

Memorandum

Date: July 19, 2011

To: Julie Wise, OMB Desk Officer, Food and Nutrition Service

Through: Rachelle Ragland Green, Food and Nutrition Service, Information Clearance Officer; Ruth Brown OCIO Desk Officer

From: Alicia White, Senior Nutritionist, Child Nutrition Division
USDA – Food and Nutrition Service

Re: Under Approved Generic OMB Clearance No. 0584-0524
Request Approval to Perform Formative Research –
FNS Team Nutrition Curriculum

The Food and Nutrition Service (FNS) of the USDA Food, Nutrition and Consumer Services is requesting approval for formative research under Approved Generic OMB Clearance No. 0584-0524.

This request is to acquire clearance for the evaluation of a garden-related nutrition education curriculum.

The following information is provided for your review:

1. **Title of Project:** Formative Research about FNS Team Nutrition Curriculum
2. **Control Number:** 0584-0524
3. **Public affected by this Project:** Individuals, and State, Local/Tribal Employees

The affected public will include third and fourth grade students, their teachers, their parents/caregivers, and the foodservice manager of the four participating schools.

See section 5, *Number of Respondents*, for a description of the number of participants for each audience, student and parent/caregiver.

4. **Recruitment**

Three elementary schools with existing school site gardens that are willing to use the curriculum in one third and one fourth grade classroom during the fall 2011 will be selected. Each school will represent a different USDA FNS region of the country. Two of the three schools have more than 50% of the school population eligible to receive free or reduced priced lunches under the National School Lunch Program. The plan will provide for all students in the participating classrooms, their teachers, their parents/caregivers, and the school foodservice manager to be assessed without exclusions (i.e., no further screening criteria will be applied).

5. Number of respondents

The total estimated number of participants is 369: 180 third and fourth grade students, 180 parents/caregivers of the students, 6 – third and fourth grade teachers, and 3 school food service managers.

Responder estimates are based on response rates of 85% for students, 30% for parents/caregivers, 83% for teachers, and 66% for food service managers. The response rate for students is high because curriculum implementation will occur as part of the regular classroom activities.

Number of Respondents

Target audience	Total number of participants	Proportion of Responders	Proportion of Non-Responders
3 rd -4 th grade Students	180	85% (153)	15% (27)
Parents/Caregivers	180	30% (54)	70% (126)
Classroom Teachers	6	83% (5)	17% (1)
School Foodservice Managers	3	67% (2)	33% (1)
Total	369	214	155

6. Time needed per response

The time needed per response per evaluation instrument for responders and non-responders from each target group is provided below in section 7: *Total Burden Hours on Public*.

7. Total burden hours on public

(a) Affected Public	RESPONDENT TYPE	(b) Survey Instruments	(c) No. of Respondents	(d) Frequency of Responses	(e) [c x d = e] Est. Total Annual Responses Per Respondent	(f) Hours Per Response	(g) [e x f = g] Total Burden Hours	
Individuals & Households	STUDENTS		180					
	Responders (85%)	Pretest	(153)	1	153	0.25	38.25	
		Posttest	(153)	1	153	0.25	38.25	
	Non-Responders (15%) ¹	Pretest	(27)	1	27	0.00	0.00	
		Posttest	(27)	1	27	0.00	0.00	
	SUBTOTAL							76.50
	PARENTS/CAREGIVERS		180					
	Responders (30%)	Posttest	(54)	1	54	0.25	13.5	
	Non-Responders (70%)	Posttest	(126)	1	126	0.08	10.08	
	SUBTOTAL							23.58
	State, Local/Tribal Employees	TEACHERS		6				
		Responders (67%)	Implementation Log	(4)	7 ²	28	0.08	2.24
Non-Responders (33%)		Implementation Log	(2)	7	14	0.04 ³	0.56	
Responders (83%)		Interview	(5)	1	5	0.50	2.50	
Non-Responders (17%)		Interview	(1)	1	1	0.00	0.00	
SUBTOTAL							5.30	
FOODSERVICE PERSONNEL (All schools)		3						
Responders (66%)		Posttest	(2)	1	2	0.25	0.50	
Non-Responders (33%)		Posttest	(1)	1	1	0.08	0.08	
SUBTOTAL							0.58	
TOTAL			369		591		105.96	

8. Project Purpose, Methodology and Formative Research Design:

Background

As authorized under Section 6(a)(3) of the Richard B. Russell National School Lunch Act, 42 USC 1755(a)(3), the Department of Agriculture's Food and Nutrition Service (FNS) provides training and technical assistance for school foodservice, nutrition education for children and their caregivers, and encourages school and community support for healthy eating and physical activity. These

1 Student non-responders will be all students absent for both the pretest and posttest, or absent for the pretest or the posttest.

