


## Memorandum

**Date:** January 15, 2016

**To:** Steph Tatham, OMB Desk Officer

**Through:** Ruth Brown, United States Department of Agriculture, Office of Chief Information Office

**From:** Lynnette Thomas   
Food and Nutrition Service, Branch Chief, Planning & Regulatory Affairs

**Re:** Generic OMB Clearance No. 0584-0524 - Request for Approval to Perform Formative Research for Educational Technology Environmental Scan

The Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA) is requesting approval for formative research under Approved Generic OMB Clearance No. 0584-0524.

This request is to acquire clearance to conduct formative research with grade K-12 teachers to obtain feedback about their experiences and perceptions of educational technology. This research will explore audience perceptions, attitudes, ownership, and usage in order to inform future FNS Team Nutrition initiatives. The following information is provided for your review:

1. **Title of the Project: Team Nutrition Educational Technology Environmental Scan**
2. **Control Number:** 0584-0524, Expires 06/30/2016
3. **Public Affected by this Project:**  
State and Local/Tribal Employees
  - Grade K-12 educators
  - Principals of elementary, middle, and high schools.

See section 7, *Project Purpose, Methodology & Formative Research Design*, for a description of the number of participants for each audience (K-12 educators and health educators) by research methodology (focus group interviews and surveys).

#### 4. Number of Respondents:

Table 4.1 – Consent Forms\*

Audience	# Of participants
Grade K-12 Educators (all subjects) and librarians^	1,240
Teachers of Health Education	1,190
<b>Total</b>	<b>2,430</b>

\*Includes non-responders and those choosing not to participate.

^Teachers in this category include teachers of health education, librarians, and core academic subjects.

Table 4.2 – School Approval\*

Audience	# Of participants
School Principals	28
<b>Total</b>	<b>28</b>

\*Includes non-responders and those choosing not to participate.

Table 4.3 – Research Activities by Audience^

Target Audience	Research Activity	# of Participants
K-12 Educators (all subjects) and librarians	Focus Group Interview*	155
	Distributing Flyers and Consents	14
	Schedule Confirmation Email	248
Teachers of Health Education	Survey^	119

\*Groups will recruit 8 to seat 5 educators.

^It is estimated that 10% of teachers contacted will complete a survey

#### 5. Time Needed Per Response:

Table 5.1 - Time Needed per Initial Recruitment & Consent Form for Focus Groups Participation\*

Target Audience	Time (minutes)	Time (hours)
Grade K-12 Teachers (all subjects)	12	0.20
School Principals (Letter of Agreement)	10	0.17

\*The time is an average response per respondent.

Table 5.2 - Time Needed per Initial Recruitment & Consent Form for Survey Participation\*

Target Audience	Time (minutes)	Time (hours)
Teachers of Health Education	5	0.08

\*The time is an average response per respondent.

Table 5.3 - Time Needed for Research Activities by Audience

Target Audience	Research Activity	Time (minutes)	Time (hours)
K-12 Teachers (all subjects)	Focus Group Interview	45	0.75
	Distributing Flyers and Consents	30	0.50
	Schedule Confirmation Email	2	0.03
Teachers of Health Education	Survey	10	0.17

**6. Total Burden Hours on Public:**

Affected Public		Screeners, Surveys	ID	No. Respondents	Frequency of Response	Est. Total Annual Responses per Respondent (c x d)	Hours per Response	Total Burden Hours (e x f)
<b>State, Local/Tribal Employees</b>	Grade K-12 Teachers	Consent Forms	A,B, F	1240	1	1240	0.20	248.00
		Distribution of Flyers	G	14	1	14	0.50	7.00
		Scheduling Confirmation Email	H	248	1	248	0.03	7.44
		Focus Group Interview	D	155	1	155	0.75	116.25
	Teachers of Health Education	Consent Forms	C,J	1190	1	1190	0.08	99.16
		Online Survey	E	119	1	119	0.17	20.23
		Complete Principal Letter	I	14	1	14	0.17	2.38
<b>Total</b>			<b>2980</b>		<b>2980</b>		<b>500.46</b>	

**Total burden hours on public:** 500.46 hours.

**7. Project Purpose, Methodology, and Formative Research Design:**

Background

The mission of the US Department of Agriculture’s (USDA) Food Nutrition Service (FNS) is to provide children and needy families better access to food and a more healthful diet through its nutrition assistance programs. Among the programs administered by FNS are the National School Lunch Program (NSLP), School Breakfast Program (SBP), Summer Food Service Program

(SFSP), and Child and Adult Care Food Program (CACFP). The Child Nutrition Programs provide nutritionally balanced, low-cost or free meals and snacks. Team Nutrition is an FNS initiative that supports the Child Nutrition Programs through training and technical assistance for foodservice, nutrition education for children and their caregivers, and school and community support for healthy eating and physical activity.

