.9).

Table 6

Mean Importance Ratings and Standard Deviations for Training Needed to Develop Characteristics of Directors Operating School Nutrition Programs in Large School Districts

Statement	N	Mean^a	SD
18 Handles difficult people and different personalities	92	3.7	0.5
21 Applies team building skills	91	3.7	0.5
7 Creates a vision for their SN operation	93	3.7	0.6
20 Handles conflict effectively	90	3.7	0.5
23 Leads others effectively	90	3.6	0.7
10 Finds solutions	91	3.6	0.7
17 Supports open communication	90	3.6	0.6

^a Scale = 1, not important, to 4, very important

(table continues)

Table 6 (*continued*)

Mean Importance Ratings and Standard Deviations for Training Needed to Develop Characteristics of Directors Operating School Nutrition Programs in Large School Districts

Statement	N	Mean^a	SD
6 Listens actively	92	3.6	0.7
16 Maintains integrity	89	3.6	0.8
15 Leads in an ethically appropriate manner	90	3.5	0.8
5 Uses coaching skills effectively	92	3.5	0.6
22 Recognizes strengths of others	90	3.5	0.7
24 Delegates tasks appropriately	90	3.5	0.7
32 Seeks professional development opportunities to enhance knowledge and skills	90	3.5	0.8
19 Changes management styles to fit situation	90	3.5	0.7
9 Accepts responsibility	91	3.5	0.8
28 Possesses analytical skills	90	3.4	0.8
27 Makes decisions in a timely manner	90	3.4	0.9
26 Strategize solutions for potential problems	90	3.4	0.8
1 Desires to gain new knowledge	93	3.4	0.8
33 Conveys passion for their SN operation	88	3.4	1.0
3 Possesses ability to multi-task	92	3.4	0.8
30 Considers potential risks before making decisions	90	3.3	0.8
25 Supports creativity in others	91	3.3	0.8
29 Manages with confidence	90	3.3	0.9
14 Knows own strengths and weaknesses	90	3.3	0.9

^a Scale = 1, not important, to 4, very important

(table continues)

Table 6 (*continued*)

*Mean Importance Ratings and Standard Deviations for Training Needed to Develop
Characteristics of Directors Operating School Nutrition Programs in Large School Districts*

Statement	N	Mean^a	SD
31 Possesses political savvy	89	3.3	0.9
4 Thinks independently	91	3.2	0.9
12 Manages with determination	90	3.2	0.9
11 Takes risks	91	3.0	0.9
8 Has a global perspective	91	3.0	0.9
2 Conducts applied research	92	2.6	0.9
13 Micro-manages on rare occasions	89	2.5	1.0

^a Scale = 1, not important, to 4, very important

CONCLUSIONS AND RECOMMENDATIONS

Research Study Conclusions

The largest public school districts in the United States are responsible for educating a high percentage of all public school students in the nation; therefore, school nutrition programs in these districts have the greatest potential of influencing the nutritional health and wellbeing of children nationwide. Previous research has indicated that large school districts serve a demographically different student body, have a greater percentage of economically disadvantaged students, and operate in complex political and financial environments than smaller school districts (Casserly, 2005; Snipes, Doolittle, & Herlihy, 2002). Findings of this research study suggest that the leadership of school nutrition programs in these large school districts is critical to the success of these programs.

The majority of SN directors who responded to this survey has worked in SN programs for 15 years or more (70.5%) and has been in their current position for less than ten years (59.9%). In addition, prior to taking the SN director position, over one-third (36.6%) of SN directors had worked on the SN management team in their current district and another 19.4% worked as a SN director in another large school district. These results suggest that the SN director position in a large school district is generally not an entry-level management position in SN and that those school district administrators who hire SN directors value prior management experience in large school districts. When asked about their primary area of study, SN directors most frequently reported the areas of nutrition and dietetics (27.2%), business (21.0%), food and nutrition (16.0%), and food service management (14.8%). These results reflect the diversity of SN directors' responsibilities and suggest that educational backgrounds in nutrition, foodservice management, and business are all valuable to their position as SN directors.

Over one-third (36.9%) of survey respondents indicated that they will be retiring in the next five years and another 14.7% are not sure if they will retire, indicating that there may be the impending retirement of 50% or more of these current directors of large SN programs within the next five years. When asked the type of education and experience they would recommend for their successor, 68.8% of SN directors recommended experience on the SN management team in a large school district followed by an undergraduate degree in nutrition (50.5%), undergraduate degree in business (48.4%), and a graduate degree (46.2%). Current SN directors recognize the importance of experience on the SN management team in large districts as well as an educational background in nutrition and/or business. Given the impending retirements of these directors in large school districts and propensity of many SN directors to ascend from the ranks of the SN management team, there is a need to prepare middle management SN professionals and others to lead SN programs in large school districts.

