Exploring the Need for Web-Based Training Among School Nutrition Directors

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National Food Service Management Institute
The University of Mississippi

Building the Future Through Child Nutrition

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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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EXECUTIVE SUMMARY

School nutrition directors, supervisors and/or coordinators (SNDs) must function under a complex set of job responsibilities in order to successfully execute their role in managing school nutrition programs. Providing timely and engaging training opportunities to promote knowledge and skill development for SNDs is challenging. In the past several years, online learning and Web-based training (WBT) has gained tremendous popularity with a proliferation of both online course offerings and student enrollment. Although WBT has the potential to meet the diverse learning needs of SNDs, their opinions and interests related to WBT are unknown.

Before committing the resources to develop, test and deliver WBT modules for SNDs, it was important to conduct a WBT needs assessment. The two primary objectives of this needs assessment research were to: 1) qualitatively explore their need and interest in utilizing WBT, and 2) quantitatively determine their perceived knowledge, skill, training, and interest in utilizing WBT within the 14 established functional areas.

Since no known published research or standardized tool existed to address the research objectives, the researchers developed a qualitative and quantitative instrument. Content validity of the instruments was established by an expert review panel including three doctoral-level registered dietitians and two SNDs. Face validity was then established with a convenience sample of three SNDs who pilot tested the instruments.

The resulting qualitative structured-interview questionnaire assessed the following:

- Access to and use of computers and Internet at the place of employment and home,
- Exposure and experiences with previous computer-based education,
- Perceived benefits and barriers of using WBT to acquire new knowledge,
- Perceived benefits and barriers of using WBT for practice activities to further improve skills,
- Potential strategies to promote WBT opportunities, and
- Demographics of the SNDs and their school districts.

In the final quantitative functional area survey, SNDs were asked to respond to the following six questions for each of the 14 functional areas:

- Does your job require you to perform in the functional area (yes or no),
- Rate your knowledge in the functional area (1=poor, 5=very good),
- Rate your skill in the functional area (1=poor, 5=very good),
- Rate your satisfaction in your ability to perform in the functional area (1=very dissatisfied, 5=very satisfied),
- Indicate the forms of continuing education you have received in the functional area, (Meeting, conference or pre-conference; Professional development publication/article; Web-based training, online course, or distance education; Academic course work; Other), and
- Rate your interest in participating in WBT to improve your knowledge and skill in the functional area (1=very disinterested, 5=very interested).

In one final question, SNDs were asked to rank the top 5 functional areas they were most interested in participating in Web-based training (WBT) to improve their knowledge and skills.

In order to evaluate potential differences between SNDs who attended the National Food Service Management Institute (NFSMI) 5-day Orientation to Child Nutrition Management Seminar (attendees) and those who did not (non-attendees), two approaches were used to identify potential participants. For the attendees, contact information for all participants in the NFSMI 5-day orientation during 2004-2006 was obtained. Since the 5-day orientation targets new and aspiring directors, the majority of attendees had less than five years of director experience. Furthermore, approximately 90% of the attendees from 2004-2006 resided in six states including Mississippi, Michigan, Louisiana, Indiana, Florida, and Colorado. In order to closely match the demographics for the non-attendees, the state agency directors from these six states were asked to provide a contact list of SNDs with less than five years of experience. The two lists were cross-referenced with one another to avoid duplicates. The lists were then randomly sampled.

A research packet containing a letter that detailed the purpose of the research, the Consent to Participate form, and the Functional Area Survey along with a NFSMI-addressed stamped envelope was initially mailed to the SNDs. Approximately 5-7 days later the SNDs were contacted via telephone and asked to participate in the qualitative structured-interview questionnaire. Those who consented and participated in the telephone interview were also asked to complete the Functional Area Survey and return it in the envelope provided. Approximately 5-7 days after completion of the telephone survey, participants were mailed a reminder letter to return the Functional Area Survey.

Participants in the qualitative structured-interviews included 42 SNDs with an average of 3.1 (SD$\pm$4.6) years of director experience. There were no major differences identified between attendees and non-attendees. Results indicated that the majority of SNDs have the technology infrastructure needed to support WBT at work and at home. Thirty-eight (90%) reported interest

in utilizing WBT to acquire knowledge, and 40 (95%) reported interest in WBT for practice activities to further improve skills. Benefits of WBT included convenience, opportunities to study unfamiliar areas in more detail and practice the skills, ability to gain knowledge and get current information, and accessibility of information. Barriers included lack of instructor/student interaction or feedback to questions, on-site interruptions or time, technology problems, and the motivation or discipline needed to complete assignments.

Of the 42 SNDs participating in the qualitative phase, 34 (81%) completed and returned the Functional Area Survey. In general, within each functional area, SNDs rated their knowledge and skills similarly, and the higher the rating for knowledge and skill was reflected in a more positive satisfaction in job performance. The five functional areas with the highest interest rating and ranking for a WBT format included: (1) Sanitation, Food Safety & Employee Safety, (2) Financial Management & Record Keeping, (3) Nutrition & Menu Planning, and (4) Program Accountability.

Although several previous studies suggested that interest in WBT may be low among school nutrition professionals, these findings suggest the opposite. An overwhelming majority of SNDs expressed interest in utilizing WBT both to acquire knowledge and for practice activities to further improve skills. It is feasible to suggest that preference for WBT may be more related to a lack of availability and resulting exposure, and less related to a lack of interest. This prospect can be supported by the fact that while only 16 (38%) SNDs reported participation in some form of previous WBT, at least 38 (90%) reported they would be interested in participating. Furthermore, the overall thematic counts indicate that SNDs identified substantially more benefits (n=135) of WBT as compared to barriers (n=77). Additionally, when asked to rate their

interest (1=very disinterested, 5=very interested) in participating in WBT for each functional area, the overall mean rating across all functional areas was 4.0.

Although the sampling methodologies were appropriate for this exploratory needs assessment, the small sample somewhat limits generalizability. . It is important to confirm these findings in a larger, more representative sample of SNDs. Overall results indicate that WBT may be a viable delivery method to provide timely training for SNDs. As the potential to integrate WBT into current educational offerings is further investigated, it is important to begin WBT module development with the functional areas as prioritized by SNDs and address the perceived benefits and barriers during the development, field testing, and marketing of WBT modules.

INTRODUCTION

School nutrition directors, supervisors and/or coordinators (SNDs) must function under a complex set of job responsibilities in order to successfully execute their role in managing school nutrition programs. The National Food Service Management Institute (NFSMI) has identified 14 major functional areas required of competent SNDs (Rainville & Carr, 2001). The NFSMI is responsible for providing training and educational opportunities to promote knowledge and skill development for each of these functional areas, which includes assessing learning outcomes to allow for evaluation and continuous improvement of educational offerings. Presently, NFSMI offers traditional educational opportunities through conferences, workshops, specialized training, and satellite seminars/teleconferences. The NFSMI also offers a 5-day Orientation to Child Nutrition Management Seminar targeting new and aspiring school nutrition program directors, which includes SNDs. However, due to the geographical dispersion and diverse learning needs of SNDs, they are not all able to take full advantage of the current educational opportunities. Since the potential educational opportunities utilizing online learning and Web-based training (WBT) are abundant, NFSMI is exploring the potential of developing and providing WBT opportunities for SNDs (Martin & Parks, 2006).

In the past several years, online learning has gained tremendous popularity with a proliferation of both online course offerings and student enrollment (Allen & Searman, 2006). As suggested by Dryden and Vos, interactive information technology including the Internet, two-way conferencing, and multimedia interactive study is transforming distance education and creating a learning revolution (Dryden & Vos). The advantages and disadvantages of online learning programs are greatly debated in the literature. Among the most frequently cited benefits of online learning include accessibility from any site, convenience, cost effectiveness,

interactivity, learner-centered, uniformity of content, and rapidly updated content (Block & Dobell, 1999; Jones & Fitzgibbon, 2002). Another advantage is that online courses attract older students who have additional employment and family responsibilities when compared to traditional students (Allen & Searman, 2006). Some of the most frequently reported disadvantages of online learning include feelings of isolation, lack of group relationships or social and emotional exchanges, and frustrations with or lack of access to technology (Cobb & Mueller, 1998; Mills, Fisher, & Stair, 2001). Furthermore, the online environment can present challenges for instructors including the redesign and transfer of courses to a Web-based format, incorporating activities to develop and test learning outcomes, and promoting successful electronic communication.

