

School Nutrition Environment in the Middle Grades and the Promotion of Healthy Eating Behaviors

by

Mary Kay Meyer, Ph.D., R.D.

Research Scientist, Applied Research Division

Martha T. Conklin, Ph.D., R.D.

Director, Applied Research Division

Jerry R. Lewis, Ed.D.

Assistant Professor, Educational Leadership and Research, University of Southern Mississippi

John Marshak, Ph.D.

Assistant Professor, Educational Leadership and Research, University of Southern Mississippi

Sherri Cousin, M.Ed.

Graduate Student, Educational Leadership and Research, University of Southern Mississippi

Casey Turnage, M.S., R.D.

Graduate Student, Educational Leadership and Research, University of Southern Mississippi

Dean Wood, M.Ed.

Graduate Student, Educational Leadership and Research, University of Southern Mississippi

Applied Research Division



**National Food Service Management Institute
The University of Mississippi
University, Mississippi 38677-0188**

September 2000

NFSMI Order Number R-44-01



**National Food Service Management Institute
The University of Mississippi**

Building the Future Through Child Nutrition

Location

The National Food Service Management Institute (NFSMI) was established by Congress in 1989 at The University of Mississippi in Oxford as the resource center for Child Nutrition Programs. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service. The NFSMI Applied Research Division 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.

Programs and Services

Professional staff development opportunities and technical assistance to facilitate the management and operation of Child Nutrition Programs are provided through:

- ◆ Educational References and Materials
- ◆ Information Services
- ◆ Workshops and Seminars
- ◆ Teleconferences and Satellite Seminars
- ◆ Applied Research

Administrative Offices

Education Division

The University of Mississippi
P.O. Drawer 188
University, MS 38677-0188
Phone: 800-321-3054

Applied Research Division

The University of Southern Mississippi
Box 10077
Hattiesburg, MS 39406-0077
Phone: 601-266-5773

TABLE OF CONTENTS

Preface	1
Executive Summary	2
School Nutrition Environment in the Middle Grades and the Promotion of Healthy Eating Behaviors	
Introduction	4
Method	5
Results	8
Recommendations	26
References	28
Appendices	29

PREFACE

Healthy eating is an important life skill. It helps children grow, develop, and do well in school. Healthy eating prevents childhood and adolescent health problems such as obesity, eating disorders, dental caries, and iron deficiency anemia. It also lowers the risk of future chronic diseases such as heart disease, stroke, diabetes, and cancer and reduces potential health care costs (USDA, 2000). However, in today's school environment many conflicting factors are present that compete with creating a good nutrition environment that encourages healthy eating behaviors. As a result, the Applied Research Division of the National Food Service Management Institute conducted a focus group study throughout the country to identify the nature of the nutrition environment in the middle grades.

We are appreciative of the team from the Department of Educational Leadership and Research at The University of Southern Mississippi who participated in the research. A special thanks is extended to Dr. Richard Kreuger, University of Minnesota, who guided our research team through the process of conducting and documenting the focus group research.

The Applied Research Division of the National Food Service Management Institute is indebted to the 77 focus group participants for their willingness to give personal time away from their work and families to make this research project possible. We would also like to thank the State Education and Foodservice and Nutrition Departments who assisted in identifying the participants.

Martha T. Conklin, Ph.D., R.D.
Director of Applied Research

Jane Logan, Ph.D.
Executive Director

School Nutrition Environment in the Middle Grades and the Promotion of Healthy Eating Behaviors

EXECUTIVE SUMMARY

Nutrition is important to children at all ages; however, it is extremely important for children in middle grades who are experiencing great changes in their physical and psychological development. They are growing rapidly and are particularly vulnerable to outside pressures during these years. For these reasons, it is critical to provide a good nutrition environment for these children. As a result, a focus group research project was developed to determine the status of the nutrition environment for middle grades nationwide.

Focus groups were held in Kansas City, Missouri; Las Vegas, Nevada; and Reston, Virginia. These cities were chosen because of their central location and accessibility to major airports. Three sets of participants in the focus groups included school principals and superintendents, teachers and coaches, and foodservice managers and directors. Three teams of moderators and assistant moderators conducted the focus groups. The first round of focus groups was held at each site during the morning with homogeneous groups. The questions used in these sessions led to the identification of barriers to having a good nutrition environment in the middle grades. A second round of focus groups was held at each site after lunch. In each of the three afternoon sessions, participants consisted of a mixture of all types of respondents attending the previous sessions. These focus groups were designed to explore possible discontinuity between responses of the homogeneous groups and responses elicited from a heterogeneous grouping. These groups were asked to address strategies for improving the school nutrition environment.

State directors of child nutrition programs and state associations of school administrators were contacted to solicit names of possible participants. The World Wide Web also was used to search for possible school selection. The state agencies and associations were asked to suggest names of individuals from average districts who have the ability to speak to issues relating to the school environment, especially as relating to healthy eating behaviors of students in middle grades.

The constant comparative method of analysis was used to organize research findings (Glaser and Strauss, 1967). In the analysis process the researchers read each quote to see if it fit into one of the existing categories or if it should be placed into a new category. A new category was created if it was different from what had already been seen. The analyst looked at the frequency and extensiveness of comments, words used, intensity of the comments, and the specificity of the

comments. If a comment described something identified earlier, then the analyst categorized it with the earlier quotes. Once categories were identified, a summary statement was written to illustrate how participants talked about that category. Quotes were pulled from the transcript to illustrate the categories or themes.

Results showed that participants did not feel the environments in middle grades were conducive to healthy eating habits. Vending machines and a la carte sales of unhealthy food items received much discussion. Many examples of mixed messages concerning a good nutrition environment were given by the participants. The major barriers identified to having a good nutrition environment in middle grades were as follows: lack of time; funding; physical environment; menu and menu choices; competitive foods; lack of commitment by school administrators, the community and parents; and outside influences.

When asked for suggestions to overcome these barriers, the major response was funding. If adequate funding was provided, participants believed the issues of the physical environment and the lack of time could be solved. The other solutions revolved around the theme of commitment. One administrator stated, “When it becomes a priority, it will get done.”

When asked how to increase awareness and promotion of healthy eating behaviors, the major response was “advertising.” Participants felt these students were highly influenced by the media, particularly sports figures and popular musicians. Other suggestions included family education and role modeling by teachers, school administrators, and parents.

Recommendations included items on a national as well as a local level. Recommendations on a national level included the following:

- The development of an advertising campaign for school meals;
- Continued adoption of a comprehensive health curriculum that includes students, parents, and the community; and
- Reduction in the need for vending and a la carte through adequate funding.

Recommendations for the local level included the following:

- Adoption of district nutrition policies;
- Better role modeling by teachers, parents, and school administrators for healthy eating behaviors; and
- Enhancement of school cafeterias.

School Nutrition Environment in the Middle Grades and the Promotion of Healthy Eating Behaviors

INTRODUCTION

Although the school nutrition environment is important in all grades (K-12), this research seeks to focus initially on the environment experienced by students who are developmentally ready to make choices about all aspects of their lives. The rationale for the focus on middle-grade students and educators in this research is as follows:

- Students in middle grades are at an awkward stage of life. Ages 10-15 span pre-pubescence to pubescence and pre-adolescence to adolescence. Educators must be developmentally responsive to the needs of these young people, as the academic achievement of these students is highly dependent upon their other developmental needs, such as adequate nutrition (National Middle School Association, 1998).
- Changes in patterns of thinking and learning are quite evident in this age group. This represents an opportunity to instill eating habits that last into adulthood. Even good habits begun at home and in the elementary grades are scrutinized and questioned at this stage of development due to peer pressure and efforts to become independent thinkers (National Middle School Association, 1998).
- Health practices of this age group are often inappropriate, especially in relationship to diets needed to meet the nutrient needs of changing bodies. Rapid physical changes combined with the multiple hazards of contemporary life make this a crucial period for healthy personal growth and development (George and Alexander, 1993).
- The economy also directly affects students, especially these middle graders. A substantial number of young people have considerable disposable income and they are a major target for marketing campaigns.
- Young people in the middle grades are remarkably clannish due to peer pressures. It is important to understand that this is a defense against a sense of identity confusion (George and Alexander, 1993).
- Carnegie Council on Adolescent Development stated, “unfortunately, by age 15, substantial

numbers of American youth are at risk of reaching adulthood unable to meet adequately the requirements of the work place, commitments of relationships . . . responsibilities of participation in a democratic society making appropriate choices.” (George and Alexander, 1993).