When asked about their certification or credentialed status, 39.4% of the responding SN directors indicated they were SFNS credentialed, 37.2% were SNA certified, 29.8% were Registered Dietitians, and 17.0% were State Department of Education certified. This result suggests that many SN directors recognize the need for lifelong learning and the value of certification or credentialing. Two survey questions addressed SN directors' preferences regarding accessing SN resources and continuing education formats. When seeking resources or information to assist in the operation of their SN program, over three-fourths (79.6%) of SN directors indicated that they prefer both print-based and Web-based resources. The highest rated continuing education formats reported by SN directors were meeting or conference (93.6%), professional development publication/article (61.7%), and pre-conference program (42.6%).

These responses signify that SN directors are self-directed to seek continuing education based on their interest in the issue or the value to their operations. These results also suggest that when these SN directors are at work, they are focusing on work-related responsibilities and therefore, they choose to regard continuing education opportunities as away-from-work activities.

The SN directors responding to this survey were from all seven USDA regions and represented districts with various student enrollments ranging from 30,000 to over 100,000 students and with 20 to over 150 feeding sites. Regardless of the size of school district, there was strong agreement in respect to the operational issues and practices encountered by SN directors in large school districts. In other words, SN directors, regardless of the size of their large school district, are encountering comparable operational issues. The results also indicate that the SN directors illustrate similarities in their approach to operating a multi-million dollar business within the school district.

Almost all (98.9%) of the SN directors indicated use of district-level professional staff to oversee site level operations in their districts. Almost half (47.4%) of SN directors in large districts had experience on SN management teams either in their current or other school districts prior to being hired as SN director. Experience on a SN management team appears to be a logical and frequent career path for becoming a SN director in a large school district, thus, as mentioned previously, there is a need for leadership training for those district-level professional staff aspiring to assume a role in upper management for a large SNP.

SN directors in this study also confirmed the use and importance of the SN management team in large school districts by their strong agreement with two of the operational issues/practice statements. These statements were “putting together an effective management team is critical to the operational success of the SN department” (4.0 ± 0.1) and “the SN

department employs district – level professional staff to over see site-level operations” (3.9 ± 0.4). These findings acknowledge the necessity of professional staff in large SN operations and the directors’ respect for a well-trained knowledgeable management team.

The SN directors who participated in this study rated 29 of the 33 characteristics and/or qualities needed by SN directors in large school districts 3.5 or greater on a 4-point scale, signifying that these characteristics and qualities are important or very important for a SN director to be successful. In summary, the SN director in a large district should be a leader with integrity, who finds solutions and accepts responsibility, creates a vision for the SN program, leads others effectively in an ethically appropriate manner, and supports and fosters effective communication. Regardless of school district size, there was strong agreement in respect to the characteristics and/or qualities needed by SN directors in large school districts.

Characteristics with the highest importance ratings for training include “handles difficult people and different personalities” (3.7 ± 0.5), “applies team building skills” (3.7 ± 0.5), “creates a vision for their SN operation” (3.7 ± 0.6), and “handles conflict effectively” (3.7 ± 0.5). SN directors in this study acknowledge the importance of effectively leading their SN operations, and key to being an effective leader is recognizing the diversity of their staff and the use of team building to elicit the best in their staff. SN directors recognize that training is important to assist in the development of these leadership characteristics. In addition, no differences based on school district enrollment were found for the importance rating for training needed to develop characteristics of directors operating school nutrition programs in large school districts.

Education and Training Implications

Findings from this research suggest the following implications for education and training:

- Education and training programs are needed to assist in the preparation of SN professionals to operate SN programs in large school districts. These programs should target SN professionals who work on management teams in large SN programs as well as other SN directors from smaller school districts. The operational issues and practices related to SN operations in large school districts as well as the characteristics and qualities of directors operating SN programs in large school districts identified in this research study should provide the foundation for these education and training programs.
- Education and training resources targeted to SN directors in large school districts should be available both as print-based and Web-based.
- Education and training programs targeted for SN directors in large school districts should be offered as part of a meeting/conference or as a pre-conference program.
- Educational resources and training programs targeted for large SN programs should be offered to all SN programs with student enrollment of 30,000 or greater.
- SN directors in this study recognize that training is important to assist in the development of leadership characteristics. Educational resources and training programs are needed to assist in this development. The characteristics and qualities identified in this study as important to the success of SN directors in large school districts as well as whether training is needed to develop the characteristics and/or qualities should serve as the foundation for developing these education resources and training programs.

Research Implications

Findings from this study suggest the need for additional research. No significant differences based on school district enrollment for the operational issues statements and the characteristics/qualities of successful SN directors were found in this research study. Additional research is needed to explore whether the findings in this research are unique to large school districts, defined in this study as 30,000 or greater student enrollment, or are common to SN directors regardless of school district enrollment.

Several NFSMI research projects have focused on the development of competencies, knowledge, and skills for SN professionals. When the competencies, knowledge, and skills for SN directors are updated, researchers should explore whether a unique functional area is needed to encompass leadership topics.