Although the continuing education needs and training needs of school nutrition program professionals (Conklin, Sneed, & Martin, 1995), the information seeking behaviors of school nutrition program directors in small districts (Conklin, Lambert, & Lambert, 2005), and the training needs of school nutrition site managers (Sullivan, Haper, & West, 2002) have all been examined, none of this research specifically focused on WBT. When conceptualizing the possibility of developing and offering WBT to inform, engage, and assess learning outcomes for SNDs, several potential challenges exist. First, there is not a designated education level, universal set of job qualifications, or common continuing education requirement for SNDs. The SNDs education level may range from high school to doctorate degrees in philosophy or education (*School nutrition compensation and benefits report*, 2006) and there is potential for a large variation in a SNDs' familiarity, comfort level, and interest in on-line learning technologies. Secondly, as mentioned previously, SNDs are required to perform under a complex set of functional areas. Some functional areas may be better accommodated in a WBT format,

and there may be a greater need for training in certain areas. Therefore it is important for SNDs to assess their training needs and identify interests in WBT for each functional area. Thirdly, as the aging cohort of SNDs begin to retire there is a need to recognize and accommodate the learning preferences for the next generation of younger SNDs (Conklin et al., 2005; Conklin et al., 1995).

Learning Theory

Transferring learning opportunities and courses to a Web-based format does not automatically improve the instruction (Williams, 2002). In fact, the course content and structure often requires substantial redesign for an online format, and the experience and learning needs of the online learner must be considered. The Modes of Learning Theory suggests that instruction must be designed to meet different modes of learning including accretion, tuning, and restructuring (Rumelhart & Norman, 1978). Briefly, accretion is the addition of new knowledge to existing memory, tuning is the formation of new conceptual structures or schema, and restructuring is the adjustment of knowledge to a specific task usually through practice. The central theme of the Modes of Learning Theory is that the training experience of learners must be realized and that there is typically not one single approach that meets the need of all intended learners. The constructs of this theory provided the conceptual framework for sampling methodology and questioning route for this research to explore how WBT may best accommodate the learning needs of SNDs. For example, WBT needs may be different for SNDs in accretion mode (acquiring new knowledge) as compared to SNDs in restructuring mode (altering knowledge through practice activities).

Purpose and Objectives

Prior to committing the resources to develop, test and deliver WBT modules for SNDs, it was important to conduct a WBT needs assessment. The two primary objectives of this needs assessment research targeting SNDs were to: 1) qualitatively explore their need and interest in utilizing WBT, and 2) quantitatively determine their perceived knowledge, skill, training, and interest in utilizing WBT within the 14 established functional areas. Secondarily, in applying the Modes of Learning Theory, it was hypothesized that learning needs for SNDs who had attended and completed the intensive NFSMI 5-day orientation (attendees) may differ from those SNDs who had not completed the orientation (non-attendees). Specifically, it was theorized that since attendees had significant classroom exposure to NFSMI's educators and materials, they may identify more benefits and less barriers to continuing their education in an on-line format and they may be more open and accepting of on-line learning targeting higher modes of learning, as compared to non-attendees. Therefore, the qualitative phase of this study was designed to evaluate differences between 5-day orientation attendees and non-attendees.

METHOD

Survey Instruments

Since no known published research or standardized tool existed to address the research objectives, the researchers developed two instruments: 1) a qualitative structured-interview questionnaire and 2) a quantitative functional area survey. Content validity was established by an expert review panel including three doctoral-level registered dietitians and two school nutrition directors (SNDs). The panel gave feedback on the content, clarity, and complexity of both instruments. The two instruments underwent a series of reviews resulting in several changes including modifications in the question and answer choices, clarification in functional area definitions, simplification in terminology, and adjustments in overall flow and survey layout.

Face validity was then established with a convenience sample of three SNDs who pilot tested the instruments. They completed both instruments and provided feedback regarding clarity of questions, response categories, and the instruments' format, flow, and length. As a result of the pilot test, one redundant question was eliminated and minor changes were made to the wording of several questions.

The resulting qualitative structured-interview questionnaire assessed the following:

- Access to and use of computers and Internet at the place of employment and home,
- Exposure and experiences with previous computer-based education,
- Perceived benefits and barriers of using Web-based training (WBT) to acquire new knowledge,
- Perceived benefits and barriers of using WBT for practice activities to further improve skills,
- Potential strategies to promote WBT opportunities, and

- Demographics of the SNDs and their school districts.

In the final quantitative functional area survey, SNDs were asked to respond to six questions for each of the 14 functional areas including:

- Does your job require you to perform in the functional area (yes or no),
- Rate your knowledge in the functional area (1=poor, 5=very good),
- Rate your skill in the functional area (1=poor, 5=very good),
- Rate your satisfaction in your ability to perform in the functional area (1=very dissatisfied, 5=very satisfied),
- Indicate the forms of continuing education you have received in the functional area, (Meeting, conference or pre-conference; Professional development publication/article; Web-based training, online course, or distance education; Academic course work; Other), and
- Rate your interest in participating in WBT to improve your knowledge and skill in the functional area (1=very disinterested, 5=very interested).

In one final question, SNDs were asked to rank the top 5 functional areas they were most interested in participating in Web-based training (WBT) to improve their knowledge and skills.

Data Collection

This research was approved by The University of Southern Mississippi's Institutional Review Board. In order to evaluate potential differences between SNDs who attended the NFSMI 5-day Orientation to Child Nutrition Management Seminar (attendees) and those who did not (non-attendees), two approaches were used to identify potential participants. For the attendees, contact information for all participants in the NFSMI 5-day orientation during 2004-2006 was obtained. The list included 188 names. Since the 5-day orientation targets new and

aspiring directors, the majority of attendees had less than five years of director experience. Furthermore, approximately 90% of the attendees from 2004-2006 resided in six states including Mississippi, Michigan, Louisiana, Indiana, Florida, and Colorado. In order to closely match the demographics for the non-attendees, the state agency directors from these six states were asked to provide a contact list of SNDs with less than five years of experience. These state agency directors provided a total of 92 contacts. The two lists were cross-referenced with one another to avoid duplicates. As is customary in qualitative research, an appropriate sample size is needed to achieve data saturation. On the outset of this project, it was determined to randomly sample each list for a minimum of 20 attendees and 20 non-attendees, and if new responses continued to emerge or overall themes were unidentifiable additional SNDs would be surveyed to achieve data saturation.

A research packet containing a letter that detailed the purpose of the research, the Consent to Participate Form, and the Functional Area Survey along with a NFSMI-addressed stamped envelope was initially mailed to the SNDs. Approximately 5-7 days later the SNDs were contacted via telephone and asked to participate in the qualitative structured-interview questionnaire. Those who consented and participated in the telephone interview were also asked to complete the Functional Area Survey and return it in the envelope provided. Approximately 5-7 days after completion of the telephone survey, participants were mailed a reminder letter to return the Functional Area Survey.

Data Analyses

During the qualitative structured-interview, the interviewer recorded hand-written field notes. Immediately following each interview the interviewer expanded and typed the field notes. Two independent researchers then thematically categorized, counted, and summarized the

participants' responses. The Functional Area Survey responses were analyzed using descriptive statistics, including frequencies, percents, means and standard deviations (SD).

RESULTS AND DISCUSSION

Sample Characteristics

Data saturation was adequately achieved in the resulting sample of 42 school nutrition directors (SNDs), including 21 attendees and 21 non-attendees. The orientation attendees had an average of 3.2 (SD±2.5) years of director experience while the non-attendees had on average 2.9 (SD±6.0) years of director experience. Table 1 indicates the SNDs' level of education, their schools' student enrollment, and their access to computers and the Internet at their place of employment and at home.

Table 1

Characteristics of School Nutrition Directors, Their Schools, and Their Computer and Internet Access (n=42)

	Number (%) Orientation Attendees (n=21)	*Number (%) Non-orientation Attendees (n=21)*
Level of Education		
Less than high school	0 (0)	1 (5)
High school graduate or GED	4 (19)	6 (29)
Some college or specialized training	4 (19)	4 (19)
2-year college graduate	2 (10)	1 (5)
4-year college graduate	4 (19)	6 (29)
Some graduate school	1 (5)	0 (0)
Graduate degree	6 (29)	3 (14)
Student Enrollment		
2,799 or less	5 (24)	18 (86)
2,800 to 9,999	8 (38)	2 (10)
10,000 to 19,000	4 (19)	1 (5)
20,000 to 44,999	2 (10)	0 (0)
45,000 to 64,999	2 (10)	0 (0)
65,000 or greater	0 (0)	0 (0)

(table continues)

Table 1 *(Continued)*

Characteristics of School Nutrition Directors, Their Schools, and Their Computer and Internet Access (n=42)

	Number (%) Orientation Attendees (n=21)	*Number (%) Non-orientation Attendees (n=21)*
Computer Use at Work		
Access to a computer at work	21 (100)	19 (90)
Access to own computer at work	19 (90)	15 (71)
Access to the Internet at work	21 (100)	19 (90)
Computer Use at Home		
Access to a computer at home	21 (100)	17 (81)
Access to the Internet at home	20 (95)	17 (81)

On average, the orientation attendees spent about 21 (SD$\pm$10.6) hours each week on their computer at work and 4.1 (SD$\pm$3.4) hours each week on their computer at home, while the non-attendees spent about 13.7 (SD$\pm$10.8) hours each week on their computer at work and 4.1 (SD$\pm$5.4) hours each week on their computer at home. These findings reveal that the majority of SNDs have access to the technology infrastructure needed to support WBT and spend a significant amount of their work time on computer-related activities.