According to the President's Council of Advisors on Science and Technology (2010), there is a growing need for new technology-based instructional materials to provide rich learning experiences and compelling content for children in grades K-12. The Council concludes that technology has rapidly advanced to the point that it should play a prominent role in driving educational innovation, and that the federal government specifically should be at the forefront of developing these technologies and content for all subject areas.

FNS is conducting an environmental scan of technology in K-12 schools as well as the specific application of technology to nutrition education and promotion in schools that participate in NSLP. The environmental scan includes multiple methods of primary and secondary data collection in order to understand the current landscape and possible trends pertaining to technology in K-12 schools. This knowledge will inform the planning and development of future FNS initiatives, programs, technologies, and content to help support the mission of FNS. The proposed formative research will support this larger environmental scan by obtaining feedback directly from educators.

#### Purpose

The purpose of the proposed research is specifically to: (1) identify the ways in which technology is used to support classroom instruction, communicate with families and the community, facilitate reading in the library, discover and share instructional materials, provide professional development, and promote the availability of healthy food at school; identify effective methods for using technology-based nutrition education to change children's eating and physical activity behaviors; (3) identify effective methods and best practices for using technology to engage parents/caregivers in school activities and events; identify and understand contextual factors that may engender or inhibit the use of technology in K-12 schools; (5) identify and understand differences and disparities in the use of technology by K-12 schools, such as rural status, teacher attitudes towards and experiences with technology, and community access to technology; and (6) identify and understand the school processes and policies that shape technology access and usage.

#### Methodology/Research Design

This research will utilize qualitative and quantitative methodologies: 1) focus group interviews; and 2) surveys. All research activities will be conducted with educators and librarians employed at K-12 schools participating in NSLP.

*Focus Group Interviews.* Focus group interviews (FGIs) will be conducted with K-12 teachers, including teachers of health education and librarians (K-12 teachers), employed at schools participating in NSLP. A total of thirty-one (31) 45-minute FGIs (see Appendix D) will be

conducted with 5 educators in each group (total N=155). At least one teacher of health education will participate in each group. Eight teachers will be invited to each FGI in order to assure 5 participants are seated.

Two to three focus group interviews will be conducted with K-12 teachers at each of 14 schools, either before school, during lunch, during free periods, or after school, depending on teacher availability. Table 7.1 below outlines the segmentation of the school-based teacher focus groups by the type of school.

Table 7.1 – Segmentation of School-Based FGIs by teacher grade level.

Educator Grade Level	# of Schools	# of school FGIs per grade level	# Educators per FGI	# of Educators
Elementary School (K-4 or K-5)	5	10	5	50
Middle School (5-8 or 6-8)	4	8	5	40
High School (9-12 or 7-12)	4	8	5	40
K-12	1	3	5	15
<b>Total</b>	<b>14</b>	<b>29</b>	<b>2</b>	<b>145<sup>^</sup></b>

<sup>^</sup>This total does not reflect the full sample of educators.

In addition to the school-based FGIs described above, two focus groups will be conducted at the *Society of Health And Physical Educators (SHAPE)* conference in Minneapolis, MN. These groups will be conducted with K-12 teachers of health education (N=10). Trained research staff will conduct all focus groups.

*Online Surveys.* Online surveys (see Appendix E) will be administered to 119 teachers of health education employed at schools participating in NSLP. Surveys will take approximately 10 minutes to complete and contain open-ended questions about their experiences with technology as well as multiple-choice questions about their attitudes and perceptions of technology.

#### Design/Sampling Procedures

Public schools, from which a sample of K-12 teachers, librarians, and teachers of health education (K-12 teachers) will be drawn, will be selected in order to meet the following specifications:

- Representation of elementary, middle school, and high school teachers
- Geographic diversity, according to FNS regions
- Representation from urban, suburban, and rural communities
- Participation, at the school level, in the national school lunch program
- An ethnically and racially diverse sample
- An oversampling of teachers of health education

In order to meet the above specifications, a database of all US public schools will be compiled using publicly available data from the National Center for Education Statistics (NCES) and Office

for Civil Rights (OCR). This database (sampling database), will serve as the primary source of school selection, from which the sample of K-12 teachers and librarians will be drawn. This data will aggregate schools by number of students, number of teachers, grade-levels, student’s race and ethnicity, number of students who qualify for free/reduced-price lunch, and school-level NCES locale code, which determines a school’s place on the urban-rural continuum (<http://nces.ed.gov/ccd/commonfiles/localedescription.asp>).

In addition to the public schools described above, a sample of teachers of health education will be drawn from attendees of the *Society of Health And Physical Educators (SHAPE)* conference in Minneapolis, MN. The conference draws teachers of health education from all FNS regions, allowing for a regionally diverse oversampling of teachers of health education.

