

# GY2022 Rapid Response Survey #3: Determining the Training Needs of Child Nutrition Professionals

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## OVERVIEW

In 2012, the U.S. Department of Agriculture (USDA) finalized updated nutrition standards for school meals. In 2015, the USDA established minimum professional standards for school nutrition personnel who manage and operate meal programs to support the updated nutrition standards. These standards require all school nutrition program staff to complete annual continuing education and training courses (USDA, 2023). In 2016, the USDA updated the meal pattern standards for the Child and Adult Care Food Program (CACFP). However, unlike school nutrition, the USDA did not establish minimum professional standards for CACFP personnel to support the updated nutrition standards (Chriqui et al., 2020).

Although the USDA did not establish minimum professional standards for CACFP personnel to support the updated nutrition standards, both require child nutrition professionals in schools and CACFPs to receive training to comply with the updated meal pattern standards accurately and effectively. But what are the specific training needs, and how do they vary based on the type of child nutrition program (school vs. CACFP) and position type (management vs. staff)?

The objectives of this study are:

1. To identify the training topics that are most needed by child nutrition professionals based on operation type (school nutrition and CACFP) and position title (staff and management) over the next two years; and
2. To determine the ideal training modes (i.e., self-paced, live virtual, and in-person live) for child nutrition professionals to receive specific training topics.

## METHODS

The population of interest for the study includes a nationally representative sample of school nutrition professionals (district-level school nutrition director or supervisor, site-level school nutrition manager, and school nutrition staff/worker) and CACFP professionals (CACFP director or supervisor and CACFP provider).

The sampling framework included child nutrition professionals: (a) listed in the Institute of Child Nutrition's (ICN) database of contacts; (b) working in public and nonprofit private schools; (c) working in all seven USDA regions (Mid-Atlantic, Midwest, Mountain Plains, Northeast, Southeast, Southwest, and Western); (d) from school districts of various enrollment sizes (small, medium, and large) and CACFP professionals from a variety of program classifications (independent center, sponsoring organization, and provider) program types (family childcare home, childcare center, HeadStart/Early HeadStart, at risk after school program, emergency shelter, and adult day care center) and position titles (CACFP director or supervisor and CACFP provider).

This study consisted of two phases: Phase I focused on survey development and included a literature review, the development of a draft survey (based on the literature review), and an expert review panel to evaluate the draft survey. Phase II included the pilot of the draft survey and data collection and analysis utilizing the finalized survey.

Researchers conducted a literature review in The University of Southern Mississippi's online library in Phase I. Within that system, the researcher accessed the EBSCOhost platform, selected all databases, and utilized the following filters: 2017 to present, peer-reviewed academic journals, and English language.

Some of the keywords used in the search included school nutrition staff, training needs, and professional development. Other resources utilized in the development of the draft survey included—Managing Child Nutrition Programs: Leadership for Excellence (Martin & Oakley, 2008); Keys to Excellence: Standards of Practice for Nutrition Integrity (School Nutrition Association, 2019); and the Institute of Child Nutrition’s Competency Knowledge and Skills series for school nutrition professionals (Lewis & Lartey, 2018; Rushing & Rainville, 2022; and Nettles, Carr and Asperin, 2009). The initial draft of the survey was developed with the assistance of two culinary professionals at the ICN’s Culinary Institute of Child Nutrition, Chef Partick Garmong, Associate Director, and Chef Garrett Berdan, Education and Training Specialist.

The initial survey, which was created as a Word document, included a consent form, three multiple choice demographic questions (school district student enrollment size [for school personnel only], state where the Child Nutrition Program is located, and respondent job title) and two matrix-style questions based on respondents’ selection to the job title question. The five job title choices were as follows: District-level school nutrition supervisor or director, site-level school nutrition manager, school nutrition assistant/technician (the foodservice employees who work at the local school cafeteria under the direction of a school nutrition manager), child care provider in a

CACFP, and other.

If a respondent selected “other” as a job title choice, they were directed to the end of the survey. Each set of matrix questions incorporated the functional areas as topic areas from the ICN competency, knowledge, and skills series, each of which corresponds to a job title choice (Lewis & Lartey, 2018; Rushing & Rainville, 2022; Nettles et al., 2009). In each matrix question set, respondents were asked to “rate your current level of need to receive training on each topic area” with the following answer choices: no need, low level of need, moderate level of need, high level of need. With the second matrix question in each set, respondents were asked to “indicate the ideal mode to receive training on each topic area,” and the answer choices were in-person, virtual, live, self-paced, online, and not applicable.

Next, an expert review panel of subject matter experts was solicited via email to evaluate the survey. The email included a consent form, a copy of the survey, and a guided review form. Participants were asked to complete and return the guided review form via email. Table 1 provides an overview of the individuals who were invited and of those who participated in the expert review panel. A total of 145 individuals were emailed invitations, 38 of the emails were returned as undeliverable, and 28 participated for a participation rate of 26.2% ( $N = 145 - 38 = 107$ ,  $n = 28 \div 107 = .2616$ ).

**Table 1**

*Statement from Participants Who Chose “Other” (n=4)*

Participant Titles	Number Invited	Number That Participated
State Agency child nutrition/school nutrition staff and directors from each State agency in the United States. (Those invited were in ICN’s current State agency contact database. If they were a member of ICN’s advisory board, they were counted with that group below.)	98	13
ICN Training and Education Specialist and Multi-Media Specialists. (The directors provided this list for each department based on individual experience/expertise.)	25	6
ICN’s advisory board. (These are child nutrition professionals that work in multiple areas/ settings such as USDA regional offices, State agencies, district-level school nutrition programs, CACFPs, non-profit agencies that support child nutrition programs, etc.)	21	8
A representative from the USDA, Food and Nutrition Service (FNS), Nutrition, Education, Training and Technical Assistance Division (NETTA). (This division is responsible for managing the ICN Applied Research Division [ARD] grant.)	1	1
<b>TOTAL</b>	<b>145</b>	<b>28</b>

Based on input from the expert review panel, major revisions were made to the draft survey. The survey was entered into Qualtrics and sent out to invitees via email with a survey link. The number of possible responses to the demographic question pertaining to job title increased from five to seven. Those job title choices were as follows: 1) District-Level School Nutrition Director or Supervisor, 2) Site-Level School Nutrition Manager, 3) School Nutrition, Other (please specify), 4) School Nutrition Staff/Worker, 5) CACFP Provider, 6) CACFP, Other (please specify), and 7) CACFP Director or Supervisor.