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Appendix A

Expert Panel Invitation Email

Name

The Applied Research Division (ARD) of the National Food Service Management Institute (NFSMI) is inviting you to participate in a day and a half discussion in Hattiesburg, MS September 19 – 21, 2005.

The purpose of this meeting is to bring together several school nutrition directors from various parts of the country who work in districts with more than 30,000 students to discuss issues related to operating school nutrition programs in large school districts. This discussion will assist the Applied Research Division as we begin planning a national research study to explore the uniqueness of school nutrition programs in districts serving over 30,000 students. We value your experience working in a large school nutrition program and the contribution you will make as a member of this expert panel in helping us to formulate this research project.

The time commitment would be as follows:

Monday, September 19 would be a travel day

Tuesday, September 20 – discussion all day

Wednesday, September 21 – will meet in the morning until 11:00 a.m. This will allow you time for departure.

NFSMI/ARD will pay all of your travel expenses.

Please check your calendar and let me know if you will be able to participate in the Large School Districts Expert Panel meeting by **Monday, August 8** either by responding to the email address or phone number listed below. If I do not hear from you by August 8th, our office will call to verify that you will be attending the meeting. Please review and correct your contact information listed below to ensure that we have your accurate mailing address.

If you are able to attend, further details concerning the meeting and travel arrangements will be provided. This e-mail serves to confirm the meeting dates on your calendar.

Thank you

Mary Frances Nettles
Research Scientist
National Food Service Management Institute

Appendix B

Expert Panel Participant List



**LARGE SCHOOL DISTRICTS EXPERT PANEL
NFSMI/APPLIED RESEARCH
The University of Southern Mississippi
HATTIESBURG, MS
September 20 – 21, 2005**

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Appendix C

Expert Panel Confirmation Letter

Date

Dear

The National Food Service Management Institute (NFSMI), Applied Research Division (ARD) appreciates your willingness to participate in an upcoming work group session that will discuss issues related to operating school nutrition programs in large school districts. The purpose of this discussion session is to assist us as we begin planning a national research study to explore the uniqueness of school nutrition programs in districts serving over 30,000 students. You have been selected because of your experience as a director of a large school nutrition program and the contribution you will make to the discussion process.

The work group session will be held in Hattiesburg, MS on September 20-21, 2005. The meeting will take place on the campus of the University of Southern Mississippi (USM), the home of ARD of NFSMI. As stated in our initial email, Monday, September 19th is a travel day; we will meet all day on Tuesday, September 20th, and will wrap up by 11:00 a.m. on Wednesday, September 21st.

This letter serves to provide you with the details of the upcoming work group session. We are confident that the outcome of the discussion will assist our efforts in identifying the uniqueness of school nutrition programs in large school districts and determining how NFSMI can better serve this customer group.

Travel Arrangements:

Transportation: Call Magnolia Travel of Hattiesburg (800-718-8817) to make your flight reservations. Kristi Jefcoat will be your contact; if she is unavailable, ask for Pam Watts. Please identify yourself as a participant in the Large Districts Expert Panel Meeting with USM/NFSMI. Kristi is familiar with the time commitments for our meeting so will be able to work with you to plan your travel itinerary. It is important that you *confirm your flight arrangements by 5:00 p.m., CDT, Friday, September 2*. The cost of the flight will be billed directly to NFSMI/ARD.

Hotel: Overnight accommodations (non-smoking) have been reserved for you on September 19th and 20th. The hotel expenses will be billed directly to NFSMI/Applied Research Division. You will be responsible for your telephone calls or any other incidentals. Check-in time is 3:00 p.m. and check-out time is 12:00 p.m. If you wish additional information contact the hotel at:

Hampton Inn
4301 Hardy Street
Hattiesburg, MS 39402
Telephone: 800-426-7866 or 601-264-8080

Driving Directions: From I-59 merge onto US-98 West/Hardy Street via Exit 65 toward Columbia, turn right onto Westover Drive at the traffic light by the BP gas station; Hampton Inn will be on the right.

Car Rental: Kristi or Pam at Magnolia Travel will assist you in making arrangements for a rental car. NFSMI/ARD will reimburse up to a mid-sized car rental and fuel costs (receipts required). Depending on arrival, departure times, and the city in which you will be arriving, it may be possible for you to share a rental car with another panel member; Magnolia Travel will assist in facilitating this process.

Meal Arrangements: Continental breakfast is provided at with the hotel beginning at 6:00 a.m. Your meal allowance, including the travel day is up to \$31.00 per day; no receipts are required.

Attire: The dress for the meeting is business casual. Please dress comfortably to allow for relaxation and sharing of ideas.

Expense Reimbursement: NFSMI/ARD will reimburse you for all travel, meals, and meeting related expenses (mileage to airport, airport parking, rental car expense, and meals during travel). Original receipts are required for the following:

- Lodging (Master Account)
- Parking/Tolls
- Taxi/Shuttle
- Rental Car, Gas, & Insurance (if necessary)
- Air/Train/Bus, etc. (Master Account)

Federal regulations prohibit reimbursement for alcoholic beverages. The NFSMI/ARD Travel Expense Voucher and a postage paid return envelope are enclosed for your convenience. Processing your expense reimbursement will take approximately three weeks from time of receipt.