**Sample for Focus Group Interviews**

*Grade Level* - A total of 14 schools will be selected, from which K-12 teachers will be recruited for participation in focus group interviews. One K-12 school is included in this sample because it is a common structure for small schools in rural areas. The specific school segmentation plan is detailed in chart 7.1 on previous page.

*Geographic Diversity.* Two schools will be selected from one state in each of the seven (7) FNS regions (one state will be selected to minimize travel costs).

*Rural Location.* NCES locale codes will be used to insure a diversity of schools from rural, suburban, and urban locations. Within each FNS region, schools will be segmented by locale code as follows:

Table 7.2 – School Selection by Locale

FNS Region	School Locale Code	Locale Description*	Proposed # of Schools & Type
Mid-Atlantic Region	21, 22, or 23	Small to Large Suburb	1 Elementary School 1 Middle School
Midwest Region	11, 12, or 13	Small to Large City	1 Elementary School 1 Middle School
Mountain Plains Region	41, 42, or 43	Rural - Fringe, Distant, or Remote	1 High School 1 K-12 School
Northeast Region	11, 12, or 13	Small to Large City	1 Middle School 1 High School
Southeast Region	41, 42, or 43	Rural - Fringe, Distant, or Remote	1 Elementary School 1 Middle School
Southwest Region	31, 32, or 33	Town - Fringe, Distant, or Remote	1 Elementary School 1 High School
Western Region	21, 22, or 23	Small to Large Suburb	1 Elementary School 1 High School

\*The local description is taken from the NCES <http://nces.ed.gov/ccd/commonfiles/localedescription.asp>.

*National School Lunch Program.* All participating schools will have at least 33% of students who qualify for free or reduced-priced lunch, and at least 5 schools will have more than 75%. Participating teachers of health education recruited from the *SHAPE* conference will work at schools that participate in NSLP<sup>1</sup>.

*Student Race/Ethnicity.* Schools will be selected such that the final sample will include:

- At least 2 schools with more than 40% African-American students
- At least 2 schools with more than 40% Hispanic/Latino students
- At least one school with more than 15% Native American students
- Fewer than 4 schools with more than 80% non-Hispanic White students

### ***Sample for Survey***

After the participating states from each of the seven (7) FNS regions are determined (one state per region, for 7 total states), all schools in the participating states with the appropriate locale code that are not hosting focus groups (see Table 7.2) will be identified using the *sampling database*. All teachers of health education at these non-participating schools will be considered part of the target sample. Teachers of health education who participate in focus groups will not be eligible to participate in the survey.

### **Recruitment and Consent**

#### ***Focus Group Recruitment - Schools***

Using the sampling plan detailed above, a four-step procedure will be utilized in order to efficiently recruit focus group participants and encourage them to attend without the use of incentives.

1. First, teachers of health education will be emailed directly (see Appendix G) and recruited to participate in focus groups. Email addresses and phone numbers will be obtained for these teachers from publicly available databases and school websites. A consent packet (see Appendix A) will be distributed to interested teachers of health education that includes detailed information about the formative research and their rights as research participants. These teachers will serve as primary contacts and coordinators at each school in order to assure adequate representation from teachers of health education in each focus group.
2. After a primary contact is established, approval will be obtained from the school principals (see Appendix I). Any state, district or local IRB approval will also be obtained. Principal approval and interest from at least one teacher of health education will be required for school sites to be selected. This process has been successfully employed in similar projects, and was chosen to assure that at least one teacher of health education is interested and available to participate in research activities in each

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<sup>1</sup> A minimum percentage is not included as these teachers may not be able to provide accurate estimates of their school's participation in NSLP.

school location. Obtaining principal approval first does not guarantee participation of teachers of health education because principals can't appoint or nominate participants as it constitutes a manipulation of power dynamics and may be viewed as exploitive by IRB.

3. After principal approval has been obtained and a primary contact established, all teachers in the participating schools will receive email invitations to participate in FGIs (see Appendix A), using contact information obtained from publicly available databases. In addition, the designated primary contact at each school will distribute flyers in teacher mailboxes with information about the study (see Appendix F). Both the flyer and the invitation email will direct K-12 teachers to a website that contains an online consent packet (see Appendix A). Consent packets will include a brief survey for teachers to complete. These surveys will ask teachers about demographic information, familiarity with technology, and teaching experience.
4. Finally, after times have been selected, participating teachers will be sent a scheduling email (see Appendix H) to remind them where and when the focus groups will take place.

Once interest and consent has been established at one school in any given FNS region, researchers will focus recruitment to additional schools within 150 miles, to reduce the cost of travel between school sites. Efforts will be made to select diverse participants, however, in our experience conducting research, both with and without the use of recruiting firms, respondent diversity quota attainment will be suppressed without the use of incentives.