Qualitative Structured-Interview Results

In the first set of questions, SNDs were asked to report participation in any previous Web-based training (WBT), and to subsequently discuss what they liked and disliked about the WBT. Sixteen (38%) SNDs, eight orientation attendees and eight non-orientation attendees, reported participation is some form of previous WBT. When questioned about specific forms of WBT participation, 10 had communicated with an instructor, five reported contact with other students via bulletin boards or chat rooms, and 12 completed tests or assignments to earn professional certificates or college credit. The SNDs most liked being able to complete the

training on their own time or at their own pace (n=10), not having to travel (n=6), and being able to study unfamiliar areas in more detail (n=2). There were relatively fewer dislikes reported which included lack of face-to-face interaction or instructor feedback (n=4), and technology or Web site navigation problems (n=3).

In the next set of questions, a scenario was described whereby SNDs were asked to think of a regulation they were required to implement or a competency they were required to meet in which they had received no or little education/training. When asked if they would be willing to receive computer-based training to acquire knowledge regarding this regulation or competency, 18 (86%) of the orientation attendees replied yes and three (14%) were undecided; and of the non-attendees, 20 (95%) replied yes and one (5%) replied no. Table 2 illustrates the identified themes, counts among attendees and non-attendees, and representative comments regarding the perceived benefits regarding WBT to acquire knowledge, and Table 3 illustrates the perceived barriers.

Table 2

Perceived Benefits of using Web-Based Training to Acquire Knowledge (n=42)

Theme	*Count Orientation Attendees (n=21)*	*Count Non-orientation Attendees (n=21)*	*Supporting Comments*
Convenience: Time	5	11	• Completing it anytime of the day, being able to stop and go • Time saving because I can do it right from my own computer
Convenience: Travel	9	7	• Would not have to travel 30 minutes to the local college • We don't have the time or resources to plop on plane and go to NFSMI
Convenience: Cost	2	3	• Cost, we would save time loss at work, airfare, and hotel • Would not have to pay for travel or a registration fee
Study unfamiliar areas in more detail or move at my own pace	12	6	• There are hell days when you don't get anything done and then calmer days, this would allow you to work at your own pace • The ability to move fast through the easy stuff and dig a little deeper into the parts that are harder • I could keep re-reading the material until I understood it
Gain knowledge or get current information	8	5	• Increase my knowledge base and make me a better supervisor • Stay current with changing information
Accessibility of information	8	5	• More information is usually available online than in a classroom setting • Quicker to link to information online than looking in a manual

Table 3

Perceived Barriers of using Web-Based Training to Acquire Knowledge (n=42)

Theme	*Count Orientation Attendees (n=21)*	*Count Non-orientation Attendees (n=21)*	*Supporting Comments*
No instructor/student interaction or feedback to questions	12	8	• I would miss the one-on-one interaction with the students and instructors • If I did not understand something would I be able to ask questions right away and get an answer, or would there be a delay to getting my questions answered • If you are not understanding something and are not even in the ballpark and you keep moving forward, you would need some sort of feedback
Time or on-site interruptions	6	3	• Taking time away from work, but weighing the options it still a better alternative than attending a class • The interruptions and distractions with completing it on-site
Computer system or technology issues	1	6	• Trouble navigating on the computer or Web site, not knowing what to do • If the computers are down, and they often are
Motivation or discipline	3	1	• You would need to discipline yourself to complete the course
Typing information	2	0	• Students wouldn't be as participatory because they would have to type everything out

In a second scenario, SNDs were asked to think of a situation in which they had received education on a regulation or competency and felt comfortable in their ability to meet the competency, but needed practice activities to further improve their skills. When asked if they would be willing to receive computer-based training for practice activities to further improve skills, 20 (95%) of the orientation attendees replied yes and one (5%) said no. Non-attendees replied identically with 20 (95%) yes replies and one (5%) no reply. Table 4 illustrates the identified themes, counts among attendees and non-attendees, and representative comments regarding the perceived benefits regarding WBT for practice activities, and Table 5 illustrates the perceived barriers.

Table 4

Perceived Benefits of using Web-Based Training for Practice Activities to Improve Skill (n=42)

Theme	*Count Orientation Attendees (n=21)*	*Count Non-orientation Attendees (n=21)*	*Supporting Comments*
Accessibility of current information	8	6	• Updated on newest regulation • All of the resources would be available in one place
Practice the skill	6	8	• Hands on are always better than just talking about it, you often don't know if you understand until you actually do it • I could routinely log on and complete as many practice sessions as necessary until I felt comfortable with the information
Convenience	8	4	• Convenience is the main thing • The convenience of being able to do it on my own time
Self-directed learning	7	3	• Skip things you are familiar with and spend more time on things you are less familiar with, versus having to sit through it all • Tailor your learning and zero in a competency in which you needed more training, we are strong in some areas and weak in other areas
No embarrassment factor	3	1	• If responses are not as they should be, there is not stigma or rejection • Sometimes you don't want everyone to know if you have a question

Table 5

Perceived Barriers of using Web-Based Training for Practice Activities to Improve Skill (n=42)

Theme	*Count Orientation Attendees (n=21)*	*Count Non-orientation Attendees (n=21)*	*Supporting Comments*
No instructor/student interaction or feedback to questions	9	5	• If you don't interpret the practice activities correctly, there is no one to let you know that what you have done is wrong • Having someone available to answer the questions that I may have
On-site interruptions or time issues	5	6	• In a seminar you are forced to do the activity, with Web-based you may think yeah, yeah I'll get to it, but then get frustrated with so many interruptions • If it is on a timeline or live teleconference it would be impossible for me to participate
Computer system or technology issues	2	3	• Technology problems • You would have to familiarize yourself with new communication techniques
Activities limitation	3	2	• I would prefer hands-on activities for practice • Lack of role playing activities

Overall, the major perceived benefits and barriers of WBT as identified by these SNDs, supports previously established advantages and disadvantages of online learning (Block & Dobell, 1999; Cobb & Mueller, 1998; Jones & Fitzgibbon, 2002; Mills et al., 2001). Some earlier research that examined the training needs of school nutrition program professionals found that many school nutrition program professionals did not use Web-based or emailed information or services (Conklin et al., 2005), and that instruction delivered via Internet/World Wide Web and interactive teleconferences was the least preferred training delivery mode (Sullivan et al., 2002). Additionally, in a more recent study involving 95 SNDs from large school districts, the most preferred form of continuing education were meetings or conferences (94%) and professional development publications/articles (62%), whereas online course work/distance education (25%) and blended learning (28%) was less preferred (Nettles & Carr, 2007). These studies imply that interest in WBT may be low. However, our findings suggest the opposite, with an overwhelming

majority expressing interest in utilizing WBT both to acquire knowledge (n=38; 90%) and for practice activities to further improve skills (n=40; 95%). Although several factors may contribute to this discrepancy, it is feasible to suggest that preference for WBT may in part be more related to a lack of availability and resulting exposure, and less related to a lack of interest. This prospect can be supported by the fact that while only 16 (38%) of SNDs reported participation in some form of previous WBT, at least 38 (90%) reported they would be interested in participating. Furthermore, the overall thematic counts indicate that SNDs identified substantially more benefits (n=135) of WBT as compared to barriers (n=77).

In applying the Modes of Learning Theory, the anticipated differences among orientation attendees and non-attendees were not confirmed. First, it was speculated that since attendees had significant more classroom exposure to NFSMI's educators and materials, they may identify more benefits and less barriers to continuing their education in an on-line format, as compared to non-attendees. This was not found. Furthermore, it was conceived that attendees would be more willing to participate in on-line learning targeting higher modes of learning, specifically WBT for practice activities to further improve skills. However, interest was high and identical in both groups, with both 20 (95%) orientation attendees and 20 (95%) non-attendees reporting willingness to participate in WBT for practice activities. Although our speculations did not originate, it is important not to dismiss the central theme of the Modes of Learning Theory which suggests that the training experience of learners must be realized and that there is typically not one single approach that meets the need of all intended learners. The constructs of this theory may have greater application in the development, field testing, and evaluation of WBT modules.

The SNDs were then asked to discuss their biggest barriers in trying to stay informed and educated in so many diverse areas. These results are presented below.

