



Meeting the Challenges of Serving Scratch-Prepared Foods in  
School Nutrition Programs

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# Meeting the Challenges of Serving Scratch-Prepared Foods in School Nutrition Programs

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### **VISION**

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### **MISSION**

Provide relevant research-based information and services that advance the continuous improvement of child nutrition programs.

# Institute of Child Nutrition

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# MEETING THE CHALLENGES OF SERVING SCRATCH-PREPARED FOODS IN SCHOOL NUTRITION PROGRAMS

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## EXECUTIVE SUMMARY

### Background

The prevalence of ultra-processed foods (UPFs) in children’s diets is a major public health concern. Between 1999 and 2018, UPF consumption among U.S. children aged 2–19 years increased from 61.4% to 67.0% of daily calories. High intake of UPFs is associated with obesity, metabolic disorders, poor cardiometabolic health, and academic difficulties. Although UPFs dominate children’s diets, certain types (e.g., fortified cereals, plant-based meat alternatives, high-pressure processed foods) can provide public health benefits in specific contexts.

Scratch cooking in schools—preparing meals from basic, unprocessed ingredients—offers a viable pathway toward healthier school meals. Research shows that scratch-prepared meals improve nutritional quality; reduce calories, fat, and sodium; and increase student acceptance and participation. However, implementation is constrained by barriers including costs, staffing, facilities, and procurement regulations.

### Objectives

The objectives of this study were to:

- Identify challenges school nutrition professionals face when offering scratch-prepared meals;
- Assess the prevalence of these challenges nationally; and
- Recommend strategies and best practices for overcoming barriers.

### Methodology

The project was conducted in three phases:

**Phase I: Literature Review:** Examined existing evidence on scratch cooking in schools and UPF impacts.

**Phase II: Review Panel:** Experts from the school nutrition field, State agencies, chefs, food distributors, and equipment providers validated survey content.

**Phase III: Data Collection & Analysis:**

- Pilot survey (n=76) tested reliability. Cronbach’s Alpha >0.80 confirmed strong internal consistency.
- National survey distributed to over 218,000 school nutrition professionals; 661 completed responses were analyzed.

- Respondents represented all U.S. states and territories except Delaware, Guam, the U.S. Virgin Islands, American Samoa, and the Northern Mariana Islands.

## Key Findings

Approximately 64% of respondents were district-level directors/supervisors. Nearly one-third had 20+ years of experience. Most worked in small (<5,000 students) or very small (<1,000 students) districts. Seventy-five percent of respondents reported “some food prepared from scratch,” while only 13.8% reported “most food prepared from scratch.”

The major challenges associated with ingredients and scratch cooking in schools were additional food costs (81.5%) and compliance with procurement regulations (83%). The major challenges associated with recipes and scratch cooking were staff skill level (68.2%), developing crediting statements (59.2%), and staff support (51.4%). Small districts reported more difficulty adjusting recipe serving sizes, and decentralized production increased quality consistency issues. The leading barriers associated with menus and scratch cooking in schools were additional labor costs (65.8%), food costs (60.8%), and staff skill level (58.2%). Site-level staff rated food safety and staff skill as greater challenges than district administrators. Regional variability was evident in cycle menu development and cost calculation.

When survey respondents were asked to identify strategies to overcome these challenges, seven themes emerged:

**Staffing & Training:** Increase wages, provide culinary training, and improve leadership support.

**Financial Management:** Advocate for higher reimbursements, pursue grants, bulk purchasing.

**Procurement & Vendor Relations:** Simplify United States Department of Agriculture (USDA) rules, use purchasing cooperatives, partner with multiple vendors.

**Operations & Menu Planning:** Phase in scratch recipes, use cycle menus, hybrid USDA/scratch approaches.

**Facilities & Equipment:** Invest in modern kitchens and centralized production models.

**Policy & Regulations:** Streamline compliance, support universal meals, and reduce paperwork.

**Collaboration & Partnerships:** Build partnerships with farms, culinary schools, and regional networks.

## Conclusions

The transition to scratch cooking in schools holds significant promise for improving children’s diets and health outcomes. Systemic barriers, particularly food and labor costs, procurement regulations, workforce training gaps, and facility limitations make large-scale implementation difficult.

Findings suggest the following challenges. Financial issues are the most pressing, especially for frontline staff. Workforce skill gaps and administrative burdens hinder recipe and menu development. Local context (district size, production style, state policies) strongly shapes challenges.

## **Applications**

### **For School Districts:**

- Start small and introduce scratch recipes gradually.
- Invest in culinary training and professional development.
- Balance high-cost items with budget-conscious menu planning.

### **For Policymakers and Funders:**

- Increase federal/state reimbursement rates.
- Expand grant opportunities for training and equipment.
- Streamline procurement and compliance processes.

### **For Community Partners and Vendors:**

- Strengthen farm-to-school supply chains.
- Partner with local colleges and culinary institutions.
- Share best practices across districts.

### **For Researchers:**

- Examine contextual differences (e.g., district size, location, production models).
- Use mixed-methods research to better capture staff and student perspectives.



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