The matrix questions were converted to a “pick-group” format in Qualtrics that allows respondents to identify topic areas that they felt there was a high need to receive training within the next two years and select one of three training modes (self-paced, online, live virtual [meaning online in real time], and in-person live) that they felt would be ideal for them to receive training on that topic area. This change was made for multiple reasons. First, review panel participants felt the matrix questions were too cumbersome and would not generate sincere responses. The pick-group provided an alternative that would gather similar data but in a more concise, up-to-date manner with a more innovative activity for respondents. The topic areas in the pick-group questions were changed from ICN’s function areas identified as the Knowledge Competency and Skills series (Lewis & Lartey, 2018; Rushing & Rainville, 2022; and Nettles, Carr and Asperin, 2009) to the USDA’s list of suggested job-specific training topics found in the *Guide to Professional Standards for School Nutrition Programs* resource (USDA, 2020). Each pick-group question offered a listing of job-specific topic areas based on one of the following three job title categories: 1) school nutrition management, 2) school nutrition assistants/technicians, and 3) CACFP professionals.

Skip-logic steered respondents to the appropriate category of pick-group questions based on how they answered a job title question. Respondents who selected district-level school nutrition director or supervisor, site-level school nutrition manager, or school nutrition other when responding to the job title question were directed to the “school nutrition management” topic area question. Respondents who selected school nutrition staff/worker on the job title question were directed to the “school nutrition assistants/technicians” topic area question. Respondents who selected CACFP (director/ supervisor, provider, or other) on the job title question were directed to the “CACFP professionals” topic question.

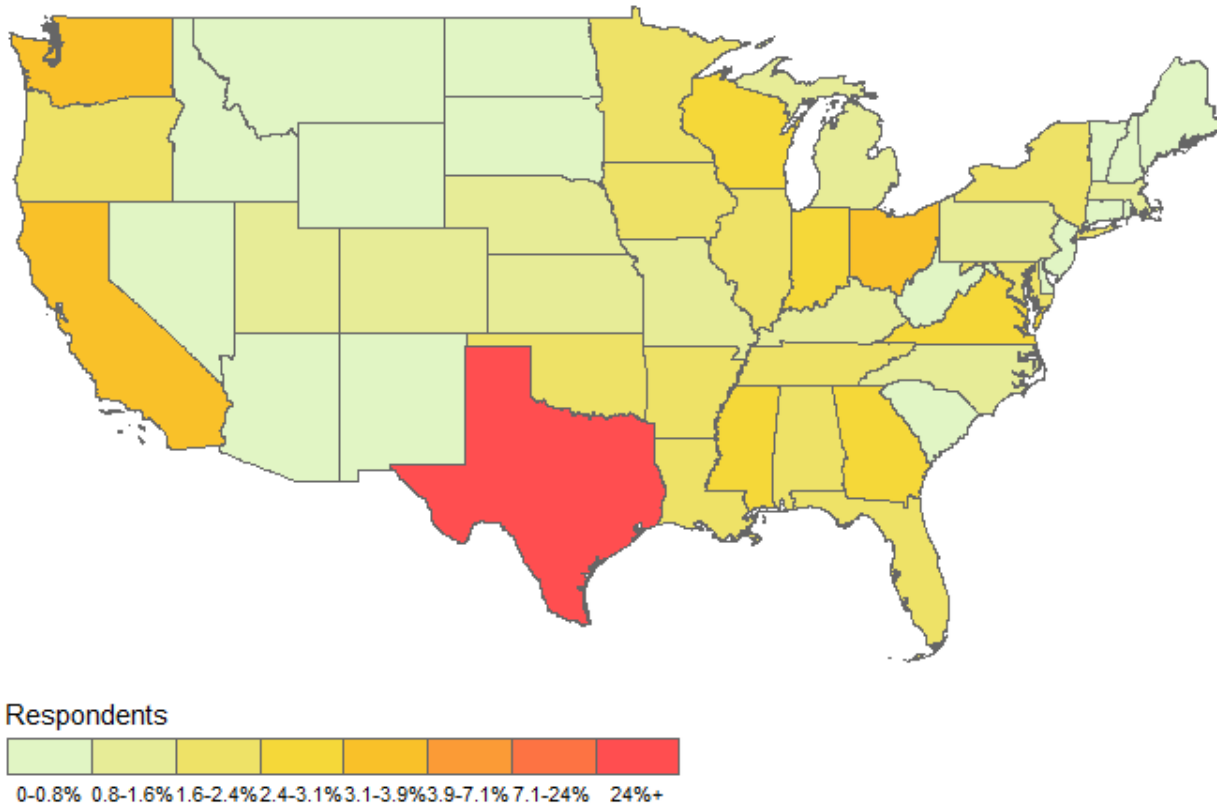
The final version of the survey with a consent form was distributed as a survey link in an email invitation by the manager of marketing and communications at ICN to all individuals listed in ICN’s database of contact, which with a population of plus 218,744. The total of successfully delivered emails was 192,744. The survey was distributed on November 7, 2023, and closed on December 5, 2023.

# RESULTS

The number of individuals that responded to the survey, minus surveys with missing data, was 777 (4.03% response rate.) Figure 1A (below) provides an overview of the distribution of all respondents by state. Not shown are Alaska, Puerto Rico, the Northern Mariana Islands, and Hawaii due to the size of the map, not based on participation rates.