We are enthusiastic about your participation in this process and look forward to your visit to the Applied Research Division. If you have any questions or if you require special assistance relating to a disability please contact us or Cheryl Beasley at 800-321-3054 or 601-266-5773. We look forward to seeing you soon.

Sincerely

Mary Frances Nettles
Research Scientist

Deborah H. Carr
Director, Applied Research Division

Enclosure

Appendix D

Agenda for Expert Panel Meeting

**Large School Districts Expert Panel
National Food Service Management Institute
Applied Research
September 20-21, 2005
Agenda**

Tuesday, September 20

8:30 – 9:00	Welcome Review Ground Rules Parking Lot
9:00 – 10:00	Sharing Session – Tell us about: <ul style="list-style-type: none">• Your experience as a school nutrition professional.• Your school district and how would you define your district.• Your school nutrition program (SNP).• What prepared you to be a SNP director in a large school district• One aspect of your program that has given you the greatest sense of accomplishment.
10:00 – 12:00	Operational Practices and Challenges in Large School District SNPs
12:00 – 1:00	Lunch
1:00 – 2:30	Training Practices and Challenges in Large School District SNPs
2:30 – 3:30	Other Issues/Challenges/Concerns Faced in Large School District SNPs
3:30 – 4:00	Demographic Questions for Survey
4:00 – 4:30	Wrap Up

Wednesday, September 21

8:00 – 8:30	Review/Clarify/Add Issues from Tuesday
8:30 – 9:30	NFSMI Competencies, Knowledge, and Skills of Effective District School Nutrition Directors/Supervisors
9:30 – 10:30	Research Needed to Assist SNP Professionals in Large School Districts Role of NFSMI in Serving SNP Professionals in Large School Districts
10:30 – 11:00	Summary Wrap Up

Appendix E

Large School District Survey

National Food Service Management Institute

*Identification of the Unique Issues Associated with
School Nutrition Programs in Large School Districts***Part I. Operational Issues/Practices in Large School Districts**

Please read each of the following statements and indicate **agreement** and **frequency** for each issue/practice as related to **YOUR School Nutrition (SN) operation**.

- In the **"Do You Agree?"** column, indicate whether you agree that this issue/practice is a part of your SN operation by circling the number corresponding to your agreement.
1 = **strongly disagree**, 2 = **disagree**, 3 = **agree**, 4 = **strongly agree**.
- Choose **"How Often?"** you encounter/perform the issue/practice described by circling the number corresponding to the frequency you encounter/perform the issue.
0 = **never**, 1 = **occasionally**, 2 = **monthly**, 3 = **weekly**, 4 = **daily**.

	Do You Agree?				How Often?				
	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4	Never 0	Occasionally 1	Monthly 2	Weekly 3	Daily 4
1. The SN department performs human resource functions for SN employees.	1	2	3	4	0	1	2	3	4
2. The SN department employs district-level professional staff to oversee site-level operations.	1	2	3	4	0	1	2	3	4
3. Putting together an effective management team is critical to the operational success of the SN department.	1	2	3	4	0	1	2	3	4
4. I serve as the SN representative with district administration.	1	2	3	4	0	1	2	3	4
5. Menus are standardized throughout the district.	1	2	3	4	0	1	2	3	4
6. The cost of technology for School Nutrition Programs (SNP) continues to increase.	1	2	3	4	0	1	2	3	4
7. I operate the SN department as a business within the school setting.	1	2	3	4	0	1	2	3	4
8. I value the importance of implementing a marketing plan for my SN operation.	1	2	3	4	0	1	2	3	4
9. The school district has a district-wide technology infrastructure.	1	2	3	4	0	1	2	3	4
10. I am challenged with employee issues due to lack of support from Human Resources.	1	2	3	4	0	1	2	3	4
11. District administrators support the contribution provided by the SN department.	1	2	3	4	0	1	2	3	4
12. Recruiting and retaining qualified SN professional staff is difficult.	1	2	3	4	0	1	2	3	4
13. I face operational challenges with inadequate food preparation facilities.	1	2	3	4	0	1	2	3	4
14. Dealing with labor unions presents challenges.	1	2	3	4	0	1	2	3	4
15. Menus are developed by district-level SN professional staff.	1	2	3	4	0	1	2	3	4
16. I am faced with SN staff challenges to implement a successful marketing plan.	1	2	3	4	0	1	2	3	4
17. I am faced with communication challenges due to the numerous organizational layers in the school district.	1	2	3	4	0	1	2	3	4
18. I consider my SN job responsibilities similar to those of a Chief Executive Officer (CEO).	1	2	3	4	0	1	2	3	4
19. My school district provides professional development opportunities that support my leadership growth.	1	2	3	4	0	1	2	3	4
20. The SN department utilizes a temp agency for site-level substitute staff.	1	2	3	4	0	1	2	3	4
21. Oversight is required to ensure that the temp agency complies with district Human Resource policies.	1	2	3	4	0	1	2	3	4