Table 6

Biggest Barriers to Staying Informed and Educated (n=42)

Theme	*Count Orientation Attendees (n=21)*	*Count Non-orientation Attendees (n=21)*	*Supporting Comments*
Time	11	7	• Time is number one; I am constantly being pulled between my 6 different schools. • I'm the only person and I cook for about 100 students a day
Changing information, amount/prioritizing information	5	7	• Keeping up with all the rules and regulations • Drill down and know things at the minute level, for example writing the specs for a piece of equipment; we have to know such global topics at such an in-depth level
Communication	2	6	• Lack of communication with those that make the rules/regulations; I don't always get the newest information • Changes that come down the tube are not always well communicated or as straightforward as they should be; call the state agency and 2 or 3 different people tell you different things and you have to make the best decision
Funding/traveling to training	2	1	• Finding the allocated funding needed to get the training • Getting to the classes, most of the training is 1.5 hours away

Lack of time was the most frequently reported barrier to staying informed and educated in so many diverse areas. Although this finding is not entirely surprising, it is important for those developing WBT be aware and considerate of a SNDs' time demands. Earlier research suggests that SNDs do not want instruction that is just for fun (Carr, 2001). Rather they want instruction that enhances and extends existing knowledge, and instruction that incorporates new findings with further directions. Although the SNDs' time is on short supply, they value learning and if they are going to participate in WBT it needs to be a meaningful experience. In fact, one SND may have said it best when describing her WBT needs when she remarked, "Don't give us a lot

of flowery information. It needs to be highly structured and organized. It needs to be very specific. 'Do this 1,2,3.'"

Paulsson and Sundin (2000) examined the obstacles in integrating WBT at work in order to enhance employees' level of competence. They concluded that when workload is high, employees do not have the time to study which areas are a priority. Furthermore, they found that specific times must be set aside for the WBT and that continual competence development at work caused a certain level of stress. These findings are noteworthy within the context of this study, because although WBT has the capability of addressing the major training and educational barriers facing SNDs, their participation in WBT will also put additional demands on them to further their learning.

The lack of funding to travel was another educational barrier. Fortunately, funding to travel is not needed to participate in WBT. However, there are fees associated with WBT, which may include registration costs, technology fees, and computer software and hardware purchases or upgrades. Allocating funding for SNDs to participate in WBT may be as difficult as allocating funding for travel. Therefore, WBT fees need to be acknowledged and made clear upfront.

Table 7 displays the findings from the final qualitative question requesting SNDs to describe the most important aspects that would attract them to participate in WBT. A structured probe regarding their desire to earn continuing education and/or college credit as a result of participating in WBT was also integrated with this question.

Table 7

Most Important Aspects of Web-Based Training Offerings (n=42)

Theme	*Count Orientation Attendees (n=21)*	*Count Non-orientation Attendees (n=21)*	*Supporting Comments*
Topic area/type of information	3	12	• Topic areas must be of interest to me • I would want to know that it is the latest information I need to follow
Convenient/time efficient /flexible	6	7	• Keep it brief • Being able to access it at any time
User-friendly	4	7	• I have to be able to navigate easily • High quality; needs to be field tested and needs to work; needs to be highly structured and organized; need to be very specific, do this 1,2,3, not a lot of flowery information; should be user friendly;
Access to an instructor	5	1	• Availability of an instructor; option to click for comments to instructor or to schedule a phone conference
Cost	2	2	• Cost, it has to be affordable

The most important aspect reported is that the topics available through WBT must be of interest. Based on this finding, it is critical that SNDs are given the opportunity to prioritize topic areas of interest. They were given the opportunity to do this in the quantitative phase of this research and the results are in the following section. Organizations must consider the topic areas of interest to SNDs if they expect to appeal to their WBT needs.

School nutrition directors also reported that the WBT should be convenient, flexible, user-friendly, and affordable. It will be important to involve SNDs in all phases of the development and field testing of the WBT, to ensure the issues of flexibility and user-friendliness are appropriately addressed. The concern of cost is an extremely important issue and needs to be examined in more detail.

The issue of offering continuing education or college credits to SNDs for WBT courses produced a wide variety of responses. Of all 42 SNDs, nine (21%) SNDs reported interest in only

continuing education credit, five (12%) reported interest in only college credit, 14 (33%) reported interest in both continuing education and college credit, and 13 (31%) reported no interest in either continuing education or college credit. Since there is not a designated education level or common continuing education requirement for SNDs, this finding is not unexpected. However, this does present challenges for trying to appeal to a wide audience base. There are large logistical and financial differences of offering on-line course for continuing education credit, versus college credit, versus no credit. This is an issue that also deserves further investigation.

Quantitative Functional Area Survey Results

Of the 42 SNDs participating in the qualitative phase, 34 (81%) returned the Functional Area Survey. As illustrated in Table 8, responses for the question "Does your job require you to perform in the functional area" ranged from a high of 100% confirming that their job required them to perform in Functional Area #2: Sanitation, Food Safety & Employee Safety, to a low of 74% confirming that their job required them to perform in Functional Area #14: Nutrition Education.

Table 8

Required Performance in 14 Functional Areas (n=34)

	Number (%) of SNDs confirming they are required to perform in each functional area
Functional Area #2: Sanitation, Food Safety & Employee Safety	34 (100)
Functional Area #3: Financial Management & Record Keeping	32 (94)
Functional Area #6: Program Accountability	31 (91)
Functional Area #9: Personnel Management	31 (91)
Functional Area #1: Customer Service	30 (88)
Functional Area #5: Procurement	30 (88)
Functional Area #7: Nutrition & Menu Planning	30 (88)
Functional Area #8: General Management	30 (88)
Functional Area #12: Marketing	28 (82)
Functional Area #10: Facility Layout and Design & Equipment Selection	27 (79)
Functional Area #13: Computer Technology	27 (79)
Functional Area #4: Food Production	26 (76)
Functional Area #11: Environmental Management	26 (76)
Functional Area #14: Nutrition Education	26 (76)

There appears to be three natural cluster areas. The top four functional areas, those with greater than 90% of SNDs reporting required performance, are the daily competencies needed to build a foundation of integrity and accountability in school nutrition programs. Whereas the bottom five functional areas, those with less than 80% of SNDs reporting required performance, may be considered activities SNDs may not actively participate in on a regular basis. School nutrition directors are undoubtedly responsible for an overwhelming amount of information.

Overall, these findings help confirm and prioritize which functional areas should be developed into a WBT format to have the greatest impact and appeal.

Figure 1 illustrates how SNDs rated their knowledge (1=poor, 5=very good), skill (1=poor, 5=very good), and satisfaction in performance (1=very dissatisfied, 5=very satisfied) for each functional area.

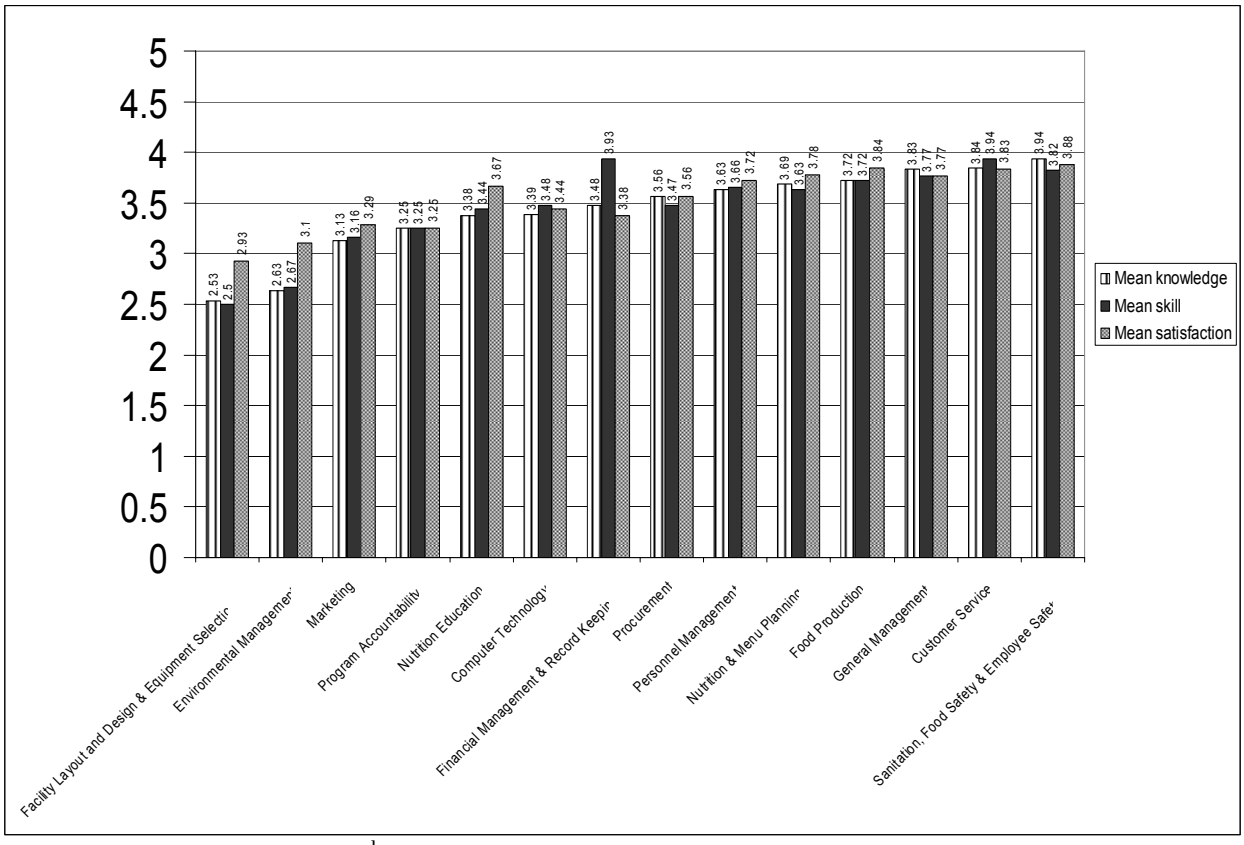

Figure 1: Knowledge[a], Skill[b], and Satisfaction[c] Rating in 14 Functional Areas (n=34)