METHOD

The research objectives for this study were as follows:

- Identify the nature of the nutrition environment in the middle grades in the U.S. schools.
- Determine which elements of a school’s nutrition environment various groups consider most relevant to students’ health and well-being.
- Explore similarities and differences among various groups in their perceptions of the school nutrition environment.
- Identify the opinions of the groups concerning steps to be taken to increase awareness of the school nutrition environment and the promotion of healthy eating behaviors of students in middle grades.

Research Design

This study used focus groups to explore the rich contextual framework for promoting healthy eating behaviors of students within the school environments of the middle grades. Focus groups allowed researchers to explore the socio-environmental, behavioral, and attitudinal dimensions of this issue without imposing predetermined boundaries. The *Focus Group Kit* developed by David L. Morgan and Richard A. Krueger (1998) was used as the basis for the development of the research design. Dr. Richard Krueger, University of Minnesota, served as a consultant on the project.

Focus Group Design

Three focus groups were held simultaneously with school administrators, educators, and foodservice administrators. School administrators included superintendents and principals. Educators included teachers and coaches. School foodservice administrators included managers and district school nutrition directors. These three groups were selected because they represented the types of individuals who are able to keenly observe the school nutrition environment. Moreover, the individuals in these roles are often deemed influential in making changes relating to the school nutrition environment. School business officials, parents, school board members, and various community leaders also are players in overall decision making in schools. They were not included in this focus group study due to the time and expense involved in accessing these populations.

Session Strategies

The field research team consisted of six individuals. Two members of the research team were present in each focus group, one serving as moderator and the second serving as the assistant moderator/recorder. The three moderators were selected because of their familiarity with the job responsibilities of the target audience. Two of the moderators were faculty members at the University of Southern Mississippi, and one was a research scientist for the National Food Service Management Institute. All of the moderators had field experience as a school administrator, educator, or foodservice manager. The three assistant moderators/recorders were advanced graduate students in the Department of Educational Leadership and Research at the University of Southern Mississippi. The team, along with Dr. Richard Krueger, worked together prior to the focus groups to develop standard protocol for introducing and moderating the focus groups. This was done to ensure uniformity in how the focus groups were conducted and to allow for comparability across the focus group sites. The focus group sessions occurred at three sites throughout the United States: Kansas City, Missouri; Las Vegas, Nevada; and Reston, Virginia. These sites were strategically located for ease of travel in the East, West, and middle of the country. There was a total of nine focus groups (three groups at three sites) with approximately 27 participants at each site.

The first round of focus groups was held at each site during the morning with homogeneous groups. A series of questions was asked leading to the identification of the barriers to having a good nutrition environment in middle grades. Questions used are found in Appendix A.

A second round of focus groups was held at each site after lunch. In each of the three afternoon sessions, participants consisted of a mixture of all types of people (school administrators, educators, and foodservice administrators) attending the previous sessions. These focus groups were designed to explore possible discontinuity between responses of the homogeneous groups and responses elicited from a heterogeneous grouping. These groups also were asked to address strategies for improving the school nutrition environment.

Each focus group session was tape-recorded and transcribed so that a complete record of the discussion could be obtained. Assistant moderators recorded notes and observations during the focus group discussions. After all questions had been discussed, the assistant moderator gave a recap of the responses and the participants were invited to verify that the summary comments were an accurate depiction of the discussion.

Participant Selection

Twenty-seven state directors of child nutrition programs were contacted to solicit names of foodservice managers and district school nutrition directors who might be available to participate

in a focus group. Similarly, the state association of school administrators was contacted to solicit suggestions for principals/superintendents. School Web pages on the World Wide Web were also used to search for possible teacher participants. State directors of child nutrition programs and executives from these professional associations were asked to suggest names of individuals from average districts who had the ability to speak to issues relating to the school environment, especially as it relates to healthy eating behaviors of students in middle grades. Although participating states had representation in each of the focus groups scheduled at one regional site, no attempt was made to match participants from the same school district. A geographical map showing participating states is found in Appendix B.

Once participation in the meetings was confirmed (Appendix C), participants were asked to complete a two-page information sheet that included demographic data about themselves and their district (Appendix D).

Data Analysis

Data were gathered from notes taken by the assistant moderators and transcriptions of the audiotaped (120 minutes) focus group discussions. The constant comparative method of analysis was used (Glaser and Strauss, 1967). In the analysis process, the researchers read each quote to see if it fit into one of the categories identified by the researcher or if it belonged in a new category. A new category was created if it was different from what had already been seen. The analyst looked at the frequency and extensiveness of comments, words used, intensity of the comments, and specificity of the comments. If a comment described something identified earlier, then the analyst categorized it with the earlier quotes.

Each transcript was read once by the research team to gain an overall feel for what was said across groups. Then the researchers began categorizing the comments. Once categories were identified, a summary statement was written to illustrate how participants talked about that category. Quotes were pulled from the transcript to illustrate the categories or themes. Throughout this process another member of the research team served as a sounding board and verification check on the analysis process. This second researcher reviewed the categories as they evolved and discussed possible ways of presenting the findings based on experiences in the groups. This second researcher also served as a validity check on the final report asking, "Are these findings valid based on my knowledge of the study, my experiences in the groups, and the debriefing sessions?"

The research team took a number of steps to ensure that the results were a valid reflection of how the participants thought about the nutrition environment of the schools. A team of people with different backgrounds conducted the research so that different perspectives would be represented. Prior to the focus groups, the questions were pilot tested and adjusted. The pilot group was composed of foodservice administrators, educators, and school administrators. The research

team was trained to conduct focus groups. During the focus groups, moderators sought clarification from participants when responses were unclear. The research team used systematic procedures for data collection and data handling for the audiotaping and transcribing of each session. After the focus groups, the team discussed similarities and differences among groups. The analyst worked with another moderator during the analysis process. All moderators were asked to review the report of the findings for validity. This is accepted focus groups' protocol (Krueger, 1998).

RESULTS

Demographics

The goal of having 81 participants (nine in each of the three focus groups at three sites) was not met due to scheduling and unforeseen cancellations. The study involved 77 participants. They included school administrators (26), educators (24), foodservice administrators (25), one nurse, and one school coordinator. The years of experience in the field and the years of experience in the district are shown in Table 1.

Table 1 Years Employed in the Field and District (N=77)

Years Employed	Number of Participants Employed in the Field	Number of Participants Employed in the District
1-4	9	20
5-8	10	12
9-12	8	8
13-16	11	9
17+	38	27
missing	1	1

The participants represented 28 states. Although the research plan called for 27 states to be represented, due to confusion an additional state was contacted. The majority of the participants were from suburban areas (25). However, rural and small towns (13), and urban areas (10) also were well represented. The remaining districts represented a combination of these classifications. The size of the school systems represented in this study ranged from 168 to 218,000 students.

Participating District Characteristics

Table 2 summarizes the characteristics of the participants' school districts.