2 The responding teacher will complete an average of 7 curriculum implementation logs.

3 The non-responding teacher may complete a portion of the average of 7 curriculum implementation logs, consuming an average of approximately 2.5 minutes each.

activities are implemented under the Agency's Team Nutrition initiative that is designed to improve children's lifelong eating and physical activity habits by using the principles of the *Dietary Guidelines for Americans*.

Under the Team Nutrition initiative, FNS is developing garden-related nutrition education lessons that promote fruit and vegetable consumption while meeting education standards for academic course content for grades three and four. These lesson plans will fill a need for a national nutrition education curriculum that connects and reinforces farm-to-school, school garden, and school meal initiatives.

Purpose

The purpose of the proposed formative research is to obtain information from students in the third and fourth grades, their teachers, parents/caregivers, and foodservice managers from participating schools regarding curriculum implementation, including ease-of-use, clarity, lesson quality, feasibility, and perceived student receptiveness. We will use this information to revise and improve the curriculum during the developmental process.

Methodology/Formative Research Design

The formative research will utilize a longitudinal, repeated measure, pretest-posttest design with a combination of quantitative and qualitative methods to determine the degree to which the goals of the curriculum are accomplished. The formative research plan provides for systematic data collection, analysis, and reporting.

The quantitative methods will be comprised of developmentally- and linguistically-appropriate instruments, developed for each of the proposed school-related populations: (1) students; (2) teachers; (3) parents/caregivers; and (4) foodservice managers. Pretest and posttest questionnaires will be administered to students. A posttest only questionnaire will be administered to the school's foodservice managers and parents/caregivers. The qualitative methods will also be comprised of interview questions for the teachers and other data collection instruments (classroom and garden observation notes recorded by evaluation staff contracted by FNS and teacher implementation logs).

Sampling Procedures. Three elementary schools with school site gardens will be selected to participate in the formative research. Two of the three schools have more than 50% of the school population eligible to receive Free or Reduced Priced Lunches under the National School Lunch Program. Within each school, one third grade classroom and one fourth grade classroom will be selected to participate for a total of six classrooms. The plan will provide for all students in grade 3 and grade 4, their teachers, their parents/caregivers, and the school foodservice manager to be assessed without exclusions.

Site Selection. Three schools will be selected from among schools that have school site gardens and are interested in implementing the curriculum in one third and one fourth grade classroom during the fall 2011. From the group of schools identified as being interested in the opportunity, FNS will select three schools sites located in different geographic areas of the country.

Incentives. Curriculum implementation and formative research will be conducted as part of the regular classroom activities. No incentives will be provided for students to participate. Parents/caregivers will be given a packet of vegetable seeds along with their parent posttest survey as an incentive to complete the survey. Assessing the level of parent/caregiver participation is part of the formative research; therefore, providing an incentive as part of the evaluation would skew the results. A stipend to each school (\$750) is being offered to cover costs associated with implementing the curriculum (food preparation equipment, vegetable seeds, seedlings, soil testing, etc.) and cover staff time needed to maintain the garden. A stipend of \$100 is being offered to teachers who complete all evaluation activities and \$25.00 to foodservice managers who participate in the posttest survey.

Consent. The individuals participating in this study will be (1) notified that their pre- or post tests is voluntary and that there will be no penalty if they chose not to participate; and (2) be assured that the information they provide will not be released in a form that identifies them except as required by law. No identifying information will be attached to any reports or data supplied to FNS. Students will use unique identification numbers provided by the school administration, and the researchers will not have access to names associated with those numbers.

Data Collection: 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.

Quantitative Data Collection: Quantitative data will be collected from students and their parents/caregivers, teachers, and foodservice managers at each of the selected schools using paper-and-pencil surveys and teacher logs. Evaluation staff (i.e., contractors working on behalf of FNS) will administer the foodservice manager posttests. Teachers will administer the student pretest, and student and parent/caregiver posttest surveys, using detailed administration protocol developed by the evaluation team. Teachers will self-administer the implementation log for each of the lessons, again using detailed administration protocol developed by the evaluation team. The use of the Internet to collect data was considered, but not used as many low-income individuals do not readily have access to computers, nor can it be guaranteed that participating schools will have access for every student to participate in an online survey at the same time, nor for teachers to complete and submit daily lesson logs. Students will complete a pretest and posttest regarding their attitudes and perceptions regarding the fruits and vegetables featured in the curriculum, fruit and vegetable consumption, perceived availability of fruits and vegetables at home and knowledge of how fruits and vegetables are grown. At posttest only, students will also report on their participation and perception of curriculum activities. Parents/caregivers at posttest only, will report on the availability of fruits and vegetables and perceived changes in student (child) produce consumption at home, and participation in at-home curricular-related activities. The instrument will be distributed by teachers using detailed administration protocol developed by the evaluation team.