[a]knowledge (1=poor, 5=very good)
[b]skill (1=poor, 5=very good)
[c]satisfaction (1=very dissatisfied, 5=very satisfied)

In general, within each functional area SNDs rated their knowledge and skills similarly, and the higher the rating for knowledge and skill was reflected in a more positive satisfaction in job performance. The SNDs were also asked to identify all the forms of continuing education they had received in the each functional area. The results are displayed in Table 9.

Table 9

Reported Forms of Continuing Education for 14 Functional Areas (n=34)

	Meeting/ Conference	*Publication /Article*	*Academic Course work*	*Web-based Training/ Online Course*	*Other*	*None*
Functional Area #1: Customer Service	24	18	15	4	1	6
Functional Area #2: Sanitation, Food Safety & Employee Safety	26	24	19	6	7	2
Functional Area #3: Financial Management & Record Keeping	22	12	16	2	8	4
Functional Area #4: Food Production	20	17	12	1	6	5
Functional Area #5: Procurement	24	16	12	2	4	3
Functional Area #6: Program Accountability	25	17	7	3	4	5
Functional Area #7: Nutrition & Menu Planning	25	17	17	4	4	4
Functional Area #8: General Management	18	16	17	3	3	6
Functional Area #9: Personnel Management	22	16	18	3	3	6
Functional Area #10: Facility Layout and Design & Equipment Selection	14	6	8	1	3	9
Functional Area #11: Environmental Management	12	9	5	0	0	15
Functional Area #12: Marketing	19	14	17	1	2	7
Functional Area #13: Computer Technology	15	11	14	5	2	6
Functional Area #14: Nutrition Education	23	15	9	3	0	3
Total	**289**	**208**	**186**	**38**	**47**	**81**

As illustrated in Table 9, for all 14 functional areas, the most widely reported forms of continuing education reported were meetings/conferences/pre-conferences (n=289), professional development publication/article (n=208), and academic course work (n=186). The fact that Web-based training/online course/distance education (n=38) was the least reported form of continuing education supports previous findings that WBT is not routinely utilized among school nutrition program professionals (Conklin et al., 2005; Nettles & Carr, 2007; Sullivan et al., 2002). It is interesting to note that participation in WBT is very low, despite our findings suggesting an extremely high interest in WBT. As previously discussed, these finding may suggest that low participation in WBT is not due to a lack of interest, but rather a result of lack of availability.

When asked to rate their interest in participating in WBT to improve knowledge and skill in each functional area (1=very disinterested , 5=very interested), Figure 2 illustrates that overall SNDs indicated they were somewhat interested (4) to very interested (5) in the majority of functional areas.

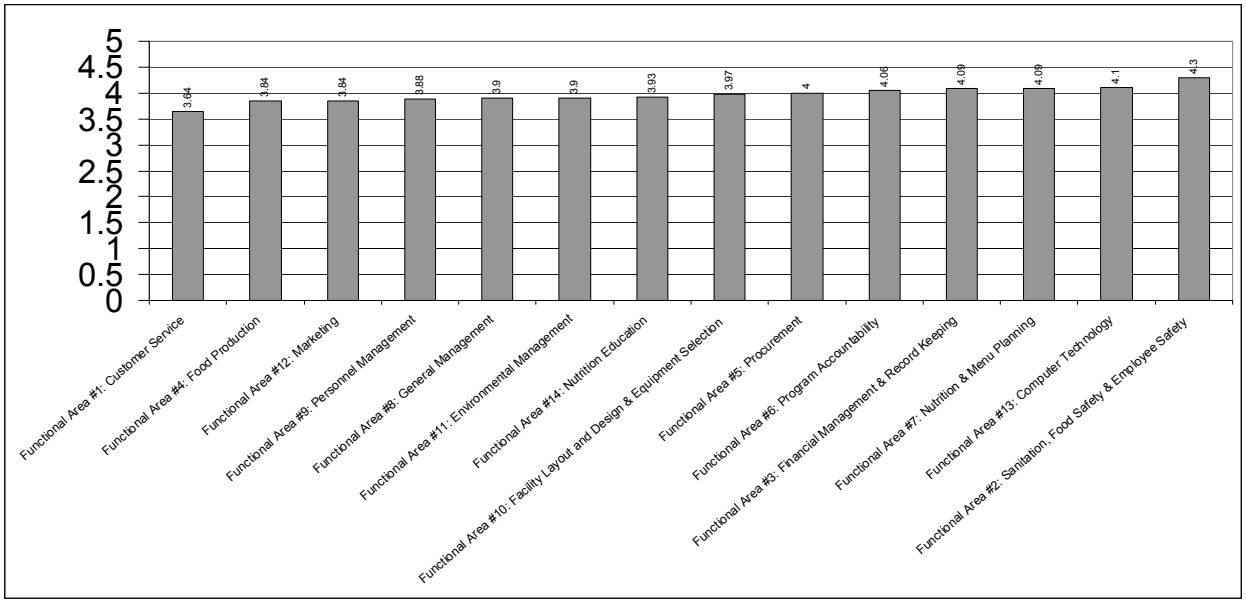

Figure 2: Interest Rating[a] for Participating in Web-Based Training in 14 Functional Areas (n=34)

[a]interest (1=very disinterested , 5=very interested)

In addition to rating each individual functional area, SNDs were asked to rank the top 5 functional areas they were most interested in participating in WBT. In order starting with the highest ranking, the top five functional areas were: (1) Financial Management & Record Keeping, (2) Nutrition & Menu Planning, (3) Sanitation, Food Safety & Employee Safety, (4) Nutrition Education, and (5) Program Accountability. In summary, when comparing the rating and ranking questions, the following four functional areas received the highest priority on both questions: (1) Sanitation, Food Safety & Employee Safety, (2) Financial Management & Record Keeping, (3) Nutrition & Menu Planning, and (4) Program Accountability.

CONCLUSIONS AND RECOMMENDATIONS

Limitations

Although the sampling methodologies were appropriate for this exploratory needs assessment, the small sample somewhat limits generalizability. This research targeted SNDs with less than five years of director experience, residing in only six states. Although interest in WBT was extremely high in this sample, it is important to note that a younger generation of SNDs was targeted. It is important to confirm these findings in a larger more representative sample of SNDs.

Research Study Conclusions

The overall results of this needs assessment indicate that WBT has the potential of being a viable delivery method for providing timely training that keeps SNDs informed, engaged, and involved. This research reveals that the majority of SNDs have the technology infrastructure, including access to computers at both work and home, needed to support WBT. There was an overwhelming positive response regarding interest in WBT for both acquiring new knowledge and for practice activities. The overall perceived benefits count far surpassed the perceived barriers. Based on these findings, it appears that the majority of SNDs would take full advantage of WBT educational offerings.

Although historically SNDs' participation in WBT has been low, these research findings imply that involvement and preference for WBT may be in part due to lack of availability and resulting exposure. With the development of new technologies, the greater demands on SNDs to develop and maintain competencies, and the impending generation of many younger SNDs, WBT learning technologies appear to have a definite role in the future training of SNDs.

School nutrition directors lack time and need convenient and efficient training options. They want to grow their professional knowledge base, need to have ready updates at their fingertips, and want the opportunity to review the material again and again. Although WBT has the capability of addressing the major education and training barriers facing SNDs, their participation in WBT will result in additional time and resource demands. Therefore, the WBT needs to be user-friendly, flexible, affordable, and may need to provide the opportunity to earn continuing education and/or college credits.