Table 2 School District Characteristics (N=77)

Characteristic	Number of Participants	%
Foodservice personnel are involved in nutrition education in the middle grades.	31	40
Nutrition is included in the curriculum in middle grades.	73	95
There is a comprehensive health curriculum that includes nutrition in middle grades.	60	80
The school board has a policy dealing with contracts for food/drink items with vendors.	37	48
Schools serving middle grades with vending machines.		
All	42	55
Some	24	31
None	10	13
Schools serving middle grades with school-sponsored stores.		
All	17	22
Some	27	35
None	32	42

Table 3 shows the frequency and type of snack items sold in vending machines and school-sponsored stores. Of the schools represented, 59 reported having some a la carte sales. The most popular items sold were pizzas, french fries, chips, cookies, and chicken tenders/nuggets.

Table 3 Items Sold in Vending Machines and School-Sponsored Stores (N=77)

Item	Frequency
soda	56
sports drinks	44
candy	41
chips	37
water	30
cookies	30
flavored water	19
low-fat chips	14
ice cream	13
low-fat cookies	13
fruit products	12
sweet rolls	9
milk	6
fresh fruit	3

Summary of Morning Focus Group Questions

The following is a summary by question of the responses for all focus group sessions. Quotations are identified according to the group providing the information.

1. When you think of a school environment that promotes healthy eating behaviors, what comes to mind?

A variety of responses were given for this question; however, they were generally negative in tone and substance. One major observation by the participants was the availability of non-nutritious food items at school. Availability of these nonnutritious food items was through the following four major sources:

- Vending machines.

Foods and beverages were sold in vending machines, and often profits went to support school activities. **“The Coca Cola Bottling Company in my little middle school pays us \$1500 for letting them have the vending machines and 20% of the gross that goes into the machines. We do nothing. So it is about \$8,000 a year for a little middle school of 1,100 kids.” (administrator)**

- Cafeteria sales of a la carte items.

Often these foods were high in sugar and/or fat. Participants stated these items were sold so that programs could maintain financial self-sufficiency.

- Teacher/club sales during the school day.

Fund-raisers to support activity budgets. Candy was frequently cited as the item sold for school fund-raisers.

- Commercial fast foods.

Schools have contracted with commercial fast food restaurants to provide meals for students. And, frequently fast foods are brought into the school by parents, teachers, and students. **“I have a mother who brings Mc Donald’s Happy Meals to her child in afternoon detention. Go figure.” (administrator)**

The nutritious meals provided by the school foodservice and nutrition programs were frequently not eaten by the students. A number of issues identified by the participants contributed to the lack of student desirability.

- Menu choices.

Participants felt some of the menu items served were unappealing and often lacked flavor. Salad bars and fresh fruits were not always available. Some a la carte items, usually high in fat, were chosen as more desirable by students.

- Cafeteria atmosphere.

Participants stated that the cafeterias were frequently very noisy, dining area decor and seating arrangements were not conducive to pleasant dining, facilities were overcrowded, and the serving staff often was perceived by the students as unfriendly. Frequently, insufficient time was allowed for meal service, **“Kids have to have time to eat, so they are not rushed . . . trying to afford enough time so that kids are not ‘cattled in’ and ‘cattled out’.” (teacher)** Many schools do not have cafeterias and only multipurpose rooms, such as cafeteriums, are available for dining.

The influence of teachers also was noted as a negative impact on the eating behavior of middle grade students. Participants said that teachers often do not model good eating habits for the students. Many teachers do not eat in the cafeteria. What the students see the teachers eating does not always exemplify good nutrition. Many teachers commented about the presence of soda machines in the faculty lounges and bringing of “junk food” into the classroom to eat while students worked on assignments.

Participants felt parents and the community influenced the eating behaviors of the students. Many parents today are too busy to prepare healthful meals. Commercial fast food dinners, whether brought home or eaten at the restaurant on the way to an activity such as sports or church, is common. Some parents go to work before the kids leave for school, addressing breakfast only by leaving money and never inquiring about how this money was spent. **“We have a snack bar and I wish we could eliminate it. Parents give students money for lunch, and they save it and use it at the snack bar.”(teacher)**

2. Here is a list of things that might be part of the school’s nutrition environment. Circle all of those you feel are a part of the school’s nutrition environment. (Exercise sheet for this question is found in Appendix E.)

As the discussions evolved in the groups, it was generally agreed that all items on the list could impact the nutrition environment in some way. The list included items such as: vending

machines, breaks, a la carte sales, family eating patterns, cafeteria staff, peer pressure, arrangement of tables, and food fights. A complete list is found in Appendix E. Many participants began the discussion with a narrow view of what happens only on the school campus as impacting the students, while others grasped the big picture immediately.

3. Participants were asked what items they felt impacted the school nutrition environment that were not on the list. Those identified were:

- dialogue with the students
- physical limitations of the facility
- marketing
- influence of outside companies such as Coke and Pepsi
- holiday influences
- bus schedules
- recess before lunch vs. recess after lunch
- body weight/overweight

4. List the top five qualities that you consider essential to a school's nutrition environment. On this blank card, I want you to create a report card and grade your school on those qualities you consider essential. Rate them from "A" being excellent to "F" being failure.

The following characteristics identified were: variety of food, nutritious foods, nutrition education, presentation of food, adequate time to eat, administrative support, friendly staff, taste of the food, cost, atmosphere of the dining area, orderly cafeteria, safe and clean cafeteria, and quality food.

5. What are the barriers to promoting healthy eating behaviors in your school? On the back of the report card, list three barriers that impede healthy eating behaviors within your school.

- Money.

Money was the most commonly mentioned barrier by all three groups. The issue appears to be divided into several areas.

(A)The first area is the revenue generated from nonnutritious food sales. For the foodservice program the a la carte items, often chips and cookies, are a necessity to be able to operate in the "black." **"To make money we have to sell a la carte (junk) food. I think we are part of the problem."**(foodservice) The clubs' sponsors see candy, etc., sales revenue as an easy addition to their budgets. Administrators see concession stands and vending machine monies as supplements to local funding allocations.

(B) The second area is the money students possess to make purchases. Even students eligible for free and reduced price meals have money to purchase the less healthful food items from vending and a la carte offerings. In some locations there is a social stigma associated with having to eat in the “regular” lunch line. Not all schools have been able to overcome the difficulties of differentiating between those students on free and reduced priced meals and those who are not. Therefore, students who qualify for free and reduced meals often do not eat the regular meals.

- Cafeteria atmosphere.

The cafeteria or dining area atmosphere was the second most-noted barrier. Participants noted long lines, outdated facilities, and overcrowded conditions as not being conducive to students making good eating decisions. Frequently, students skipped meals or ate foods from vending machines. Some focus group participants shared that changes in furniture and long-term upgrades in the cafeteria itself have made significant differences. **“You may have adequate money to cover preparation costs, labor costs, food supplies . . . but if you need to update environment, you need better equipment, the kind the kids see in the fast food restaurants instead of the long lines of the stereotypical school foodservice serving line. To get that type of setting it takes dollars, and there is nobody that is going to give it to you.”(foodservice)**

- School policy.

Since most school systems did not have a policy on nutrition, except as it related to the health and physical education curriculum, teachers did not see a need to make it a priority. The emphasis is placed on standardized testing. **“We are starting to publish test scores in the newspaper and that is putting a squeeze on anything that is not going to be published. Electives are being eliminated and we do not have a health class and will not get one.”(administrator)** The teaching of technology has already reduced the instructional time for nonlanguage and math classes. Only one participant stated his/her district had a policy that affected the curriculum on developing healthy eating habits. **“We have the New York State Assessments, the kids have tutorials and all kinds of study sessions that take place during lunch, so kids don’t eat, they just don’t eat.”(teacher)**

- Food choices.