**Figure 1A**

*Map Distribution of All Respondents*

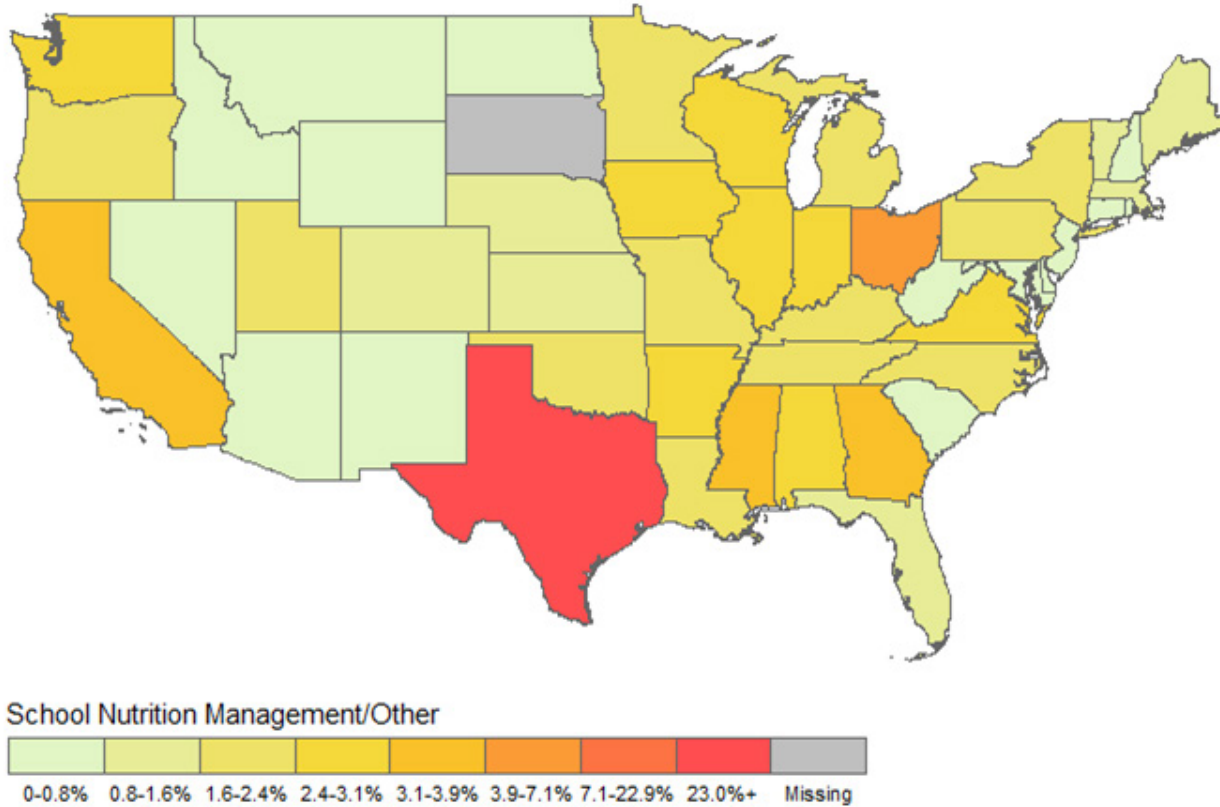


Texas, by far, had the largest number of respondents (28%, n=221), while California (3.8%, n=30, Ohio (3.5%, n=28), and Washington (3.3%, n=26) had the next highest participation rates. Rhode Island (0.1%, n=1), Delaware (0.3%, n=2), Montana (0.3%, n=2), Nevada (0.3%, n=2), and Puerto Rico (0.3%, n=2) all tied with low participation rates and there were no participants from South Dakota. Two participants (0.40%) reported that they do not reside in the US.

Figure 1B (presented on next page) provides an overview of the distribution of school nutrition management/school nutrition other respondents by state. Alaska, Puerto Rico, the Northern Mariana Islands, and Hawaii are not shown. Texas was again the state with the largest number of respondents (23.7%, n=116), while Ohio (4.3%, n=21), Mississippi (3.9%, n=19), and California (3.9%, n=19) were the states with the lowest participation rates. Two participants reported not residing in the US (2, 0.4%). There were no participants from South Dakota.

**Figure 1B**

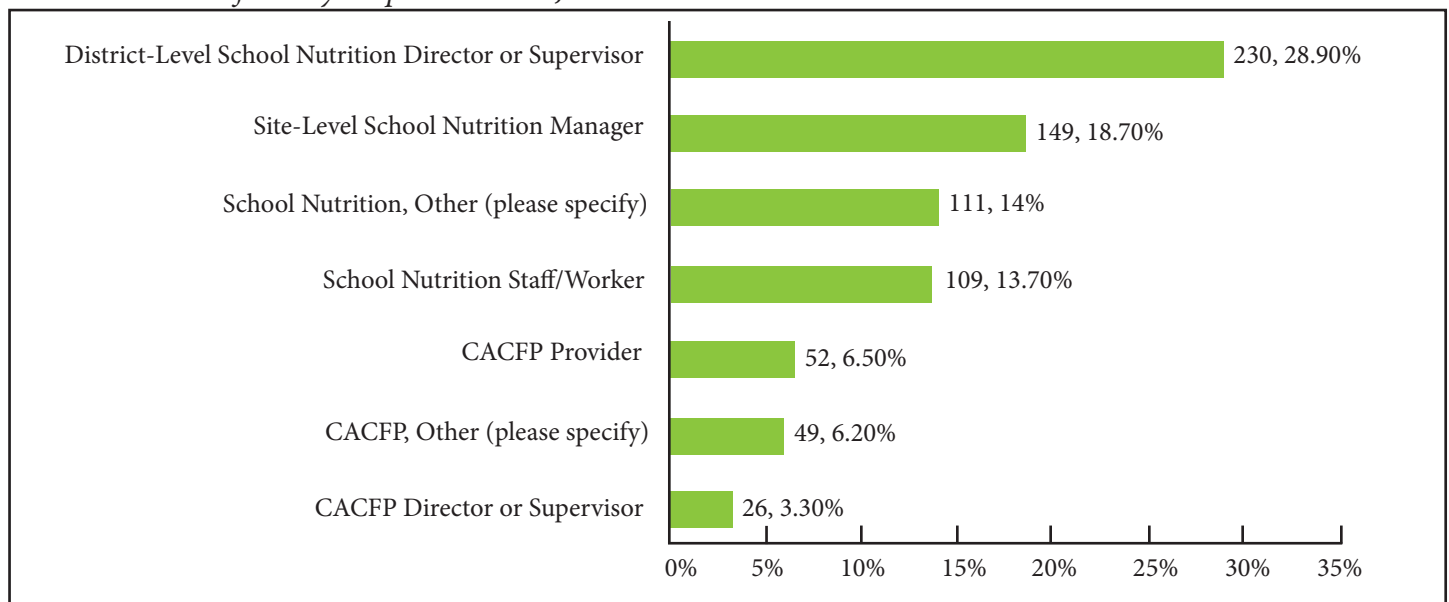
*Distribution of School Nutrition Management/School Nutrition Other Respondents by State*