Exploring the Uniqueness of Child Nutrition Programs in Large School Districts

	Do You Agree?				How Often?				
	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4	Never 0	Occasionally 1	Monthly 2	Weekly 3	Daily 4
22. I encounter funding challenges related to the food production/transport systems used in my district.	1	2	3	4	0	1	2	3	4
23. I often encounter challenges with district-level support when trying to address disciplinary issues with employees.	1	2	3	4	0	1	2	3	4
24. The SN department encounters challenges when trying to utilize SN software with the district-level technology.	1	2	3	4	0	1	2	3	4
25. District-level SN coordinators/supervisors review site-level employee records and document work performance, training, attendance, etc.	1	2	3	4	0	1	2	3	4
26. Menus are planned to meet the needs of a diverse student body.	1	2	3	4	0	1	2	3	4
27. I have supervisory responsibilities with site-level employees.	1	2	3	4	0	1	2	3	4
28. District administrators view the SN department as a business within the school setting.	1	2	3	4	0	1	2	3	4
29. The cost of maintaining current software and hardware in all feeding sites is a financial challenge.	1	2	3	4	0	1	2	3	4
30. I am faced with financial challenges to support marketing activities.	1	2	3	4	0	1	2	3	4
31. The installation of current software for all feeding sites is a time management challenge.	1	2	3	4	0	1	2	3	4
32. Frequent turnover in district-level administration presents challenges.	1	2	3	4	0	1	2	3	4
33. I am faced with community political challenges in operating the SNP.	1	2	3	4	0	1	2	3	4
34. I face operational challenges with inadequate foodservice equipment.	1	2	3	4	0	1	2	3	4
35. I view the SN department as a business within the school setting.	1	2	3	4	0	1	2	3	4
36. Retaining competent maintenance staff is a challenge.	1	2	3	4	0	1	2	3	4
37. I directly supervise district-level SN professional staff.	1	2	3	4	0	1	2	3	4
38. District-level SN professional staff assures consistency in implementing the marketing plan for all school sites.	1	2	3	4	0	1	2	3	4
39. Lack of understanding of SN program needs by district-level technology staff presents challenges.	1	2	3	4	0	1	2	3	4
40. I am faced with communication challenges due to the numerous organizational layers in the SNP.	1	2	3	4	0	1	2	3	4
41. The SN department performs human resource functions for other district departments.	1	2	3	4	0	1	2	3	4
42. I am faced with district political challenges in operating the SNP.	1	2	3	4	0	1	2	3	4
43. I face operational challenges with inadequate cafeteria dining facilities.	1	2	3	4	0	1	2	3	4
44. I am not involved in day-to-day operations at site-level facilities.	1	2	3	4	0	1	2	3	4
45. Retaining competent technology staff is a challenge.	1	2	3	4	0	1	2	3	4
46. Understanding the financial aspect of operating the SNP is a challenge.	1	2	3	4	0	1	2	3	4
47. Recruiting and retaining qualified SN site-level staff is difficult.	1	2	3	4	0	1	2	3	4
48. I view my leadership skills as impacting the success of the SNP.	1	2	3	4	0	1	2	3	4
49. My work schedule is greater than 40 hours per week.	1	2	3	4	0	1	2	3	4
50. SN department is current with technology practices.	1	2	3	4	0	1	2	3	4
51. The volume and the complexity of meeting the special nutrition needs of children is a challenge.	1	2	3	4	0	1	2	3	4
52. I seek professional development opportunities beyond what my school district provides to improve my leadership skills.	1	2	3	4	0	1	2	3	4

Part II. Characteristics/Qualities of Directors Operating School Nutrition Programs in Large School Districts

Listed below are characteristics/qualities we would like for you to consider as relating to the role of a SN director in a large school district.

• In the “Successful SN Director” column, indicate **how important** these characteristics/qualities are to being a **successful** SN director in a large school district by circling the number corresponding to importance.

1 = not important, 2 = somewhat important, 3 = important, 4 = very important

• In the “Training” column, indicate your opinion of the **importance of training** to develop these characteristics/qualities by circling the number corresponding to importance.

1 = not important, 2 = somewhat important, 3 = important, 4 = very important.