Limited cafeteria choices were a concern. Participants frequently characterized the food as poor quality, greasy, tasting artificial, and lacking visual appeal.

- Peer pressure.

Participants mentioned that peer pressure and the need to socialize were overlooked. Body image for female students dictated poor choices or lack of eating entirely. The need to socialize with peers is important to the development of social skills for students in this age group. The dining experience should enhance the development of these skills rather than deter. **“We have free and reduced students coming into the cafeteria for breakfast, and the kids that pay won’t come in because those kids are in there.”** (teacher)

- Media.

Participants saw television media as negatively influencing eating behavior. Television advertising is full of advertising for fast foods, soft drinks, and high-sugar items. **“We have Channel 1 News every morning and between the news segments Pepsi and the fast food and hypes are on.”** (administrator) The only nutritious food advertised is milk. Participants felt the “got milk” promotion was effective.

- Family/parental attitudes.

Attitudes and behaviors of parents have a direct impact on students’ decisions. Participants thought parents are frequently too busy with a career or trying to make ends meet that they do not pay attention to the quality of the food consumed by their children. With the social pressures of today, the main goal often is to just have some type of food on the table. **“They don’t care what they are eating as long as the kid says, ‘yes, I ate lunch’.”** (teacher) **“Parents expect us to feed them good choices, but at home they give them fast foods for rewards. But we are supposed to be the bad guys and enforce nutrition.”**(foodservice)

- Curriculum.

The last barrier is that of the curriculum. Only a few participants, generally health and physical education teachers, touched on nutrition. **“Advertising may raise awareness, but knowledge is what will produce the best choices in the long run.”** (administrator)

6. What do you consider to be the major barrier in your school to a healthy nutrition environment?

When participants were asked to select the one barrier they felt was major at their school, there was a diversity of selection. The two most common were “money” and “parental attitudes.” Many thought that funding of various sports drove the decision to install vending machines. The presence of vending machines frequently influenced students’ decisions concerning food choices. Many students would rather skip lunch and wait until the vending machines were turned on and

consume a candy bar and soda. Participants stated that the level of regular budget allocation is so low that money from vending machines sales and a la carte sales are becoming necessary to pay for things schools would otherwise have to do without.

Many of the students' eating decisions were seen as an extension of their parents'. They are reflecting the family's meals which, to an ever growing extent, are composed of fast foods and frozen dinners. Participants emphasized the need to make parents aware and increase their knowledge of the importance and value of healthy eating.

For a few of the participants, there was a need to create a policy or vision from the school board down as to what should be included in the nutrition environment that promotes healthy eating behaviors. Teachers particularly wanted commitment and direction for a school-wide nutrition program.

Still, others considered the availability of good choices a major barrier. Both in and out of school, kids are allowed to choose their foods and they choose what tastes good. Junk food is their number one choice. Reducing the availability of bad choices, at least in school, coupled with increased emphasis on nutrition in the curriculum is necessary.

Some educators pointed to the importance of peer pressure in making these choices. Furthermore, there is an expectation of pleasure through foods. If food is not considered "cool" or does not provide pleasure from taste, kids will not eat it. Participants believed one should not underestimate peer influence and the adolescent state of mind.

The time allotted for eating also was selected as a major barrier. When there are long lines, a congested atmosphere, and a short time to get and consume food, students will make expedient choices. **"When it is crowded, kids go to the shortest line . . . it doesn't matter what it is."**(teacher)

7. Occasionally organizations within a school send mixed messages about the nutrition environment. Please give me one example of this in your school. (Mixed messages = say one thing and do another.)

- Rewards.

Participants from all parts of the country noted that the number one mixed message was the reward system that is ingrained in schools. According to participants, teachers, PTA members, and administrators are all guilty. They reward children with treats, often unhealthful ones. They gave several examples to include: pizza parties (pizza would be ordered from a commercial restaurant and the students would not eat the school meal that day, thus not receiving a balanced meal) or ice cream parties for good grades, good conduct

or good attendance; reading competitions that were linked to pizza parties; selling candy to go to Mexico; using vending machine money to support student activities; giving children cookies after a state exam or when the results come in; and teachers using candy to reward academic progress or during activities or games. **“The mixed message is we want children to eat well, and we want them to know their basic choices and what is important for their bodies, but we are not giving it to them. Their parents aren’t giving it to them. The teachers are not promoting it, nor is the PTA. Instead, they are given parties, rewards, and treats.”** (teacher) **“We teach about obesity in health class, but every reward they get is pizza, ice cream, and cookies”** (teacher)

- Vending.

The second leading mixed message was vending machines. The participants raised several concerns here. First, they stated that vending machines are a blatant contradiction to any healthy eating program because the choices in these machines are unhealthy. **“We say eat healthy, but we are selling unhealthy items.”** (administrator) Further, they expressed sincere concern and frustration over the link to vending machines and the survival of existing programs, in particular extracurricular activities. **“Economics plays a part in all this . . . the sports teams get money from the vending machines . . . if you don’t have enough money to run your programs the economics takes over versus the nutrition of items for students.”** (administrator) Thus, the concerns over nutrition are overridden by financial concerns and program longevity. Participants also commented on the fact that the vending machines can be automatically turned on and off, but that they are usually only turned off during the lunch time. In other words, this is done, not for the well-being of the students, but for financial reasons. The foodservice department doesn’t want the competition.

- Snacks/a la carte.

A la carte items emerged in every session and within every state represented at the focus group sessions. The main concern was that a la carte menus serve a lot of unhealthy choices to include: brownies, cookies, chips, snack cakes, fruit-flavored drinks, sodas, pizzas, and other snack foods. In addition, another concern was raised addressing the idea that many students fill up on a la carte foods, without eating anything that is remotely nutritious. **“I think that they [a la carte menus] deter healthy eating, and kids are filled-up even before lunch begins because they are filled-up on junk food.”** (administrator) Participants voiced frustration and gave the groups a reality check concerning having to sell these types of items. The foodservice programs are under great pressure from the competition and school boards and must keep their foodservice programs financially successful “out of the red.” **“We are forced to sell those things because of competition. I give out free pop.”**(foodservice) **“I sell junky stuff to make money.”** (foodservice)

- Teachers.

Participants noted the following objections to teacher behavior that negatively influenced the school nutrition environment:

- not coming in the cafeteria,
- ordering out for lunch,
- bringing lunch from home,
- having too many parties in their classrooms,
- walking through the halls eating “junk” food,
- providing donuts for teachers, and
- having vending machines in the teachers’ lounge. **“We have juice machines for the students, but Coke machines in the teachers’ lounge.”(teacher)**

- Fund-raisers.

A lot of sports programs are supported through fund-raisers that typically sell candy. Also, the Parent Teacher Organization (PTO) has bake sales, again, to support the programs. **“We are forced to compete for funds . . . If we weren’t forced to compete, maybe we wouldn’t sell those things.” (foodservice)**

- Menus/menu choices.

The school menu and menu choices do not always reflect a healthy balance of choices. **“We say that all our kids are getting balanced meals, but 50% eat corn dogs and french fries for lunch.” (teacher)** **“We tell them you must eat this, this many times a day, but we don’t even give them the choices to eat it when they go through the lunch line.” (teacher)**

- Coaches.

Teachers felt that coaches should be more nutrition oriented. Concerns were expressed regarding coaches, in particular wrestling coaches and their weight reduction programs. **“Coaches should be more nutrition oriented than any other teacher in the school, but they support concession stand sales because it raises money for them.” (foodservice)**

- Breakfast for testing.

According to some participants, breakfast programs are only implemented at or around testing days. The consensus was that students need adequate nutrition every day, not just on testing days.

- Miscellaneous.

The participants were concerned that food items (especially milk) were being discarded because students did not want the item, but were told they must take it. Participants questioned the regulations concerning this practice.