Most respondents were district-level school nutrition directors (28.9%, n=230) and site-level school nutrition managers (18.7%, n=149). Figure 2 provides an overview of respondents by job title.

**Figure 2**

*The Distribution of Survey Respondents Per Job Title*



## Position Title: School Nutrition Management/School Nutrition Other

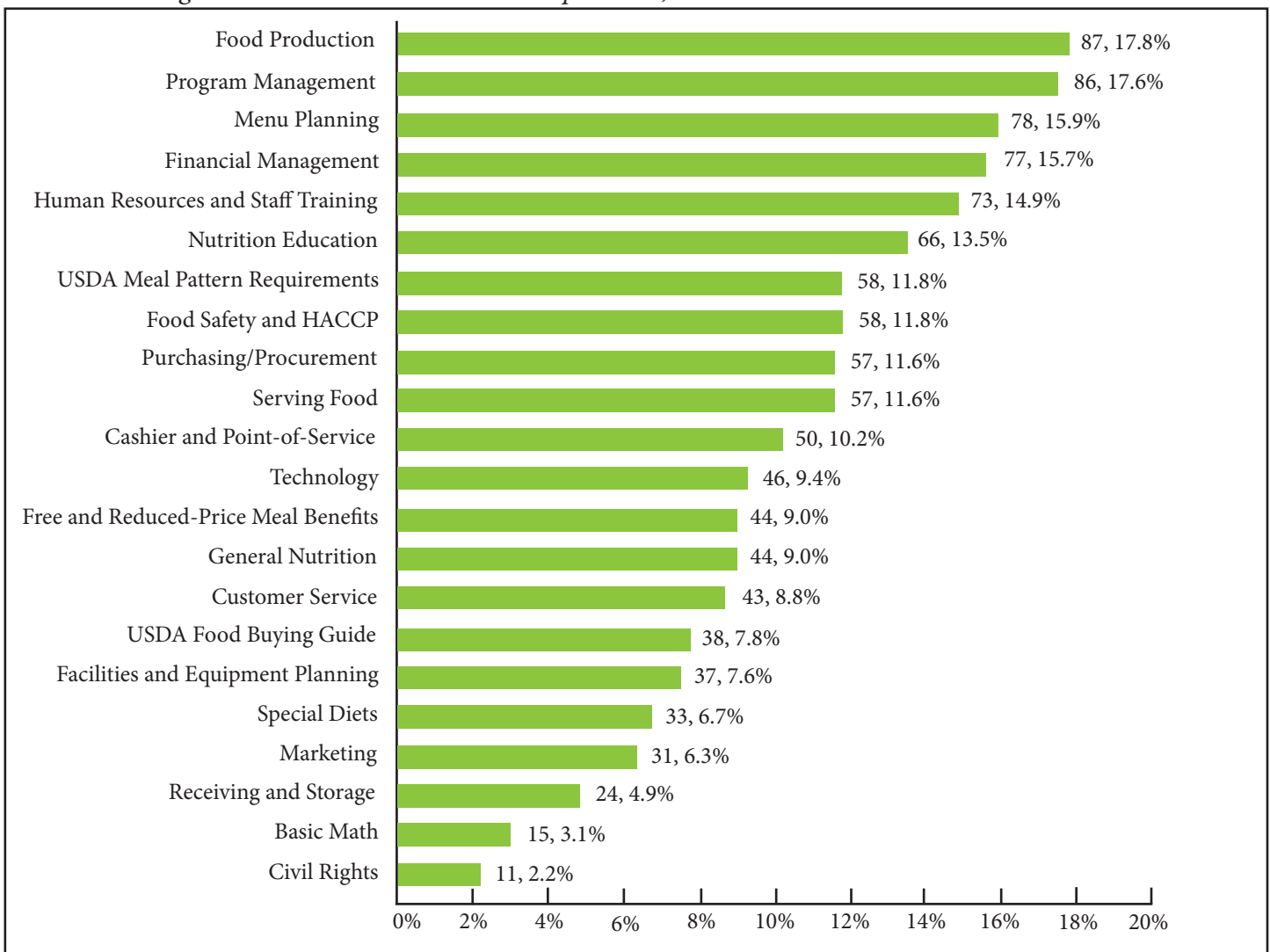
The results in the following section pertain to survey respondents with school nutrition management job titles (i.e., district-level school nutrition director or supervisor, or site-level school nutrition manager) and those who selected school nutrition other as a job title.