	Successful SN Director				Training			
	Not Important 1	Somewhat Important 2	Important 3	Very Important 4	Not Important 1	Somewhat Important 2	Important 3	Very Important 4
1. Desires to gain new knowledge	1	2	3	4	1	2	3	4
2. Conducts applied research	1	2	3	4	1	2	3	4
3. Possesses ability to multi-task	1	2	3	4	1	2	3	4
4. Thinks independently	1	2	3	4	1	2	3	4
5. Uses coaching skills effectively	1	2	3	4	1	2	3	4
6. Listens actively	1	2	3	4	1	2	3	4
7. Creates a vision for their SN operation	1	2	3	4	1	2	3	4
8. Has a global perspective	1	2	3	4	1	2	3	4
9. Accepts responsibility	1	2	3	4	1	2	3	4
10. Finds solutions	1	2	3	4	1	2	3	4
11. Takes risks	1	2	3	4	1	2	3	4
12. Manages with determination	1	2	3	4	1	2	3	4
13. Micro-manages on rare occasions	1	2	3	4	1	2	3	4
14. Knows own strengths and weaknesses	1	2	3	4	1	2	3	4
15. Leads in an ethically appropriate manner	1	2	3	4	1	2	3	4
16. Maintains integrity	1	2	3	4	1	2	3	4
17. Supports open communication	1	2	3	4	1	2	3	4
18. Handles difficult people and different personalities	1	2	3	4	1	2	3	4
19. Changes management styles to fit situation	1	2	3	4	1	2	3	4
20. Handles conflict effectively	1	2	3	4	1	2	3	4
21. Applies team building skills	1	2	3	4	1	2	3	4
22. Recognizes strengths of others	1	2	3	4	1	2	3	4
23. Leads others effectively	1	2	3	4	1	2	3	4
24. Delegates tasks appropriately	1	2	3	4	1	2	3	4
25. Supports creativity in others	1	2	3	4	1	2	3	4
26. Strategizes solutions for potential problems	1	2	3	4	1	2	3	4
27. Makes decisions in a timely manner	1	2	3	4	1	2	3	4
28. Possesses analytical skills	1	2	3	4	1	2	3	4
29. Manages with confidence	1	2	3	4	1	2	3	4
30. Considers potential risks before making decisions	1	2	3	4	1	2	3	4
31. Possesses political savvy	1	2	3	4	1	2	3	4
32. Seeks professional development opportunities to enhance knowledge and skills	1	2	3	4	1	2	3	4
33. Conveys passion for their SN operation	1	2	3	4	1	2	3	4
34. Other, specify _____	1	2	3	4	1	2	3	4

Part III. Program and Personal Characteristics

This section seeks to learn more about you and your school district. Please fill in your answers or circle the letter associated with the best answer.

How many feeding sites do you serve?

- | | |
|-----------------------|----------------------|
| a. Less than 20 sites | d. 70 to 99 sites |
| b. 20 to 39 sites | e. 100 to 149 sites |
| c. 40 to 69 sites | f. 150 or more sites |

What is the total enrollment in your school district?

- | | |
|------------------------------|--------------------------------|
| a. Less than 30,000 students | d. 50,000 to 69,999 students |
| b. 30,000 to 39,999 students | e. 70,000 or 99,999 students |
| c. 40,000 to 49,999 students | f. 100,000 or greater students |

What percentage of enrolled students in your district are **approved** for

- _____ free meals
 _____ reduced price meals

What is your district average daily participation rate (ADP) for lunch based on student meal category?

- _____ free
 _____ reduced price
 _____ paid

How many district-level staff report **directly** to you?

- | | |
|----------------|--------------------|
| a. Less than 5 | d. 16 to 20 |
| b. 5 to 10 | e. Greater than 20 |
| c. 11 to 15 | |

Do you have district-level SN professional staff overseeing site-level operations?

- a. No
 b. Yes, how many feeding sites does each SN professional staff oversee?
 1. Less than 5 sites 4. 16 – 20 sites
 2. 6 – 10 sites 5. 21 or more sites
 3. 11 – 15 sites

Does your SN operation have a formalized marketing plan?

- a. No
 b. Yes

What is the approximate annual budget for your district School Nutrition Program? _____

What percentage of total revenue do you budget for food? _____ %

What percentage of total revenue do you budget for labor? _____ %

Do you benchmark meals per labor hour (MPLH) among the schools in your district?

- a. No
 b. Yes, describe how you calculate MPLH _____

What method are you using to calculate meal equivalents that equate to a student reimbursable lunch for the following?

Breakfast _____

After school snacks _____

Non-reimbursable food sales (a la carte) _____

What types of foodservice operations are used in your district?

(circle all that apply)

- a. Onsite kitchens
 b. Centralized kitchen serving both offsite and onsite
 c. Central kitchen with no onsite service

For hot and/or cold food that is prepared centrally, how is the food transported? (circle all that apply)

- a. Hot foods delivered in bulk
 b. Hot foods delivered preplated/preportioned
 c. Hot foods delivered hot
 d. Hot foods delivered cold to be rethermalized onsite
 e. Cold foods delivered in bulk
 f. Cold foods delivered preplated/preportioned
 g. Not applicable in my district

Is a central warehouse for storage of food and supplies used in your district?

- a. No
 b. Yes

How does your SN operation manage foodservice equipment maintenance issues?