8. When you consider all of the things that you have to contend with each day, on a scale of one to seven with seven being high and one being low, where do you place the school's nutrition environment in your list of priorities?

The overall average for administrators was 2.9, teachers 4.2, and foodservice staff 3.4. Many teachers stated that several years ago it would have had a higher priority, but because of all the pressures today, it is not as high for them.

9. What would it take to move nutrition to a higher priority?

No regional differences were noted in responses; however, the role of the participants influenced their responses. The foodservice participants were concerned with staff and funding. They felt that with more resources they could have a greater influence on students. More staff would allow them time to interact with teachers and students in the classroom.

Teachers were concerned with the curriculum. **“The curriculum does not emphasize it . . . there is so much in the curriculum, yet there is a limited amount of time.”** (teacher) Teachers also felt they did not have time to stay up-to-date on the topic and develop materials they would need to teach the topic.

Administrators also were feeling overwhelmed. They were having to deal with so many issues that nutrition would become a priority only when there was a pressure for it to be. **“When it becomes a priority, it will get done.”** (administrator) Laws and regulations were not a universal concern. Some felt policies needed to be established, while others feared state mandates.

Participants also identified involvement. Several groups of teachers and administrators felt that involvement would bring nutrition to a higher level of consciousness. They felt teachers, administrators, foodservice employees, and parents should be involved in solving this problem.

10. Please share an example of something that was actually done in your school that made a positive impact on the nutrition environment.

- Menus and choices.

Salad bars, “grab ‘n’ go” breakfast, home cooked foods, sub shops, deli bars, special foods prepared well such as the Thanksgiving lunch, and examples of a la carte items were mentioned. **“We sell a Rockin Burger . . . once you put a wrapper on it, the student will buy it.” (foodservice)** **“We do exhibition cooking with five themes that include Mexican and pasta. We prepare the food in front of the students. When they see it, they really like it.” (foodservice)**

- Physical environment.

Everything from clothes to equipment was listed. The theme of having an environment that appealed to kids was prominent. **“One of my managers changed her cafeteria into a Kids Corner using a sports theme. She also sends out a newsletter from the Kids Corner Ladies.” (foodservice)**

- Promotions.

A variety of promotions was shared including health fairs, special menus, special theme decorations, music in the cafeteria, and enhancements to the dining environment. **“When you bake bread, the aroma goes down the hall and this has an impact on your program in a positive way.” (administrator)** **“When the school has an open house, we have an open kitchen.” (foodservice)**

- Nutrition education.

Several participants shared the programs they had established with universities and the use of student interns. The interns assisted with conducting nutrition classes. One state had a coordinated nutrition education workshop for teachers, foodservice personnel, and other staff.

- Role modeling.

This theme evolved as teachers discussed examples of the roles they played such as monitoring in the cafeteria, not just eating in the cafeteria. Participants raised the issue that superintendents and principals should be role models.

- Other.

Snacks with tutoring sessions. **“I think our tutoring sessions go more smoothly when you give them something to eat. It is peanut butter and crackers, or a banana and a fruit drink. It’s not a filet mignon, but I still think that is a neat thing.” (administrator)** One

program emphasized table etiquette. **“We had an educational program that emphasizes nutrition, we give rewards for good table etiquette . . . they get more time for recess.”** (administrator)

11. Of all the things we discussed today, what to you is the most important thing that was said?

- Funding.

Although teachers did not mention that funding was the most important topic of the day, it was the major issue for those serving in administrative and foodservice management positions. Representatives from each participating state mentioned this as important. Analysis revealed that the issue of funding had double the response rate when compared to other items discussed during the day. Typically, two statements categorized the sessions’ findings: **“...we are at a crossroads; we need to decide if we are a business or a nutrition program...,”** (foodservice) and **“Money dictates what we do or don’t do for kids, and I think that is a really sad scenario.”** (administrator) These statements reflect a general concern for the lack of financial support by federal, state, and local sources as well as the inability of local districts to provide nutritious meals for all children. Additionally, participants reported that the lack of funding negatively impacted the areas of personnel and capital expenditures.

- Administration.

Next in importance was support and leadership from district- and building-level administrators. Specifically, participants mentioned lack of communication and lack of involvement by those in authority (school boards, superintendents, and principals) to oversee the nutrition program. The thrust here was that in order to affect or implement change, one must first educate all stakeholders to include: students, parents, staff, and community. Focus groups at each site mentioned this as an important factor. **“You have to be a change agent in your school, and you have to take it upon yourself because no one else is going to do it for you. So, I think education is number 1.”** (administrator) **“Without education, how do we affect change?”** (administrator) **“You have to be aware of where you are and then you have to have a vision; you have to have goals.”** (administrator)

Another factor raised under this area was the importance of understanding that providing children with nutritious meals leads to better academic performance. **“Healthy kids are healthier learners.”** (teacher)

- Involve students and others.

The East Coast participants noted that student involvement was of critical importance to implement any form of change at the school level. **“Kids can advise us on everything!” (administrator) “When kids are given an opportunity to share, they buy into a program.” (administrator) “I think getting everybody involved, the teachers, students, parents, and different organizations . . . like the PTA . . . would be extremely helpful.” (teacher)**

- Societal factors.

In general, the participants felt that there were several societal factors that negatively impacted the children and nutrition programs. They included: environment, family traditions, community involvement, peer pressure, low standards of nutrition, and food providers/choices at school. **“In light of the consensus that adolescent eating behaviors are poor, behavior hasn’t changed relative to the food providers in the schools.” (teacher)**

- Mixed messages.

The participants in every state agreed that mixed messages were a concern that needs to be addressed. They commented that since we do have a “rising awareness” we must also be “consistent,” instead of saying one thing and doing another. **“Mixed messages say to students, that you need to be healthy, but we are going to give you junk.” (teacher) “. . . teachers, administrators, and parents all need to be more aware of how . . . what we do impacts what kids do . . . I mean our modeling and you know I’m thinking teacher parties really do not help . . . so the negative things that we do or the messages we send are stronger than we think they are.” (teacher)**

- Policy USDA and local/district.

The participants noted that it is important to establish a strong policy in order to affect change. They also noted that this policy should consider the input from teachers, administrators, and students. **“The idea of a district-wide policy may not be the most important, but it certainly seems like the most concrete.” (teacher)**

- Vending machines.

There was a concern over vending machines. Many participants did not like the idea that they were operational during lunch. East Coast participants mentioned less frequently that vending machines were on during lunch. **“Our administration moved the vending**

machines out of the cafeteria so that they could keep them on during lunch.”
(foodservice)

- Miscellaneous comments

One person from one state mentioned these additions: make only healthy choices available to students and the impact attitudes of staff, foodservice, and teachers have on students.

Afternoon Focus Group Sessions

Participants were in mixed groups during the afternoon sessions. Therefore, it was not possible to identify the participant group contributing the quotes.

1. Based on the major barriers we identified this morning, what steps do we need to take to overcome them?

During the lunch break, the moderators and assistant moderators analyzed all the barriers from the three groups and identified duplication among groups. They then identified the five major barriers discussed in the three groups. These five became the barriers used for the afternoon discussion among the group of mixed participants. The major barriers for all focus groups at all locations were: time, funding, physical environment, menu and menu choices, competitive foods, lack of commitment, and outside influences.

- Time and physical surroundings.

Much of the discussion surrounding time and the physical environment dealt with funding. With adequate funding, the groups felt the time and physical environment issues could be solved. Time could be improved with the funding for more serving lines and staff to serve the students. If more funding were available to pay teachers for longer days, meal periods could be longer. Suggestions for funding included increasing taxes at all levels and seeking corporate sponsors.

- Menu/menu choices.