#### ***Focus Group Recruitment – SHAPE Conference***

Trained research staff will attend the *SHAPE* Conference and approach teachers of health education in between conference events, during networking breaks, and on the expo floor. Teachers will be provided with a consent packet (see Appendix B), which contains information about the study and a proposed time and location for the focus group, a brief questionnaire, and consent form. Interested qualifying teachers will be asked to sign the consent forms and will given the specific time and location for the FGIs (see Appendix B).

#### ***Survey Recruitment***

All teachers of health education (e.g. health education, health enhancement, physical education, school nutritionists, and school food service directors) identified using the sampling plan detailed above will be contacted via email (see Appendix J) using contact information obtained through publicly available databases and school websites. The email will be sent by MCG, and will include information about the study and link to the survey (see Appendix E). The first page of the survey link will be a consent form (see Appendix C). A screener will not be used as teachers of health education will be directly targeted by the sampling plan, however the survey will ask teachers of health education to indicate their position for analysis purposes.

All consent forms are modeled after those previously approved by OMB under “Formative Research About FNS Curriculum Messages for 5<sup>th</sup> and 6<sup>th</sup> Grades” (control number: 0584-0523, ICR 201207-0584-007), with the only modifications reflecting the content of the study.



### Compensation

Each school will receive a \$150 facility fee to cover the cost of MCG research staff using a conference room or the library to conduct focus groups. This fee is based on conversations with a random sample of 8 schools with which MCG has recently conducted research. The average cost of community members renting a room in the library or other spaces was \$50 per hour. It is estimated that that preparation and focus groups will take approximately 3 hours per school, during which time the school may not be able to use and/or rent the rooms to other outside groups.

Educator focus group participants will be provided with a hot meal, as the focus groups will take place during lunch or immediately after school. The meal will be arranged by the research staff and is valued at \$8 per participant.

### Data Analysis

*Qualitative Data.* All focus groups interviews will be conducted using the moderator's guide (Appendix D), audio-recorded (with respondent permission), and transcribed. This text will become the data for qualitative analysis. Codes, representing new insights and relevant participant experiences and opinions, will be identified using Grounded Theory, by which codes and themes are allowed to emerge from the text (Corbin & Strauss, 1990; Glaser, 1992; Henwood & Pidgeon, 2003; Walker & Myrick, 2006) and entered into the NVivo software package in order to organize themes. In order to ensure that individuals did not bias findings, multiple researchers will code interview transcriptions, and themes will be compared and synthesized in Qualitative Debriefing Sessions. Findings will be considered descriptive and directional, but not definitive. No attempt will be made to generalize findings as nationally representative or statistically valid.

*Quantitative Data.* All educator surveys (Appendix E) will be entered into PASW Statistics Program of quantitative analysis. Descriptive and correlational analysis will be conducted in order to identify patterns and relationships among and between key variables (Tabachnick & Fidell, 2007). In addition, and depending on the final cell sizes, exploratory t-tests and ANOVAs will be conducted to identify key differences between by key variables (e.g. rural vs. urban, size of school, percentage of students receiving free or reduced-price lunch). Though the results of this analysis will be quantitative in nature, no attempt will be made to generalize findings to the larger population given the sample size and sampling procedure.

### Outcomes/Findings

Information and formative input gathered from specific target audiences through the research will help develop final products that are relevant, meaningful and easy-to-use. Research summary findings may be published either electronically or in print, but such documents will not include information that personally identifies any of the research participants.

## 8. Confidentiality:

Using the *Agreement on Security of Comments Form* participants will be informed of confidentiality and privacy act provisions before responding to the screener. System of Record FNS-8, FNS Studies and Reports, published in the Federal Register on 4/25/1991 at 56 FR 19078, covers personal information collected under this study and identifies safeguards for the information collected.

**Federal Costs:** \$112,816.11

## 9. Research Tools/Instruments:

- **Appendix A:** Consent Package for School Focus Groups: Teacher Email, Teacher Informed Consent Form for Focus Group Participation, and Questionnaire for Participation in Focus Groups
- **Appendix B:** Consent Package for SHAPE Conference Focus Groups: Teacher Letter, Teacher Informed Consent Form for Focus Group Participation, and Questionnaire for Participation in Focus Groups
- **Appendix C:** Consent Package for Teacher of Health Education Survey: Teacher Letter and Teacher of Health Education Informed Consent Form
- **Appendix D:** Moderators Guide for Teacher Focus Groups
- **Appendix E:** Teacher of Health Education Survey
- **Appendix F:** Flyer for School Focus Groups
- **Appendix G:** Introduction Email for School Focus Groups
- **Appendix H:** Scheduling Email for School Focus Groups
- **Appendix I:** Principal Letter of Agreement
- **Appendix J:** Introduction Email for Teacher of Health Education Survey