A variety of interactive approaches can be incorporated to deliver the training, assess competencies, and capture learning outcomes. However, there is a continuing need to involve SNDs in the field testing of WBT to ensure the illustrated concepts are easily understood and that the activities and perceived as applicable. As the potential to integrate WBT into current educational offerings is further investigated, it is important to begin WBT module development with the functional areas as prioritized by SNDs and address the perceived benefits and barriers during the development, field testing, and marketing of WBT modules.

Education and Training Implications

Listed below are the education and training implications derived from this needs assessment

- Social interaction:
    - The WBT should promote two-way interactions between instructors and SNDs, and among the SNDs.
    - In order to prevent feelings of isolation, the WBT instructors should be adequately trained to create a sense of community among the SNDs.
    - The SNDs need timely feedback to their questions generated through the WBT.

- Technology support:
    - A help desk function needs to be established and function efficiently to deal with potential technology problems.
    - An on-line tutorial should be available to assist new users in navigating the Web-interface features.
- Relevant topics:
    - The topics offered must be of interest to the SNDs and be viewed as high priority areas with up-to-date information.
    - Based on the findings of this needs assessment the four functional areas with the highest priority ratings and rankings include (1) Sanitation, Food Safety & Employee Safety, (2) Financial Management & Record Keeping, (3) Nutrition & Menu Planning, and (4) Program Accountability.
- WBT modules features:
    - The SNDs need the ability to customize the WBT modules to meet their needs. They need to be able to skip familiar areas and spend more time with unfamiliar areas so they can enjoy a useful and self-directed online learning experience.
    - The WBT learning opportunities need to be asynchronous. The SNDs are extremely busy and have a multitude of interruptions throughout the day. They need the option to stop or pause the WBT modules at any time and need around the clock access to the training so that the training can be completed during non-working hours. Aspects such as live teleconferencing or live chats may not be the best options.

  - The SNDs desire to access and review the materials over and over again. Therefore even after the training is completed, access to the WBT modules should be granted for an extended or perhaps indefinite time period.
  - All WBT activities need built in features to encourage and assure SNDs they are completing the activities correctly.
- Development and field testing of modules:
  - The SNDs value their time and learning experience. The SNDs need to be involved in the development and testing of WBT modules, to assure the training is viewed as straight-forward and applicable.
- Logistics:
  - The financial cost of training is of concern among SNDs and needs to be carefully considered when offering WBT.
  - Continuing education credits and/or college credits interest some, but not all SNDs. In order to appeal to the diverse education levels of SNDs, several options of educational credit may need to be offered.

Recommendations for Additional Research

This project lays the foundation for a multitude of additional research related to future WBT opportunities for SNDs. First, the findings of this small pilot test should be expanded upon in a more representative sample of SNDs. Although this study clearly identifies SNDs interest and perceived barriers and benefits related to WBT, a larger more representative sample of SNDs are needed to: 1) prioritize Web-based training (WBT) functional areas, and 2) identify the logistical issues of developing and delivering WBT learning modules including the estimated amount of time SNDs are willing to devote to a module, the cost range willing to pay, the types

of educational credit desired, and others. Two important variables to examine in this representative sample are response variations among SNDs of different generations and varying school district size. The findings from this additional research will ensure the information gained can serve as an integral part of any future attempts of NFSMI to develop and deliver WBT modules.

Once the functional areas have been prioritized and some of the logistical issues have been examined, WBT modules will need to be developed and field tested. Of particular importance is to assure that SNDs perceive the modules as user-friendly, timely, and applicable to their job. Additionally, mechanisms for assessing and tracking learning outcomes need to be established through the field testing. Following completion of WBT modules, it will be important to request feedback from the SNDs to determine effectiveness of the course activities, assignments and instructor. As the WBT modules become utilized more broadly, future research is also needed to assess differences between the knowledge and skills acquired through WBT versus more traditional educational settings. The cost-effectiveness of WBT modules is an important area that may also warrant further investigation.

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Appendix A

Human Subjects Review/Institutional Review Board

Exploring the use of Web-Based Training for School Nutrition Program Directors/Supervisors/Coordinators

Project Goals:
The purpose of this research is to explore school nutrition directors, supervisors or coordinators (SND) need and interest in utilizing interactive multimedia (IMM) technology and Web-based training (WBT). The differences in response between directors who completed the National Food Service Management Institute (NFSMI) 5-day orientation and new directors who have not completed the National Food Service Management Institute (NFSMI) 5-day orientation will be examined.

Protocol:
This research will involve approximately 40-50 SND including about 20-25 SND directors who participated in the 5-day NFSMI orientation during 2004-2006 and 20-25 SND directors who have not participate in the NFSMI orientation. Inclusion criteria include a job title of school nutrition director, supervisor or coordinator and less than five years of experience in the position. The research protocol involves a 15-20 minute in-depth/structured telephone interview followed by a brief 10-minute written survey. The purpose of the phone call is to explore the technology infrastructure of SND's place of employment and home and study the perceived benefits and barriers of utilizing WBT to meet job competencies. The purpose of the written survey is to investigate the SND's knowledge, satisfaction, and interest in utilizing WBT related to 14 previously established functional areas for SND.

A list of all SND who participated in the 5-day NFSMI orientation during 2004-2006 has been obtained from NFSMI. The NFSMI 5-day orientation targets new and aspiring SND, therefore the majority of SND will have less than 5 years of experience. A random sample of 35 SND will be generated, this over sampling accounts for those who may not meet the eligibility criteria or may be unwilling to participate. Approximately 90% of SND's participating in the 5-day orientation during 2004-2006 resided in six states including Mississippi, Michigan, Louisiana, Indiana, Florida, and Colorado. Therefore, new SND directors who have not participate in the NFSMI orientation will also be sampled from these states. Dr. Deborah Carr, Director of NFSMI's Applied Research Division, will contact the state agency in each of the six states requesting a contact list of school nutrition directors, supervisors or coordinators with less than five years of experience. If an adequate sample cannot be achieved from these six states Dr. Carr will conveniently contact additional state agencies. The list will be cross-referenced with the orientation attendance list to eliminate SND attending the 5-day NFSMI orientation during. The resulting list will be used to generate a random sample of 35 new SND directors who have not participate in the NFSMI orientation.

The SND will initially be contacted via mail with a letter explaining the purpose of the research and informed consent including voluntary participation and confidentiality (see attached letter). The letter will include a NFSMI-addressed stamped envelope and two handouts including 1) Consent to Participate Form, and 2) Functional Area survey. Approximately 5-7 days after the letter has been mailed, the researchers will contact the participants via telephone. After oral informed consent is obtained and eligibility inclusion has been confirmed, study participants will be asked a series of in-depth/structured interview questions (see attached survey). After the

telephone survey, participants will be asked to complete the Functional Area written survey and return it in an enclosed NFSMI-addressed stamped envelope.

Benefits:
The information gained from the surveys may be used to develop interactive multimedia technology (IMM) and Web-based training (WBT) opportunities for SND.

Risks:
There is no risk associated with participation in this study. There are no sensitive questions that will be asked as part of the telephone interviews. The only inconvenience will be the time it takes to complete the interview. Only researchers will have access to the surveys. The surveys will be maintained in a locked file cabinet in the researcher's office. Surveys will be maintained for three years after publications of manuscripts, and then will be shredded and discarded.

Informed Consent:
The researchers are requesting a waiver of the requirement to obtain signed consent forms. Oral informed consent will be obtained over the telephone using the attached consent to participate form. Completion of the telephone interview and Functional Area survey will serve as consent. All participants will be reminded that the participation in the research is completely voluntary. Contact information for the Human Subjects Protection Review Committee will be provided for questions/concerns.

Appendix B

Expert Reviewer Questionnaire

Expert Reviewer Questionnaire

1. Does the survey contain language that can be understood by school nutrition directors, supervisors or coordinators (SND)?

2. Does the survey content address specific and appropriate issues related to the research objectives described in the email?

3. Are there any statements that you would exclude from the survey?

4. Are there any other statements that you would include that are not a part of the survey?

5. Is the survey layout clear and easily understood?

6. Do you have any other comments or suggestions about the survey?

Appendix C

Initial Contact Letter and Consent to Participate Form

Date

Dear_____,

The National Food Service Management Institute (NFSMI)/Applied Research Division is conducting an important research project targeting school nutrition directors/supervisors/ coordinators. NFSMI offers a variety of educational opportunities through conferences, workshops, and satellite seminars. To help meet your professional development needs, NFSMI is exploring the potential use of Internet and Web-based training to provide additional educational and training opportunities.

We are requesting your participation in a telephone interview to explore your opinions, needs, and interests in utilizing Web-based training. Within the next week, you will be contacted to participate in this telephone interview. Your participation is critical to the success of this project. This telephone interview should take about 15-20 minutes. During the phone call, you will be asked questions regarding your access and use of computers, your opinions regarding your current job responsibilities and available training opportunities, and your beliefs regarding Web-based training. After the telephone interview, you will be asked to complete the enclosed Handout B survey and return in the enclosed envelope. The information gained from these interviews may be used to develop Web-based training opportunities for school nutrition directors/supervisors/coordinators.