Approximately one-third of school nutrition management/school nutrition other respondents were from districts with less than 1,000 students (35.4%, n=169). Large school districts (greater than 20,000 students) accounted for the smallest percentage of respondents working in schools (15.9%, n=76).

When school nutrition management/school nutrition other respondents were asked to select the training topics, respondents felt there is a high level of need to receive within the next two years in an in-person live setting, the predominant choices were food production (17.8%, n=87), program management (17.6%, n=86), menu planning (15.9%, n=78), and financial management (15.7%, n=77). Figure 3 provides an overview of the training topics individuals working in schools feel there is a high need to receive in-person, live within the next two years.

**Figure 3**

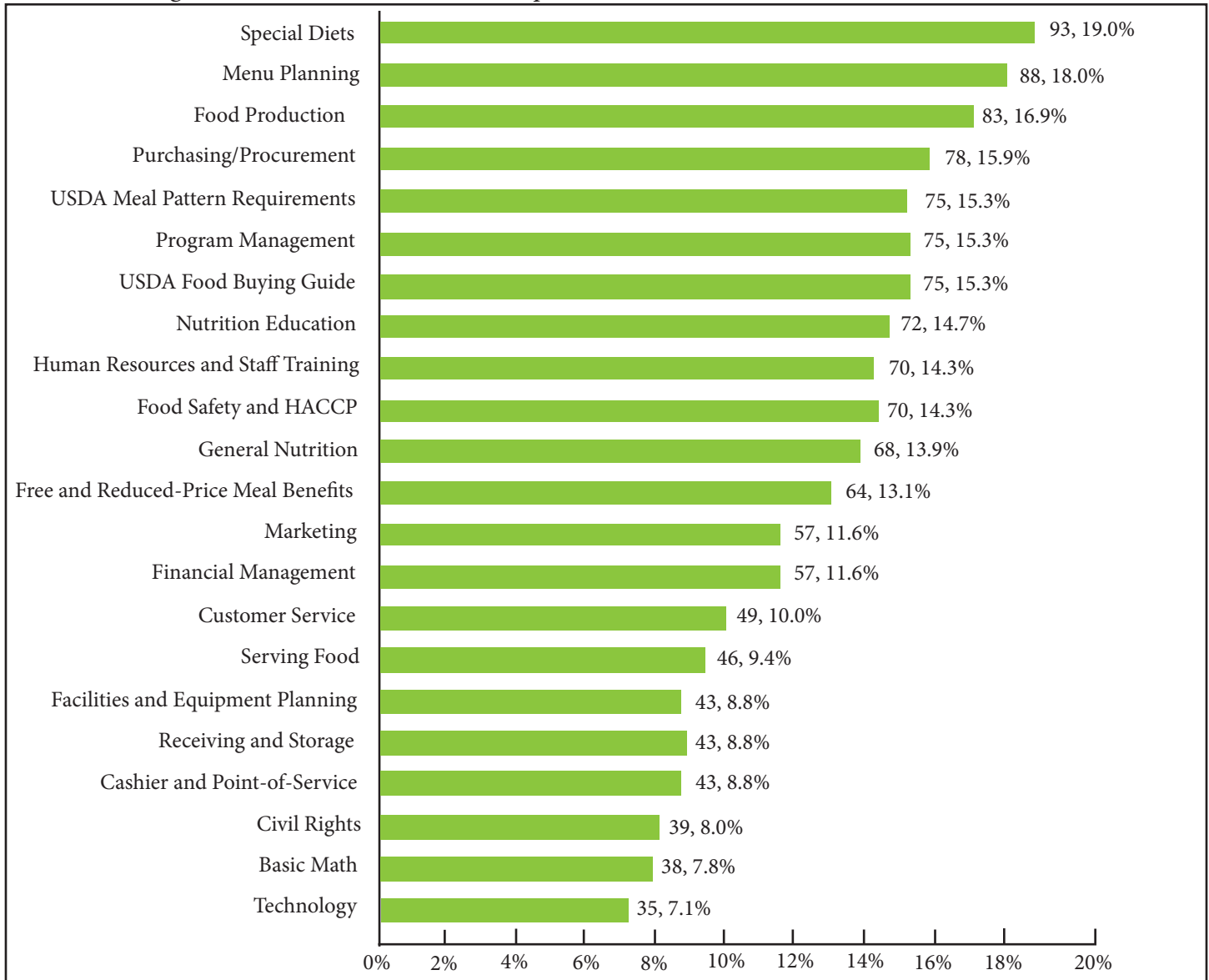
*High Level of Need Topics to Receive Training for Within the Next Two Years in an In-Person Live Setting (School Nutrition Management/School Nutrition Other Respondents)*



School nutrition management/school nutrition other respondents selected the following training topic areas the most often as having a “high-level of need” and best received via “live, virtual,” mode: special diets (19.0%, n=93), menu planning (18.0%, n=88), and food production (16.9%, n=83) (Figure 4).