- a. SN department employs their own maintenance staff to service equipment
 b. SN department relies on district-level maintenance staff for equipment service
 c. SN department contracts with an outside firm for equipment service

How does your SN operation handle technology support issues?

- a. SN department relies on district-level technology staff for support
 b. SN department employs their own technology staff
 c. SN department contracts with an outside firm for technology support

Is your SN operation using point-of-sale software?

- a. No
 b. Yes, is the software a
 1. custom-designed software package for your SN operation
 2. pre-developed SN software package

Is your SN operation using software to support production and other back-of-the-house activities?

- a. No
 b. Yes, is the software a
 1. custom-designed software package for your SN operation
 2. pre-developed SN software package

Considering the ethnic diversity of today's labor pool, do you have employees who speak little or no English?

- a. No
 b. Yes, approximately what percentage does this comprise of labor force _____ %

How would you describe your school district over the last 5 years?

- a. Increasing enrollment
 b. Enrollment steady
 c. Decreasing enrollment

In the last five years, is your school district (circle all that apply)

- a. Building new schools
 b. Renovating existing schools
 c. Closing schools

If your school district is building/renovating schools, is the SNP contributing funds toward the new/renovated SN department in the schools (i.e., equipment, dining furniture, etc)?

- a. New Construction
 1. No
 2. Yes
 b. Renovation
 1. No
 2. Yes

Exploring the Uniqueness of Child Nutrition Programs in Large School Districts

What form of continuing education do you prefer (circle all that apply)?

- a. Professional development publication/article
- b. Independent study (video, manuals)
- c. Independent study (CD ROM, internet)
- d. Satellite seminar
- e. Small study group
- f. Self study program
- g. Preconference program
- h. Meeting or conference
- i. Poster session
- j. Online course/distance education
- k. Interactive multimedia modules
- l. Academic course work
- m. Home study course
- n. Blended learning (face-to-face and online)
- o. Other, specify _____

What is your **highest** level of education?

- a. High school diploma or GED
- b. Associate degree
- c. Baccalaureate degree
- d. Some graduate credits
- e. Master's degree
- f. Graduate hours beyond master's
- g. Doctoral degree
- h. Other, specify _____

What has been your primary area of study?

- a. Child Nutrition and Management
- b. Food Service Management
- c. Business
- d. Hospitality Management
- e. Food and Nutrition
- f. Culinary Food Service
- g. Nutrition/Dietetics
- h. Other, specify _____

What is your certification/credentialed status? (circle all that apply)

- a. NOT certified
- b. State Department of Education certified
- c. SNA certified, specify level _____
- d. SFNS credentialed
- e. Registered Dietitian
- f. Licensed Dietitian/Nutritionist
- g. Other, specify _____

How many years have you worked in school nutrition programs?

- a. Less than one year
- b. 1 to 5 years
- c. 6 to 10 years
- d. 11 to 15 years
- e. 16 to 20 years
- f. Greater than 20 years

How long have you been in your current position?

- a. Less than one year
- b. 1 to 5 years
- c. 6 to 10 years
- d. 11 to 15 years
- e. 16 to 20 years
- f. Greater than 20 years

Prior to taking your current position, did you work

- a. on the SN management team in your current district
- b. as a SN director in another large school district
- c. as a SN director in a small school district
- d. as a healthcare foodservice director
- e. as a restaurant manager
- f. Other, specify _____

Will you be retiring in the next five years?

- a. No
- b. Yes
- c. Not sure

In choosing a successor for your position, would you recommend he/she have (circle all that apply)

- a. Undergraduate degree in nutrition
- b. Undergraduate degree in business
- c. Graduate degree in _____
- d. Experience as a SN director in a smaller district
- e. Experience on the SN management team in a large district
- f. Experience on the SN management team in THIS district
- g. Experience in foodservice management in healthcare
- h. Other, specify _____

In what USDA Region do you work?

- a. Western – AK, AZ, CA, GU, HI, ID, NV, OR, WA
- b. Mountain Plains – CO, IA, KS, MO, MT, ND, NE, SD, UT, WY
- c. Midwest – IL, IN, MI, MN, OH, WI
- d. Northeast – CT, MA, ME, NH, NY, RI, VT
- e. Mid-Atlantic – DC, DE, MD, NJ, PA, PR, VA, VI, WV
- f. Southeast – AL, FL, GA, KY, MS, NC, SC, TN
- g. Southwest – AR, LA, NM, OK, TX

What is your gender?

- a. Female
- b. Male

Is the management of your district SNP

- a. Self-operated
- b. Contracted by a food service management company

In seeking resources/information to assist in the operation of your SNP do you prefer

- a. Print-based resources
- b. Web-based resources
- c. Both
- d. Other, specify _____

**Please enclose a copy of an organizational chart for your department.
Feel free to remove all school district identifying information.**

Thank you for completing this survey!

Thank you for assisting us in this research study!

Please return the completed survey by April 7, 2006 in the envelope provided!