At posttest, the foodservice manager (or foodservice director) will report on the extent to which they were involved in curriculum implementation activities (e.g., food preparation, taste testing, cooking in the classroom, education, environment), changes in consumption of fruits and vegetable consumption by students at lunch, and what resources (costs of materials, resources, staff time) were used to support the implementation of the curriculum.

Throughout the curriculum implementation the teachers will complete a lesson implementation log to report on the components of each lesson that were taught, including the distribution of ancillary curricular materials (e.g., newsletters), time spent teaching and working in the garden, number of students participating in curriculum-specific activities, and other subjects into which the nutrition education was integrated.

Qualitative Data Collection: Qualitative data will be collected to inform curriculum development and implementation, using a classroom observation and a posttest interview. The classroom teacher posttest interview will be used to identify teacher-perceived challenges to the implementation of the curriculum, perceived success of lessons, suggestions for curriculum improvement, and perceived student consumption of fruits and vegetables. A midterm classroom observation will be used to assess the fidelity of lesson implementation, challenges of implementation, student participation in, and enthusiasm for, lessons, and progress of the planting and growing of the school garden. The classroom observations and the posttest interviews will be conducted by the expert, skilled evaluation staff. The classroom observation form is not included in the total burden hours on the public (Section 7 above) as this activity requires no time commitment on the part of the teachers.

The table below provides a summary of the data collection activities.

Target Audience	Time 1 (September 2011)	Time 2 (October 2011)	Time 3 (December 2011)
Students	Pretest Survey	Classroom ⁴ Observation	Posttest Survey
Teacher		Classroom Observation	Posttest Interview Teacher Implementation Logs
Parent			Posttest Survey
Foodservice Manager			Posttest Survey

Data Analysis.

The pretest and posttest data from the students, and the posttest data from teachers, parents/caregivers, and foodservice managers, will be compiled and analyzed in order to interpret the findings. The data will be cleaned, reduced, coded, and analyzed using an SPSS program. A combination of nominal (school, teacher, and grade) and ordinal (selected response and Likert scales) measurements will be used to collect data.

Cross-tabulations, the chi-square test (c²) for statistical significance, analysis of variance (ANOVA), the F-Statistic, and Independent-Samples t-tests will be used to compare pre- and posttest data collected from students. Cross-tabulations, and the chi-square (c²) test for statistical significance, will be used to compare categorical data collected only at posttest; Analysis of variance (ANOVA), and the F-Statistic, will be used for questions asked only at posttest when the dependent variable were continuously distributed and the independent variable was categorical. Independent-Samples

⁴Classroom observations are not included in Section 7 above as there is no burden of time on the public.

t-tests will be used to compare pre- and posttest data when the dependent variable is continuously distributed and the independent variable was categorical.

Given the formative nature of this research, findings will be considered descriptive and directional but not definitive. No names will be associated with individual respondents' comments in the final report. No attempt will be made to generalize the findings to be nationally representative or statistically valid.

Reporting. A draft report of the formative research findings, including proposed recommendations for curriculum revisions, will be submitted to FNS for review and comment. Revisions will be made and a final copy of the report, including transcripts of interviews, submitted to FNS.

Outcome. Information gathered from the specific target audiences through the formative research will be used to guide the revisions of the curriculum. FNS may decide to publish summary findings of the evaluation of curriculum implementation either electronically or in print, but such documents will not include information that personally identifies focus group participants.

9. **Confidentiality:** Using the *Agreement on Security of Comments Form* (Attachment 10), participants will be informed of confidentiality and privacy act provisions before responding to the surveys. 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.

10. **Federal Costs:** Contract costs: \$56,468

11. **Research Tools/Instruments:**

Attachments

1. Students
 - a. Student Pretest
 - b. Protocol for Administration of Student Pretest
 - c. Student Posttest
 - d. Protocol for Administration of Student Posttest
2. Parent/Caregiver
 - a. Parent/Caregiver Posttest
 - b. Protocol for Distribution of Parent/Caregiver Posttest
3. Teacher
 - a. Teacher Posttest Interview Guide & Reporting Form
 - b. Teacher Implementation Log
 - c. Protocol for Completion of Teacher Implementation Log
 - d. Classroom Observation Form
 - e. Protocol for Administration of Classroom Observation Form
4. Foodservice Manager
 - a. Foodservice Manager Posttest
 - b. Protocol for Distribution of Foodservice Manager Posttest