Under menu and menu choices, the stigma of free meals was discussed as a barrier. One solution recommended was having universal free meals. Another was the use of the ID card that could be scanned. Other issues under this heading concerned the availability of healthful foods and the type of foods students are choosing. One comment made was, **“If you put roast beef and mashed potatoes on the menu, the teachers eat it and the kids don’t. If you put the roast beef on bread, kids will eat it.”** Participants recognize the need to keep a positive cash balance, but to do so the foodservice participants stated they must sell

additional items that are less healthful to keep school boards from contracting with outside companies to run the foodservice operation. Additional funding was again one recommended solution.

- Competitive foods.

The major solution for competitive foods also was funding. Participants stated that with adequate funding, the foodservice programs could serve healthful foods and not have to depend on sales from a la carte items to stay in a positive cash balance.

- Outside influences.

Outside influences from peers, parents, media, community, and policy or lack thereof were themes within this barrier. Recommendations for lessening the impact of these influences included having public service announcements. The comparison was made to the ones that ran several years ago, **“Do you know where your children are?”** A similar advertisement could state, **“Do you know what your children ate today?”** Also, coordination between the education arm and the foodservice arm in the school. **“We need to figure out a way to consolidate so we are all really working toward the same goal.”**

Policies were also suggested. Participants felt that policies from the local level would be more effective in developing a healthful nutrition environment in the schools. **“We need to make a public commitment to the fact that students should have physical exercise every day, that we need to be teaching nutrition and modeling it.”** Another recommendation was to tie nutrition to outcomes. **“If we tie nutrition to report cards, parents would be interested. We are conducting studies to find out if breakfast makes a difference in test scores, we should do this for lunch.”**

Education of parents was discussed in each group. Participants felt parents were not educated in nutrition and, therefore, students had little knowledge. The eating patterns of the home are translated into what the student chooses at school. **“Parents send students to school and expect them (schools) to be fixers. Parents have to realize nutrition is a pattern that starts in the home. If kids are used to fried foods at home, they will not change their selection at school.”**

Peer pressure was to be a large concern of participants. Several participants suggested using local athletes as role models. Educational programs on nutrition and its benefits through education on the World Wide Web also was suggested as a solution for parents and students.

The media was discussed as a large influence on society as a whole. Few nutritious foods are advertised on television as compared to high fat foods. More advertising about nutrition and

campaigns such as the “milk mustache” and “drink more milk” should be broadcast. Suggestions also included that the associations of vegetable growers should advertise the benefits of eating vegetables.

Lack of commitment from the community was a major barrier to the participants from the West. They saw this as separate from the outside influences. They recommended open houses and open communications to assist with this concern.

2. What will it take to increase the awareness of the schools’ nutrition environment?

- Advertising.

Advertising was recommended by all groups. Participants believed that public service announcements such as “Do you know what your child ate today?” could be effective. Advertisements on the World Wide Web also were suggested such as the messages when you open America on Line (AOL). **“This is a computer generation we are working with . . . they can relate to that.”**

- Local, state, and regional focus groups.

Other suggestions varied according to the section of the country. The midsection of the country felt strongly that local, state, and regional focus groups such as the ones conducted with this study could be done to help raise awareness in the educational community. **“I really like having administration, teachers, and foodservice together discussing this.”**

- Family education.

West Coast participants felt strongly that the parents and family should be educated. **“We have to educate the parents first.” “I think this is a generation that grew up with fast foods and they don’t know otherwise.”**

- Role models.

The East Coast participants saw teachers and administrators as important role models. They also felt support from organizations such as the National Education Association (NEA) and the American School Food Service Association were important. **“One of the strongest lobbies in Washington is the NEA. This is an issue they have to address.”**

- Other.

Other suggestions included training teachers, having more foodservice staff so managers could go into the classroom and teach nutrition, food-tasting parties, cafeteria open houses, and including foodservice staff as part of student orientation. **“I had a teacher bring her class into the kitchen and the students were amazed at all my responsibilities.”**

3. How do we increase promotion of healthy eating behaviors of students?

- Media and spokespersons.

The most highly recommended solution was to use media and spokespersons. Sports figures and musicians were thought to be especially influential on students of this age. **“We need a punk rocker to do a video.” “I don’t think it matters what we say (teachers), they need to see it on television . . . that impacts their choices versus what I say to them.” “We have a morning show and they discuss nutrition and balanced meals and the menu of the day.”**

- Foodservice.

Many believed that foodservice personnel could impact students’ eating behaviors in a variety of ways. Promotions in the schools such as the milk campaign are very effective. Open houses for the cafeteria could be incorporated into events when parents were at the school. **“Our foodservice director comes to orientation to discuss food and payment with our students and parents. She talks to parents and encourages suggestions to improve the program. This has added to positive changes in our district.”**

Nutrition fairs and catering also were suggested as ways the foodservice department could display their foods. Integrating the foodservice staff into faculty meetings would show support for nutrition. Participants suggested that principals, teachers, and administrators be invited to food shows so they can understand more about the foodservice operation.

- Curriculum.

Infusing the curriculum with nutrition was the third most frequently given suggestion. **“Integrating nutrition into the curriculum can help promote it. Let the kids grow broccoli, learn about broccoli and then try it.” “You have to provide the opportunity for them to know what healthy choices are.”**

- Student involvement.

Student involvement can change behaviors. **“We have a student advisory committee that meets with the foodservice staff once a month. The students come up with the schedule of lunches that are served each week and the students design the menu once a month.”**

- Parent involvement.

The groups recognized that parents are hard to involve, but felt there was merit in trying. **“Involving PTA/PTO and administration is a great idea. “I am against forming another committee, but using the organizations we have in place would be great.”**

- Role models.

Teachers as role models were frequently suggested. Get teachers involved. Encourage and possibly furnish lunch for teachers and administrators to eat with the students. **“I have never seen our superintendent in my cafeteria.”**

RECOMMENDATIONS

The following recommendations were developed by the research team based on analysis of all data gathered during the focus groups sessions.

National Level

- Develop advertising campaigns.

The general awareness level of nutrition in our society needs to be raised. Public service announcements, media advertising, and World Wide Web advertising could be used. Celebrities or national sports figures could be used as spokespersons to promote good nutrition.

- Education.

Further the adoption of a comprehensive health curriculum. Every district should have a curriculum that includes nutrition. Nutrition must go beyond one class of 6-10 weeks. It should be reinforced in a variety of classes such as math and science, as in nutrition across the curriculum.

Education should go beyond the student and include parents and the community. Parents influence the nutrition and well-being of our future leaders. In many cases they do not have adequate knowledge to make healthful food choices. This recommendation is congruent with the strategies identified by USDA's Team Nutrition to implement their goals.

- Reduce the need for vending machines and a la carte sales.

Determine the true impact of these two revenue sources by conducting a national survey to determine if the barriers identified in this study are represented nationally.

Vending machines too often contain less healthful foods; however, schools depend on this source of revenue to support a variety of programs. The dependence of funding from these sources should be eliminated. This will necessitate adequate funding for academic, athletic, and school foodservice programs from the national, state, and local levels.

Local Level

- Establish policy.

Local districts should establish a nutrition policy. This type of policy will be more effective coming from the local level rather than national level. Nutrition policies could eliminate many of the barriers presently seen as impacting the nutrition and well-being of students.

- Involve all stakeholders.

Parents, teachers, students, and the community should be involved in establishing a good nutrition environment in our schools. Parents are a particularly difficult group to involve, given the demands on their time. Special effort should be given to involving them.

- Role model.

Focus on key audiences that are visible to the students daily. Teachers, superintendents, coaches, and parents should be role models and not send mixed messages concerning nutrition.

- Enhance cafeteria environments.

The physical environment impacts the choice to eat, time given to eat, and the pleasure of eating. School cafeterias should provide a pleasant environment with adequate space and equipment for serving the school population.