**Figure 4**

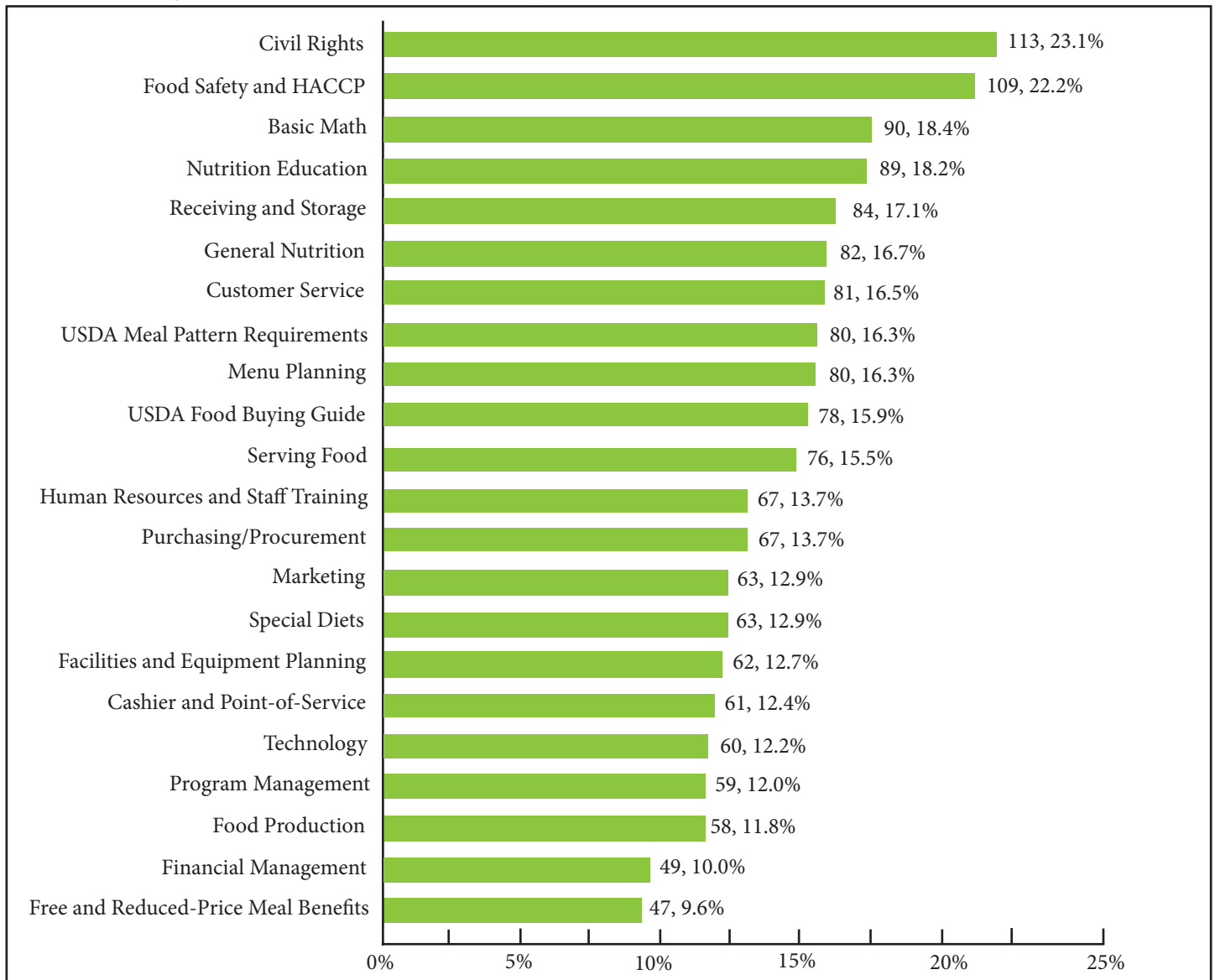
*High Level of Need Topics to Receive Training for Within the Next Two Years in a Live Virtual Setting (School Nutrition Management/School Nutrition Other Respondents)*



“Self-pace, online” was identified as the ideal training mode by most school nutrition management/school nutrition other respondents for having a high level of need for receiving the following training topics: civil rights (23.1%, n=113), food safety and HACCP (22.2%, n=109), and basic math (18.4%, n=90) (Figure 5).

**Figure 5**

*High Level of Need Topics to Receive Training for Within the Next Two Years in a Self-Pace, Online Setting (School Nutrition Management/School Nutrition Other Respondents)*



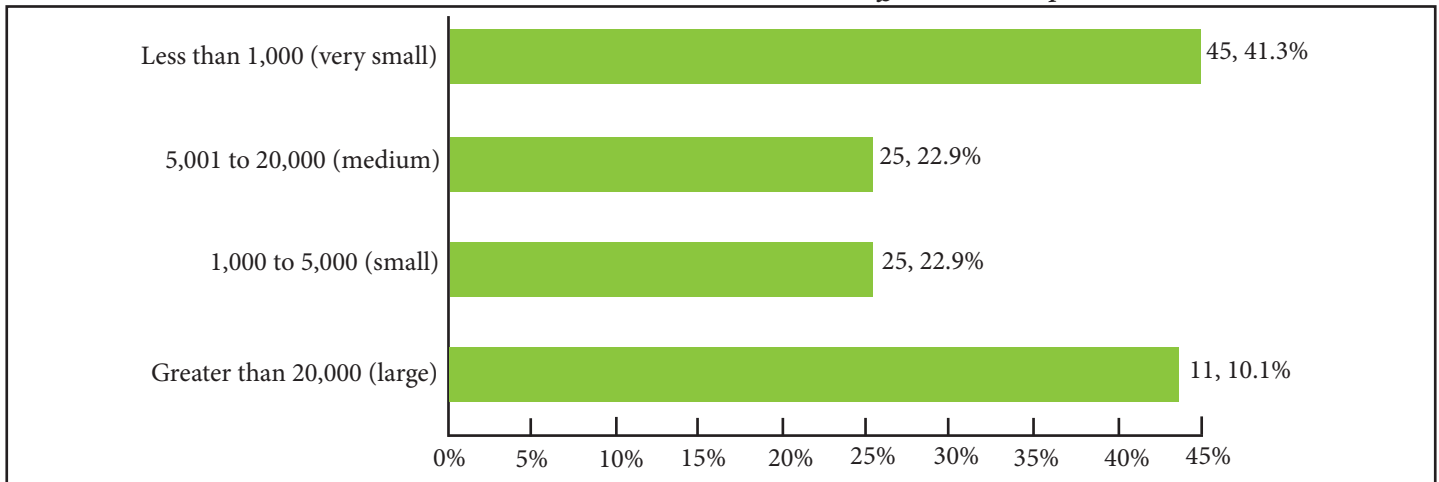
**Position Title: School Nutrition Staff/Worker**

The results in the following section pertain to survey respondents who selected school nutrition staff/worker as a job title. The majority of respondents who identified as school nutrition staff/workers were from districts with less than 1,000 students (41.3%, n=45). Large school districts (greater than 20,000 students) accounted for the smallest percentage of respondents working in schools (10.1%, n=1). Figure 6 provides a listing of participation rates by district size for all school nutrition staff/workers respondents.