Enclosed in this packet you find two important handouts.

1 **Handout A: Consent to Participate.** I will obtain your informed consent and answer any of your questions regarding the research before asking the interview questions.
2 **Handout B: Functional Area Survey.** At the time of my call I'll talk to you about this survey. You may take some time to look over it, but please do not complete until after our conversation. This written survey should take about 15-20 minutes to complete.

Please know I will be contacting you on the phone in the next week and look forward to speaking with you!

Jamie Zoellner, PhD, RD
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The National Food Service Management Institute
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Director, Applied Research Division
The National Food Service Management Institute
601-266-5773
Deborah.Carr@usm.edu

HANDOUT A: CONSENT TO PARTICIPATE

The purpose of this research is to explore school nutrition directors/supervisors' need and interest in utilizing Web-based training (WBT). It is estimated that this telephone interview will take about 15-20 minutes and the written survey will take about 15-20 minutes. You will be asked to answer a series of questions to explore your access and use of computers, your opinions regarding your current job responsibilities and available training opportunities, and your beliefs regarding Web-based training. Your personal information and answers to questions will not be disclosed to anyone. All information will be compiled, with only trends to the answers being reported. Participation in this research is completely voluntary, and you may stop answering questions at anytime. Only researchers will have access to the surveys. The surveys will be maintained in a locked file cabinet in the researcher's office. Surveys will be maintained for three years after publications of manuscripts, and then will be shredded and discarded.

There are no potential risks to you for participating in the study. A benefit to your participation is that the information provided may help the National Food Service Management Institute (NFSMI) gain a better understanding of the issues associated with using Web-based training for school nutrition directors/supervisors. This project has been reviewed by the Human Subjects Protection Review Committee, which ensures the 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, Box 5147, Hattiesburg, MS 39406 (601-266-6820). Any questions about the research should be directed to me the researcher.

We appreciate you taking time to complete the survey.

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Appendix D

Qualitative Structured-Interview Questionnaire

Check one: □ 5-day NFSMI training
□ NO 5-day NFSMI training
Date survey mailed:_____
Record phone call attempts:
_____
_____
_____
_____

Stick ID label here

Web-Based Training Survey for School Nutrition Program Directors

Hi _____,
My name is Jamie Zoellner. I am a researcher with the National Food Service Management Institute (NFSMI), Applied Research Division (ARD), at the University of Southern Mississippi. I sent you a letter about one week ago requesting your participation in a 20-30 minute telephone survey to explore your opinions regarding Web-based training.

1. Did you receive the letter?

____ Yes

Great! Do you have any questions about the letter? [Respond appropriately] This survey should take about 20-30 minutes. Is now a good time to complete the interview, or do you prefer me to call back at a more convenient time in the next few days?

____ Refusal to participate, reason if given_____
____ Now is a good time [Confirm they have supplementary survey material available][Go to #2, obtain oral informed consent]
____ Call back later [Record date & time to call back]:

_____

Before I begin I need to confirm your position title.

1a. What is your current position title?

1b. How long have you been in your current position?

1c. NFSMI offers a 5-day orientation for CNP directors.

□I have records of you attend this training on _____. Is this correct?
____ Yes
____ No, explain_____

OR

□I do not have any record of you attending this training, is this correct?
____ Yes
____ No, explain_____

____ No

Okay, that's no problem! Let me explain why I am calling you. Presently, NFSMI offers educational opportunities through conferences, workshops, specialized training, and satellite seminars/teleconferences. However, NFSMI recognizes that not all school nutrition program directors/supervisors are able to take full advantage of these educational offerings. Therefore NFSMI is exploring the potential of using the Internet and Web-based technology to provide additional training opportunities. I am conducting research which includes a 30-minute telephone interview to explore school nutrition program directors'/supervisors' opinions, needs and interests in utilizing Web-based training.

If you are willing to participate I could mail, fax or email you the survey material today and call back at a time convenient for you in the next few days.

____ Refusal to participate
____ Agree to participate
[Confirm eligibility]
[Record contact information ie. Fax, mail or email]:

[Record date & time to call back]:

2. Before I begin the survey I also need to obtain oral informed consent. Do you have any questions about **Handout A: Consent to Participate**? [Respond appropriately]

____ Agree to participate
____ Refusal to participate

Thank you for agreeing to participate, we're ready to begin. I want to begin by asking you a few questions about your access and use of computers at home and at work.

3. Do you have access to a computer at work?
   ____ Yes [GO TO QUESTION 3a]
   ____ No [SKIP TO QUESTION 4]

   3a. Do you have your own computer at work?
   ____ Yes
   ____ No

4. Do you have the Internet at work?
   ____ Yes
   ____ No

5. Approximately how many hours **each week** do you spend on the computer at work?
   _____ 0 hours
   _____ 1-5 hours
   _____ 6-10 hours
   _____ 11-15 hours
   _____ 16-20 hours
   _____ 21-25 hours
   _____ 26-30 hours
   _____ > 30 hours

6. Do you have a computer in your home?
   ____ Yes
   ____ No

7. Do you have the Internet in your home?
   ____ Yes
   ____ No

8. Approximately how many hours **each week** do you spend on the computer at home?
   _____ 0 hours
   _____ 1-5 hours
   _____ 6-10 hours
   _____ 11-15 hours
   _____ 16-20 hours
   _____ 21-25 hours
   _____ 26-30 hours
   _____ > 30 hours

9. What is the highest level of education you have completed? (check only one)

_____(a) Less than high school
_____(b) Some high school
_____(c) High school graduate or GED
_____(d) Some college or specialized training
_____(e) 2-year college graduate, specify degree_____
_____(f) 4-year college graduate, specify degree _____
_____(g) Some graduate school, specify undergraduate degree_____
_____(h) Graduate degree, specify degree _____

10. What is the approximate student enrollment of your school district? (check only one)

_____(a) 2,799 or less enrollment
_____(b) 2,800 to 9,999 enrollment
_____(c) 10,000 to 19,000 enrollment
_____(d) 20,000 to 44,999 enrollment
_____(e) 45,000 to 64,999 enrollment
_____(f) 65,000 or greater enrollment

Before we move on, let me describe what I mean when I say "computer or Web-based training." Web-based training (WBT): a form of computer based education or training delivered over the Internet or other network. WBT can consist of a wide variety of alternatives including one or any combination of the following:

a) links to data such as Web pages, documents (Microsoft Word, PowerPoint presentations, PDF, etc.), or audio and video files
b) interactive methods such as bulletin boards, chat rooms, and instant messaging
c) the use of an instructor or facilitator
d) completion of assignments to earn credit towards a professional certificate or degree

11. Have ever participated in or completed any previous WBT.

____ No[SKIP TO QUESTION 12]
____ Yes[GO TO QUESTION 11a]

a. Please explain the WBT you have participated in (probe for a-d above).

b. What did you like about the WBT?

c. What did you dislike about the WBT?

Now I am going to discuss 2 different learning need scenarios to further explore your opinions of WBT.

12. In the first scenario, think of a situation in which there is a there is a regulation that you are required to implement or competency you are required to meet. You have had no or little education/training on this regulation or competency.

    a. Would you be willing to receive computer-based training regarding this regulation or competency which you have no or little previous knowledge about?

    b. In your opinion, what are the benefits of completing Internet-based training in this scenario?

    c. What are the barriers of completing Internet-based training in this scenario?

13. In the second scenario, think of a situation in which you have received education on a regulation and competency, and feel comfortable in your ability to meet the competency. However, you want to practice activities to further improve your skills.

    a. Would you be willing to receive computer-based training regarding this regulation or competency which you already feel comfortable with but want to further improve your skills?

b. In your opinion, what are the benefits of completing Internet-based training in this scenario?

c. What are the barriers of completing Internet-based training in this scenario?

Now I only have two more questions left.

14. As a SNP director, you have a diverse list of job duties and responsibilities. What is the biggest barrier you have in trying to stay informed and educated in so many diverse areas?

15. If NFSMI developed WBT, what are the most important aspects that would attract you to participating?

This concludes my questions for the telephone survey. I want to spend a few minutes to discuss Handout B: The Functional Area Survey. As a SNP director/supervisor/coordinator, you have a diverse list of job responsibilities. NFSMI has identified 14 functional areas for SNP Directors. The purpose of the functional area survey is to explore school nutrition directors', supervisors', or coordinators' (SND) perceived knowledge, skill, training, and interest in utilizing Web-based training (WBT) within 14 functional areas. This survey should take about 15-20 minutes to complete. I would appreciate it, if you could please return the completed survey in the envelope provided.