REFERENCES

George, P.S., & Alexander, W.M. (1993). The exemplary middle school. Fort Worth, TX: Harcourt Brace.

Glaser, B. G., & Strauss, A.L. (1967). The discovery of grounded theory: Strategies for qualitative research. New York: Aldine de Gruyter.

Morgan, D.L., & Krueger, R. A. (1998). The focus group kit. Thousand Oaks, CA: Sage Publications.

National Middle School Association (1998). This we believe: A position paper [Brochure]. Columbus, OH: Author

APPENDICES

APPENDIX A

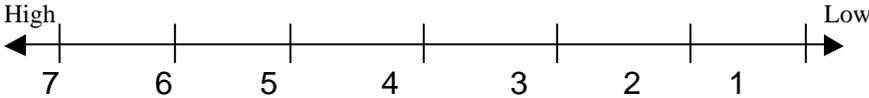
Appendix A
School Nutrition Environment Focus Groups

Morning Session

Questions	Estimated Time
Introduction by the moderator	3 minutes
1. Introductory Question Tell us your name, what school you are from, what you do, and what you most enjoy doing in your free time.	3-5 minutes
2. When you think of a school environment that promotes healthy eating behaviors, what comes to mind? - Flipchart: School environment that promotes healthy eating behaviors = School nutrition environment	5 minutes
3. Here is a list of things that might be part of the school's nutritional environment. Check those that you feel are part of the school's nutritional environment. If you think of items that are not on this list, please add them to your list. - Which ones did you add to the list? - Similarities/Differences -- would anyone like to comment? - Is there a pattern? - (Moderator: Look for ones that are not identified as not part of the school nutrition environment .)	10 minute
Collect sheets	
4. List the top 5 qualities that you consider essential to a school's nutrition environment. On this blank card, I want you to create a report card and grade your school on those qualities you consider essential. - Rating from A – F - Assistant moderator or moderator: Flipchart: Write grades on flipchart. - Why do you rate this item an "A"? Tell us about this - (Moderators: Look for clustering of A's and B's, clustering of D's and F's, and splits of A's and F's. Discuss.)	10 minutes
Collect cards	
5. What are the barriers to promoting healthy eating behaviors in your school? - On the back of the report card, list 3 barriers that impede healthy eating behaviors within your school. - Flipchart: Write responses on flipchart. - Let the participants discuss the answers to see if some fit together or cluster. Do you see similarities? For instance, are several barriers policy-based or people-based?	10-13 minutes

Appendix A
School Nutrition Environment Focus Groups

Morning Session

Questions	Estimated Time
6. What do you consider to be the major barrier in your school to a healthy nutrition environment? - Flipchart: Circle one barrier for each participant. - Discuss.	10-13 minutes
7. Occasionally organizations within a school send mixed messages about the nutrition environment. Please give me one example of this in your school . (mixed messages = say one thing and do another) - Is it apparent? Who sees it? Do others see this? - What influence does it have? (past, present, future)	15 minutes
8. When you consider all of the things that you have to contend with (administration, management, lesson planning, school violence, serving meals, day-to-day operations), where do you place the school's nutritional environment in your list of priorities? - Tell me what makes you place it in that location? - What would it take to move it to a higher priority? - 	15 minutes
9. Please share an example of something that was actually done in your school that made a positive impact on the nutritional environment.	10 minutes
10. Of all the things we discussed today, what to you is the most important thing that was said?	3-5 minutes
11. The purpose of our study is to get your opinions about issues related to the school's nutritional environment. The question is – have we missed anything?	2 minutes
12. Assistant moderator should provide a short oral summary that briefly highlights the key points that were discussed. - Is this an accurate description of what was discussed? - Is there anything that should be added? - Note: This is the time for the assistant moderator to say something if a question was left out or if more information is needed from a particular question. - We will meet back at 11:00 for a group lunch and review results. Moderators collect table tents; will shuffle for afternoon	2 minutes

Appendix A
School Nutrition Environment Focus Groups

-

Appendix A
School Nutrition Environment Focus Groups

Afternoon Session

Flipchart: Write an outline of the afternoon session:

1. Major barriers
2. Increase awareness of school nutrition environment
3. Increase the promotion of the healthy eating behaviors of students
4. Good practices

Questions	Estimated Time
1. Introductory Question	
2. Based on the major barriers we identified this morning, what steps do we need to take to overcome them? - Flipchart: At lunch, the 3 groups' major barriers should be compared. Identify 5 major barriers and list them on flipchart.	20-25 minutes
3. Now that we have identified steps to overcome the barriers: • What will it take to increase the awareness of school's nutritional environment? • How do we increase the promotion of the healthy eating behaviors of students?	20-25 minutes
4. What good practices have you heard today that might work in your school?	20-25 minutes
5. All during the day we have discussed the school nutrition environment, do you have any final thought on this topic?	5 min.

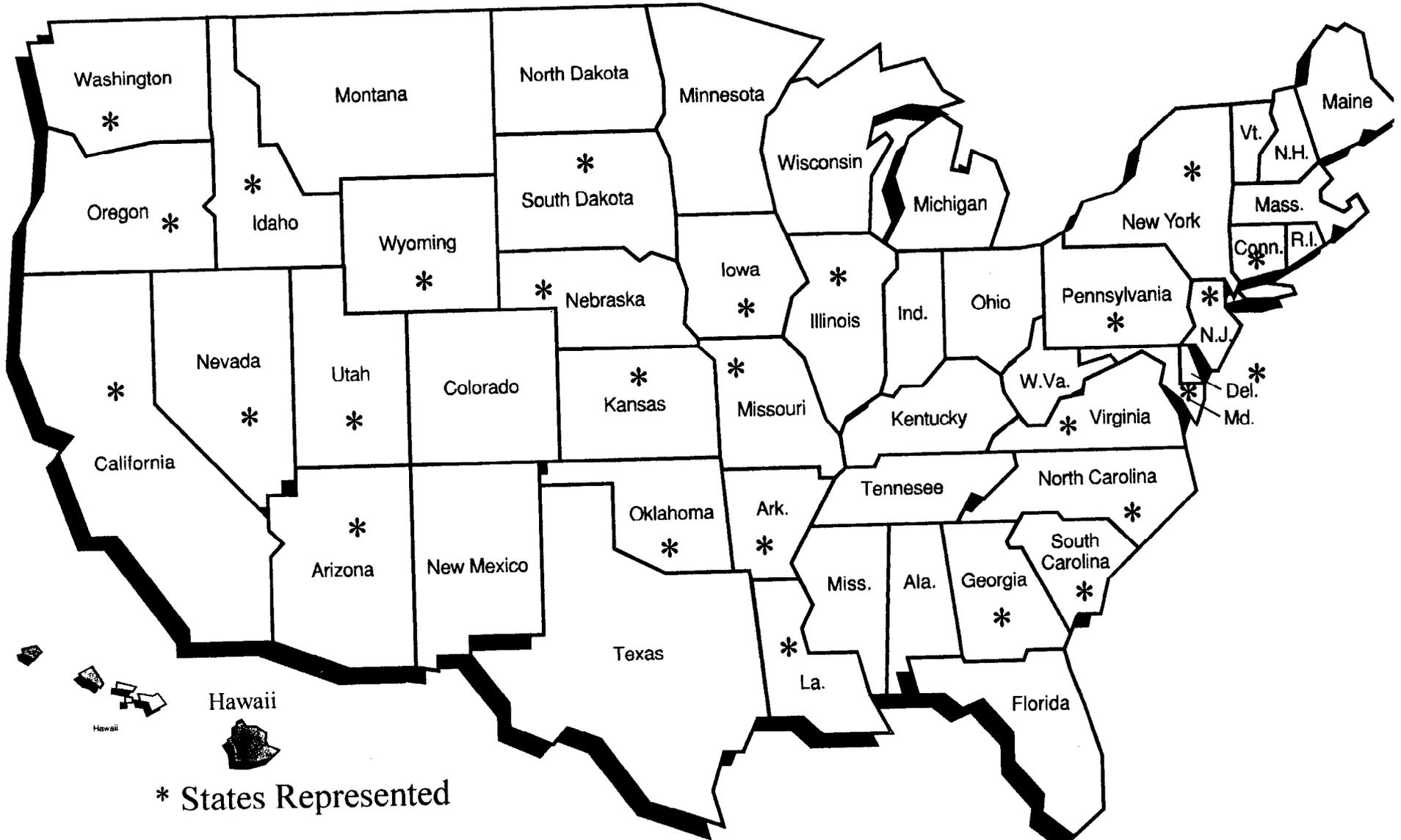
Move back to the large room for closing remarks.