**Figure 6**

*School District Size Based on Student Enrollment (School Nutrition Staff/Worker Respondents)*



When school nutrition staff/workers were asked to select the training topics that they felt there was a high level of need to receive within the next two years in multiple settings (in-person live, live, virtual, and self-paced online), several trends were observed in each mode. With regards to in-person live the most common choices were food production (22.2%, n=2), food safety and HACCP (16.5%, n=18), serving food (16.5%, n=18), and general nutrition (16.5%, n=18), while respondents suggested special diets (17.4%, n=19), USDA Meal Pattern Requirements (16.5%, n=18), and general nutrition (16.5%, n=18) were best received identified in a live, virtual mode. Self-paced online was selected as the ideal training mode for receiving the following training topics: USDA Meal Pattern Requirements (26.6%, n=29), civil rights (22.9%, n=25), and basic math (21.1%, n=23).

### **Position Title: Child and Adult Care Food Program (CACFP)**

The results in the following section pertain to survey respondents who selected CACFP (director/supervisor, provider, or other) as a job title. A total of 53 respondents (15.8%, N=726) indicated they work with CACFPs. The majority identified their program classification as providers (41.7%, n=53), while the remainder identified their program classification as sponsoring organizations (28.3%, n=36) and independent centers (20.5%, n=26).

When asked to specify their CACFP program type, most identified family child care home (24.4%, n=31), child care center (21.3%, n=27), Head Start/Early Head Start (19.7%, n=25), and other (14.2%, n=18).

When CACFP professionals were asked to select the training topics that they felt there was a high level of need to receive within the next two years, in each training mode, the following trends were observed. With regards to in-person live, the most common choices were administration/paperwork (16.5%, n=21) and regulatory compliance (16.5%, n=21), while respondents suggested administration/paperwork (24.4%, n=31), special diets (24.4%, n=31) were best received identified in a live, virtual mode. Self-paced online was selected as the ideal training mode for receiving the following training topics: USDA Meal Pattern Requirements (30.7%, n=39), health and safety (29.1%, n=37), and special diets (28.3%, n=36).

# CONCLUSIONS AND DISCUSSION

## Review Panel Participation

The 28 people who participated in the review panel represent a 19% response rate. While this number may appear low, more people than were needed were invited to get a good distribution of participants (at least six to eight respondents) from each group (i.e., State agency child nutrition/school nutrition staff and directors, ICN Training and Education Specialist and Multi-Media Specialists, ICN's advisory board, FNS, and NETTA). The sample exceeded the six to eight threshold with the State agency and two ICN groups. Although the survey was sent to only one USDA, FNS, or NETTA representative, the entire group provided comments and collectively put those comments on one document. Therefore, the research team believes the review panel participation was more than adequate to assess the survey and provide feedback.

## Survey Participation

The survey was sent out to a large population (N=218, 744), which included all individuals listed in ICN's contacts database. However, the response rate was only 0.4% (n=795), with an overwhelming percentage of total respondents from Texas 27.8% (n=221). California had the next highest participation rate, with a rate of only 3.8% (n=30).

The school nutrition management/school nutrition other respondent group had the largest representation and geographic distribution of all the job title groups. More than half of all survey respondents were school nutrition management/school nutrition other (61.6%, n=490), and this group had at least one respondent from every state except South Dakota. As with each job title group and the sample, Texas accounted for an overwhelming percentage of total responses, with 23.7% (n=116) comprising the school nutrition management/school nutrition other job title group. Ohio had the next highest participation from school nutrition management/school nutrition other respondents, with a rate of only 4.3% (n=23).

Individuals who work in the CACFP represented only 16% (n=127) of respondents, and multiple states were not represented by this group, including Kentucky, Maine, Missouri, Montana, Nevada, New Hampshire, New Jersey, Arizona, Pennsylvania, Rhode Island, South Dakota, Utah, and Vermont states. An overwhelming percentage of CACFP respondents were from Texas (28.3%, n=36), while the state with the next largest representation of CACFP respondents was Maryland, with only 7.1% (n=9).

School nutrition staff/other respondents made up only 13.7% of total respondents (n=109), and several states were not represented by this group, including Pennsylvania, Rhode Island, South Carolina, Alaska, South Dakota, Utah, Vermont, Nevada, New Hampshire, Arizona, Delaware, Iowa, Kansas, Maine, and Michigan. As with the other job title groups, Texas comprised an overwhelming percentage of school nutrition staff/other respondents (34.9%, n=38), while Washington and California were the states with the next highest participation, each with a rate of only 5.5% (n=6).

## **Position Title: School Nutrition Management/School Nutrition Other Training Needs**

Training topics identified as having a high level of need by 15% or more of school nutrition management/school nutrition other respondents were compared by mode preferences and school nutrition staff/workers preferences. Menu planning was selected as a training for which school nutrition management staff needs to receive a high level of need in all three training modes: in-person live, live virtual, and self-paced online. This indicates a high level of need for this course to be offered in multiple modes to provide the greatest opportunity for school nutrition management staff to improve their competence in this area. Note that school nutrition staff/workers were not offered this topic as a choice.

Financial management was identified as a topic area with a high level of need by more than 15% of school nutrition management respondents, but only in the in-person live mode. This suggests respondents feel this is an important, but complex topic that should be offered in-person live mode to allow for maximum interaction between instructors and other students. School nutrition staff/workers were not offered this topic as a choice.