Appendix E

Quantitative Functional Area Survey
(Landscape version scanned for report)

HANDOUT B: FUNCTIONAL AREA SURVEY

PURPOSE OF THIS SURVEY:

- The purpose of this survey is to explore school nutrition directors', supervisors' or coordinators' (SND) perceived knowledge, skill, training, and interest in utilizing web-based training (WBT) within 14 functional areas.

TERMS AND DEFINITIONS USED IN THIS SURVEY:

- **Web-based training (WBT):** a form of computer based education or training delivered over the Internet or other network. WBT can consist of a wide variety of alternatives including **one or any combination of the following**:
  - links to data such as Web pages, documents (Microsoft Word, PowerPoint presentations, PDF, etc.), or audio and video files
  - interactive methods such as bulletin boards, chat rooms, and instant messaging
  - the use of an instructor or facilitator
  - completion of assignments to earn credit towards a professional certificate or degree
- **Functional areas**: the broad groupings or categories of similar tasks that reflect job duties performed by school nutrition directors, supervisors, or coordinators within the local school nutrition operation. These categories serve as an umbrella for all tasks that are listed on a work schedule or are done on a daily, weekly, or seasonal basis within the school year.
- **Knowledge**: the information a person has in specific content areas that is necessary for successful performance in a functional area.
- **Skills**: the abilities to perform certain physical and/or mental tasks that are necessary for successful performance in a functional area.

INSTRUCTIONS FOR COMPLETING THIS SURVEY:

- There are 14 functional areas listed in the grey boxes and a **definition** of the functional area.
- Within each functional area, think about your current position and reflect upon your responsibilities, knowledge, skill, training, and interest in utilizing web-based training (WBT).
- **Check the response** to indicate your answer as you complete each section.

Functional Area #1: Customer Service Implements a district-wide customer driven program that focuses on quality standards, value, and customer satisfaction.					
Does your job require you to perform in functional area #1? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #1. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #1. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #1? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #1? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #1? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #2: Sanitation, Food Safety & Employee Safety Establishes policies and procedures for serving and training staff to ensure the safety and sanitation of all foods.					
Does your job require you to perform in functional area #2? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #2. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #2. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #2? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #2? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #2? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #3: Financial Management & Record Keeping Establishes measurable financial goals, while managing the program using appropriate financial techniques that ensure all records and supporting documentation are in accordance with local, state, and federal laws/policies.					
Does your job require you to perform in functional area #3? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #3. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #3. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #3? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #3? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #3? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #4: Food Production Ensures operational procedures for efficient and effective food production, while providing safe nutritious food of high quality.					
Does your job require you to perform in functional area #4? (*check only <u>one</u>*) ___ Yes ___ No	On a scale of 1-5, please rate your **<u>knowledge</u>** in functional area #4. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **<u>skill</u>** in functional area #4. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #4? (*check only <u>one</u>*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #4? (*check <u>all</u> that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #4? (*check only <u>one</u>*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #5: Procurement Implements an effective procurement system with established standards for receiving, storing, and inventory that ensure purchased food and supplies reflect district needs					
Does your job require you to perform in functional area #5? (*check only <u>one</u>*) ___ Yes ___ No	On a scale of 1-5, please rate your **<u>knowledge</u>** in functional area #5. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **<u>skill</u>** in functional area #5. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #5? (*check only <u>one</u>*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #5? (*check <u>all</u> that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #5? (*check only <u>one</u>*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #6: Program Accountability Ensures program compliance with all local, state, and federal laws/policies and provides training to appropriate district/foodservice staff, while providing services during disaster/emergency situations, as needed.					
Does your job require you to perform in functional area #6? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #6. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #6. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #6? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #6? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #6? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #7: Nutrition & Menu Planning Develops menus that maintain nutrition integrity and meet local, state, and federal guidelines/regulations, while assessing customer preferences and trends, including customers with special nutrition needs.					
Does your job require you to perform in functional area #7? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #7. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #7. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #7? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #7? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #7? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #8: General Management Employs management techniques to maintain an effective program and implements policies and procedures that support the philosophy and goals of the local board of education.					
Does your job require you to perform in functional area #8? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #8. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #8. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #8? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #8? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #8? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #9: Personnel Management Implements personnel policies and procedures based on job performance standards for hiring, training, and evaluating of school nutrition personnel.					
Does your job require you to perform in functional area #9? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #9. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #9. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #9? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #9? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #9? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #10: Facility Layout and Design & Equipment Selection Assists with designing and planning of facilities to ensure quality service, production, and workflow, while identifying equipment needs and specifications consistent with program needs and budget.					
Does your job require you to perform in functional area #10? (*check only <u>one</u>*) ___ Yes ___ No	On a scale of 1-5, please rate your **<u>knowledge</u>** in functional area #10. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **<u>skill</u>** in functional area #10. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #10? (*check only <u>one</u>*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #10? (*check <u>all</u> that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #10? (*check only <u>one</u>*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #11: Environmental Management Develops and implements policies and procedures to ensure effective waste management, energy conservation, and environmental safety following local, state and federal codes.					
Does your job require you to perform in functional area #11? (*check only <u>one</u>*) ___ Yes ___ No	On a scale of 1-5, please rate your **<u>knowledge</u>** in functional area #11. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **<u>skill</u>** in functional area #11. (*check only <u>one</u>*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #11? (*check only <u>one</u>*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #11? (*check <u>all</u> that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #11? (*check only <u>one</u>*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #12: Marketing Develops and evaluates a marketing plan to attract customers and effectively communicate program information in support of increasing program participation and awareness.					
Does your job require you to perform in functional area #12? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #12. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #12. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #12? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #12? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #12? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #13: Computer Technology Implements and trains staff on management information systems for enhanced productivity and efficiency of the operation					
Does your job require you to perform in functional area #13? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #13. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #13. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #13? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #13? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #13? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

Functional Area #14: Nutrition Education Develops and implements comprehensive nutrition education programs using the school cafeterias as learning laboratories and provides resources for promoting nutrition education activities throughout the curriculum.					
Does your job require you to perform in functional area #14? (*check only one*) ___ Yes ___ No	On a scale of 1-5, please rate your **knowledge** in functional area #14. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, please rate your **skill** in functional area #14. (*check only one*) ___ (1) Poor ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very good	On a scale of 1-5, how satisfied are you with your ability to perform in functional area #14? (*check only one*) ___ (1) Very dissatisfied ___ (2) Dissatisfied ___ (3) Uncertain ___ (4) Satisfied ___ (5) Very satisfied	What form(s) of training or education have you received in functional area #14? (*check all that apply*) ___ None of these ___ Meeting, conference or preconference ___ Professional development publication/article ___ Web-based training, online course, or distance education ___ Academic course work ___ Other, specify _____ _____	On a scale of 1-5, how interested are you in participating in web-based training (WBT) to improve your knowledge and skill in functional area #14? (*check only one*) ___ (1) Very uninterested ___ (2) Somewhat uninterested ___ (3) Uncertain ___ (4) Somewhat interested ___ (5) Very interested

NFSMI is trying to prioritize the need for developing web-based training (WBT) aimed at enhancing the knowledge and skills of school nutrition directors, supervisors and coordinators in each functional area. Of all the functional areas, please rank the top 5 that you are most interested in participating in WBT to improve your knowledge and skills.

Rank <u>your top 5 choices (1 through 5)</u> for WBT, with 1 = functional area you **most interest** in participating in WBT.

|_____| Functional Area #1: Customer Service
|_____| Functional Area #2: Sanitation, Food Safety & Employee Safety
|_____| Functional Area #3: Financial Management & Record Keeping
|_____| Functional Area #4: Food Production
|_____| Functional Area #5: Procurement
|_____| Functional Area #6: Program Accountability
|_____| Functional Area #7: Nutrition & Menu Planning
|_____| Functional Area #8: General Management
|_____| Functional Area #9: Personnel Management
|_____| Functional Area #10: Facility Layout and Design & Equipment Selection
|_____| Functional Area #11: Environmental Management
|_____| Functional Area #12: Marketing
|_____| Functional Area #13: Computer Technology
|_____| Functional Area #14: Nutrition Education

Thank you for assisting us in this research study!

Please return the completed survey in the envelope provided.

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Appendix F

Reminder Letter

Dear_____,

We wanted to thank you for participating in the telephone interview regarding Web-based training conducted by the Applied Research Division of the National Food Service Management Institute (NFSMI). The insight you provided will be extremely useful as we consider developing Web-based training opportunities for school nutrition directors/supervisors/coordinators.

If you have not already filled out and mailed **Handout B: Functional Area Survey** (provided in the original packet mailed to you), please take a few more minutes to help us by completing this important component of the project. If you have already mailed Handout B, please disregard this request and we thank you again!

Sincerely,

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