National Food Service Management Institute
Applied Research Division
118 College Drive #10077
Hattiesburg, MS 39406-0001

601.266.5773
FAX 601.266.4682

Mary.Nettles@usm.edu

Deborah.Carr@usm.edu

Appendix F

Survey Evaluation Form

Exploring the Uniqueness of School Nutrition Programs in Large School Districts
Survey Evaluation Form

Thank you for volunteering your time to assist us in the development of this survey. We want to be sure that the directions are clear and survey statements are easy to respond to before beginning our research project. Please assist us by answering the following questions. Revisions will be made based on your suggestions.

Part I: Operational Issues/Practices	Yes	No	Recommendations for improvement
Were directions for completing the section clear? If not, suggest improvement.			
Were the statements written clearly? If not, suggest improvement.			
Were there statements in the section that you would exclude from the survey? If yes, indicate in the last column the statement(s) that you would exclude.			
Were there any other statements that you would include in this section? If yes, indicate statements you would add.			
Were the response categories understandable? If not, suggest improvement.			
Part II: Characteristics/Qualities of Directors	Yes	No	Recommendations for improvement
Were directions for completing the section clear? If not, suggest improvement.			
Were the statements written clearly? If not, suggest improvement.			
Were there statements in the section that you would exclude from the survey? If yes, indicate in the last column the statement(s) that you would exclude.			
Were there any other statements that you would include in this section? If yes, indicate statements you would add.			
Were the response categories understandable? If not, suggest improvement.			
Part III: Program and Personal Characteristics	Yes	No	Recommendation for improvement
Were directions for completing the section clear? If not, suggest improvement.			
Where the questions in this section clear and understandable, If not, suggest improvement.			
Were there questions in this section that you would exclude from the survey? If yes, indicate in the last column the statement(s) that you would exclude.			
Were there any other questions that you would include in this section? If yes, indicate statements you would add.			
Were the response categories understandable? If not, suggest improvement.			

Please indicate any additional suggestions for improvement of the survey.

Thank you for your assistance!

Appendix G

Survey Evaluation Form

March 20, 2006

Dear School Nutrition Director:

The National Food Service Management Institute (NFSMI), Applied Research Division, is conducting a research study that will explore issues associated with operating a school nutrition program (SNP) in a large school district of 30,000 or greater student enrollment. You are one of approximately 200 school nutrition directors that have been selected to participate in this study. Your input and willingness to participate is vital to this study's success.

School nutrition directors, like you, participated in the development of the survey questionnaire as the NFSMI realizes that our research efforts are made better by involving those at the local level. The results of this study will assist NFSMI in the development of education and training resources to better serve professionals who operate school nutrition programs in large school districts.

Enclosed you will find a survey questionnaire and a self-addressed, postage-paid envelope. The questionnaire is to be completed by you, the school nutrition director in a large school district. As this is the first NFSMI project focusing on SNPs in large school districts, this survey may be lengthier than other NFSMI surveys. Please assist us in learning more about the issues in your SNP by completing this survey. It should take approximately twenty minutes of your time. Please return the completed survey questionnaire in the envelope provided by **April 7, 2006**.

Due to the anonymous nature of the study, there are no identifying codes that link your responses to you. We solicit your open and honest answers. We also ask that you respond based on your professional position and experiences.

Thank you in advance for taking time from your busy schedule to complete the questionnaire and returning it by **April 7, 2006**. In appreciation of your time and effort in completing this survey, we are enclosing a NFSMI mouse pad for your office. If you have questions, please do not hesitate to contact us by Email at Mary.Nettles@usm.edu or Deborah.Carr@usm.edu or by telephone at 1-800-321-3054.

Sincerely,

Mary Frances Nettles, PhD, RD
Research Scientist

Deborah H. Carr, PhD, RD
Director

Enclosure

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

Appendix H

SN Director Cover Letter

April 3, 2006

Dear School Nutrition Director:

We need your assistance! Several weeks ago we mailed you a survey exploring issues associated with operating a school nutrition program in a large school district of 30,000 or greater student enrollment. If you have already completed and returned the survey, please disregard this letter. We thank you for your support of this project.

If you have not yet completed and returned the survey, please assist us in this effort. Your response is crucial as there are only approximately 200 professionals who are directors of large school district nutrition programs. We hope that you will be able to carve out time from your busy schedule to complete this survey.

Due to the anonymous nature of the study, there are no identifying codes that will link any responses to an individual. The results will assist NFSMI in the development of education and training resources that will ultimately aid those operating school nutrition programs in large school districts.

Thank you for taking time from your busy schedule to complete your survey. Without your input, this national research study will not be successful. Therefore, we are counting on your support! Please return your completed survey **as soon as possible**. If you have questions, do not hesitate to contact us by Email at Mary.Nettles@usm.edu or Deborah.Carr@usm.edu or telephone at 1-800-321-3054.

Sincerely,

Mary Frances Nettles, PhD, RD
Research Scientist

Deborah H. Carr, PhD, RD
Director

The project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.



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