Serving food, customer service, general nutrition, receiving and storage, nutrition and education, basic math, food safety, HACCP, and civil rights just self-paced were all topics identified as having a high level of need, but only in the self-paced online mode. This was consistent with school nutrition staff/worker respondents, who were also given these topic areas as choices. This suggests respondents consider these topic areas important, but they do not feel the need for in-depth or immediate interaction with the instructor and their peers, and they prefer the flexibility of completing these courses at their own pace.

School nutrition management respondents identified purchasing procurement and special diets as topic areas with a high level of need to be received only in the live virtual. This indicates that school nutrition management staff prefer the convenience and potential cost savings of receiving these topic areas online, but they desire real-time interaction with the instructor and peers due to the complexity of the topic areas. School nutrition staff/workers were not offered purchasing/procurement as a topic choice.

Food production and program management were topic areas school nutrition management respondents selected as having a high level of need to be received either in-person live or live virtual modes. This indicates school nutrition management staff want to receive these courses face-to-face in real-time, but they want the option of in-person live or live virtual. The preferences for the topic area of food production were consistent between school nutrition management respondents and school nutrition staff/workers. This research is consistent with Jones et al. (2013) finding that those respondents working in schools see a high level of need to receive training on program management. School nutrition staff/workers were not offered program management as a topic choice.

School nutrition management respondents selected the topic areas USDA food buying guide and USDA meal pattern requirements as high-level need courses to be received either in the live virtual or self-paced online modes. This signifies the importance of these courses but suggests that school nutrition management staff do not see the need for these courses to be offered live in person. The USDA meal pattern requirements selection was consistent with school nutrition management and school nutrition staff/worker preferences; however, school nutrition staff/workers were not offered the USDA buying guide as a topic choice. These findings are also consistent with Jones et al. (2013) finding that individuals working in school nutrition programs have a high level of need to receive training on the Healthy, Hunger-Free Kids Act of 2010.

## **Position Title: School Nutrition Staff/Worker Training Needs**

When observing training topics identified by 15% or more of school nutrition staff/worker respondents as having a high level of need, multiple themes emerged when compared by preferred training mode. General nutrition was selected as a high-level need topic that should be available in all three training modes (in-person live, live virtual, and self-paced online). Researchers at the University of California and the California Department of Education (Jones et al., 2013) also reported the need for general nutrition training among school nutrition personnel.

Food production was selected as a high-level need topic by school nutrition staff/worker respondents, with in-person live and live virtual as the preferred modes. This indicates school nutrition staff/workers want face-to-face, real-time interaction with instructors and peers for this topic area, consistent with school nutrition management respondents' findings. Researchers at Pew Charitable Trusts and the Robert Wood Johnson Foundation (2015) also identified basic cooking skills as a top training need for school nutrition workers.

School nutrition staff/worker respondents indicated a high level of need for food safety and HACCP in both the in-person live and self-paced online modes. This corresponds with these respondents' comments that in-person live training promotes better learning, but online is needed for convenience.

Special diets, civil rights, and USDA meal pattern requirements were identified as high-level need topic areas in the live virtual and self-paced online modes. This supports the need for flexibility and convenience discussed above. Research findings by the Illinois State Board of Education and the University of Illinois Extension and Outreach supported the need for training on USDA meal patterns to comply with meal standards (Flure et al., 2020).

## **Position Title: Child and Adult Care Food Program (CACFP) (Director, Supervisor, Provider, Other)**

The training topics selected by 15% or more of CACFP respondents as having a high level of need for each of the three training modes (in-person live, live virtual, and self-paced online) demonstrate several trends. Administration/paperwork and regulatory compliance were each identified as high level of need topics that respondents desired to receive in all three modes. This suggests the importance of the selected topics and the need for respondents to have options and flexibility on when and how to receive those trainings. Special diets, USDA meal pattern requirements, purchasing and grocery shopping, and health and safety were each chosen as high-level need topics that respondents preferred to receive in the live virtual and self-paced online modes. This also demonstrates the importance of these topics while suggesting respondents prefer the convenience and cost savings associated with receiving the courses online.

## **Limitations**

The population for this study was limited to individuals listed in the ICN contact database. South Dakota was not represented by any school nutrition management/school nutrition other respondents, and several states were not represented by school nutrition staff/work and CACFP respondents. The large number and percentage of respondents from Texas (n=221, 28%) skews the data to that region of the country.

## Application

It is recommended that agencies tasked with developing and providing training for child nutrition professionals consider developing and offering training on the following topics in the specific modes (in-person, live, live virtual, and self-paced) and for the different child nutrition positions listed below:

### **School Nutrition Management/School Nutrition Other**

- Food production: in-person live and live virtual
- Financial management: in-person live
- Menu planning: all three modes
- Program management: in-person live and live virtual modes
- Purchasing/procurement: live virtual
- USDA meal pattern requirements and USDA Food Buying Guide: live virtual and self-paced online
- Food safety and HACCP, basic math, nutrition education, receiving and storage, general nutrition, and serving food: self-paced online

### **School Nutrition Staff/Worker**

- General nutrition: all three modes
- Food production: in-person live and live virtual
- Food safety and HACCP and serving food: in-person live and self-paced online
- Special diets: live virtual
- USDA meal pattern requirements and civil rights: live virtual and self-paced online
- Basic math, receiving and storage, and customer service: self-paced online

### **Child and Adult Care Food Program (CACFP) (Director, Supervisor, Provider, or Other)**

- Administration/paperwork and regulatory compliance: all three modes
- Special diets, USDA meal pattern requirements, purchasing and grocery shopping, and health and safety: live virtual and self-paced online

It is recommended that agencies developing and providing training to any child nutrition professionals recommend the following:

- Consider job titles and areas of school nutrition, such as Residential Child Care Institutions, when developing training.
- Promote food buying guide training.
- Create online training that reduces technical difficulties for users.
- Develop online training that reduces or eliminates students' ability to take shortcuts or cheat when taking the courses.

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