APPENDIX B



Appendix B

States Represented in the Middle School Nutrition Environment Study



APPENDIX C

Appendix C
Confirmation Letter



National Food Service Management Institute

Division of Applied Research
The University of Southern Mississippi
Box 10077 • Hattiesburg, MS 39406-0077
601-266-5773 • FAX: 601-266-4682

May 2, 2000

Ms.

Dear Ms.

We are pleased to learn of your willingness to participate in the National Food Service Management Institute (NFSMI) Applied Research Division's (ARD) focus group concerning the promotion of healthy eating behaviors of students in middle grades. This research is being sponsored by the United States Department of Agriculture (USDA). Results may be used by USDA to influence policy decisions.

This letter serves to provide you with some details of the meeting. The meeting will be in Kansas City, MO., on May 20, at the Holiday Inn Airport.

Travel Arrangements: You should make your flight reservations to the Kansas City Airport through **Pro Travel by calling Donna at 1-800-523-9979**. The NFSMI will pay for the ticket. We would appreciate you confirming your reservations as soon as possible to obtain the best price. Travel plans should allow you to arrive any time Friday evening and be ready to begin at 8:15 a.m. Saturday morning. Please schedule your departure no earlier than 3:45 p.m. Saturday. If travel schedules necessitate or airfares are significantly less for a Sunday departure, we will be glad to pay for a Saturday night stay. A complimentary airport shuttle is available to the hotel. Airport parking also will be reimbursed and a receipt is needed. If you choose to travel by car, you will be reimbursed at \$.325/mile.

Attire: For the NFSMI conference, dress comfortably in a manner that allows relaxation and sharing of ideas. We suggest business casual.

Hotel Arrangement: We will make your room reservation. The hotel expenses will be billed directly to NFSMI. You will be responsible for your telephone calls or any other incidentals. If you wish to contact the hotel for additional information their phone number is:

Holiday Inn Airport
816-464-2345
Holidavkci@aol.com

Expense Reimbursement: The NFSMI Applied Research Division (ARD) will reimburse you for all additional travel, meals, and conference-related expenses. The focus group meeting will include a working lunch. You will be responsible for dinner Friday, breakfast and dinner Saturday, and any meals if travel necessitates a Sunday departure. ARD will reimburse up to \$40 for meals and incidentals per day.

Meeting Schedule: Please meet at 8:15 a.m. for an organization session. Our focus groups will begin promptly at 8:30 a.m. The sessions are scheduled for two hours. We will have an early working (11-12 noon) lunch together and begin our afternoon session promptly at 12 noon. We will conclude with a joint session ending around 2:30 p.m. This will allow you to schedule return flights at 3:45 p.m. or later.

Information Form: Finally, we have included two Participant Information Forms. Please provide the needed information and fax to NFSMI at 1-888-262-9631 as soon as possible.

We will be contacting you again, prior to the May meeting, to provide you with a tentative agenda and any last minute information. We are enthusiastic about the conference and look forward to the sharing of ideas. If you have questions, please contact us at (601) 266-5773.

Sincerely,

Martha T. Conklin, PhD, RD
Director
Applied Research Division

Mary Kay Meyer, PhD, RD
Research Scientist
Applied Research Division

APPENDIX D

**Appendix D
Participant Information Sheet**

**School System Information
Middle Grades Nutrition Environment**

Please complete the following information. Some information may need to be obtained from district school administration.

Name _____ Phone _____ Fax _____

Your school system serves students who are: (circle all appropriate)

Urban Suburban Rural Small town

System wide enrollment is _____. Enrollment in grades 5-9 is _____.

Are the school(s) serving grades 5-9 designated by the Department of Education as Title I schools? Yes No .

Do your schools participate in the federally funded breakfast program? All Some None

What percentage of students qualify for free _____, reduced _____, and paid _____ lunch.

Are a la carte offerings available? Yes No

If yes, what is the largest selling item? _____

Are school food service personnel involved in nutrition education in the middle grades? Yes No

Is nutrition included in the curriculum in middle grades? Yes No

Is there a comprehensive school health curriculum that includes nutrition in the middle grades? Yes No

Does your board have a policy dealing with contracts for food/drink items with vendors? Yes No

Do the schools serving middle grades have vending machines? All Some None

Do the schools serving middle grades have school sponsored stores? All Some None

Of the following items, which do either the vending machines or school sponsored stores offer?
(Circle all that apply) Soda Water Flavored water Sports drinks (Gatorade, etc)

Milk Cookies Sweet rolls Fruit products (raisins, apple chips, etc.) Candy

Chips Fresh fruit Ice cream Low fat chips Low fat cookies

Other big sellers _____

Please Fax to NFSMI at 1-888-262-9631 as soon as possible

Thank you

Information Sheet
Middle Grades Nutrition Environment

Name (Ms., Mr., Dr.) _____ First Name for name tag _____

Your Position's Title _____

Name of School System _____

Business Mailing Address _____

Business Phone () _____ Business FAX () _____ e-mail _____

Demographic Information

Number of years you have been employed in your field? (circle one) 1-4 5-8 9-12 13-16 17+

Number of years you have been employed by this district? (circle one) 1-4 5-8 9-12 13-16 17+

Have you been or are you presently a teacher, administrator, or food service professional in a school serving at least some of the grades 5-9? Yes No

Housing Details

Do you plan on taking our offer to stay in the hotel Friday night before the meeting? Yes No

If yes, bed preference is: single bed, double bed, no preference

Do you need a room designated for smokers? Yes No

Do you have any special dietary needs? Please identify _____

Please Fax to NFSMI at 1-888-262-9631 as soon as possible

Thank you

APPENDIX E

Appendix E
List for Question 3

Please circle the items that you consider to be part of the school's nutrition environment.

Vending machines	Time of meals	Parental pressure
Meal payment system	Neighborhood restaurants	Socialization ability
Cafeteria food	Neighborhood stores	Arrangement of tables
Snack bar	Super-sized meals	Staff attitudes
School stores	Cafeteria space	Clean serving area
Athletic events	Length of meal times	Food appearance
Student candy sales	Cafeteria staff	Convenience of food
Fundraising	Disposable vs. reusable	Long lines
Breakfast	Menu choices	Theme weeks
Breaks	Breakfast at home	Evening meals
Meal location	Sack lunches	Safety in cafeteria
Field trips	Skipped meals	Contract management
Teachers' treats	Game concessions	Competitive foods
Class parties	Cafeteria monitors	School policies
Health classes	Teacher lunchroom	Labor contracts
School health curriculum	Cafeteria lighting, ventilation	Food fights
Food preparation classes	Cafeteria noise	Cafeteria capacity
Bus stops on school trips	Pest control	Title I paperwork
A la carte items	Peer pressure	Scheduling of teachers and Teachers' aides to supervise

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