



Tisch Food Center Report

Cooking Outside the Box:

How a Scratch Cooking Pilot in the Bronx is Reshaping Meals In New York City Schools

December, 2019





Laurie M. Tisch Center for Food, Education & Policy Program in Nutrition Teachers College, Columbia University

The Center cultivates research about connections between a just, sustainable food system and healthy eating and translates it into recommendations and resources for educators, policy makers, and community advocates. The Center focuses on schools as critical levers for learning and social change.

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And, finally we want to thank everyone who works toward, and cares about, making school meals an enjoyable, delicious, culturally relevant, and educational part of the school day.



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Acronyms

Short Hand	Name
ADA	Average Daily Attendance
CBO	Community Based Organization
DOE	Department of Education
DOHMH	Department of Health and Mental Hygiene
FDNY	Fire Department of the City of New York
FOS	Food Ordering System
FPR	Food Production Records
FY	Fiscal Year
GFPP	Good Food Purchasing Program
HACCP	Hazard Analysis and Critical Control Point
HHFKA	Healthy Hunger Free Kids Act of 2010
ILF	Intervention Level Framework
M/E	Meal Equivalency
NSLP	National School Lunch Program
OFNS	Office of Food and Nutrition Services
OSIS	Office of School Information Systems
PP	Participation Percentage
PCM	Paper, Cleaning, Miscellaneous
PD	Professional Development
RSCP	Return to Scratch Cooking Pilot
SCA	School Construction Authority
SFSM	School Food Service Manager
SLH	School Lunch Helper
SOP	Standard Operating Procedure
USDA	United States Department of Agriculture
WITS	Wellness in the Schools
YTD	Year-to-Date

Letter from the Executive Director

“After bread,’ said the greatest of the French revolutionary statesmen, ‘education is the first need of people.’ The fierce and intrepid common-sense of Danton enabled him to see the vital importance of public instruction, but it enabled him to see that education is not and cannot be the first need of a people. The first need is food.”

- After Bread, Education: A Plan for the State Feeding of School Children, The Fabien Society, April 1905

That 1905 quote makes the case for feeding school students. While we may believe that the United States accomplished this with the creation of the National School Lunch Program in 1946, over 60 years later we have not yet achieved the essence of Georges Danton’s urging. That is, make feeding students, and feeding them well, a core priority of schools. Eating during a long school day increases students’ readiness to learn. What students eat and their experiences at school meals teaches students a lot about food, health, community, culture, and life.

Cooking Outside the Box: How a Scratch Cooking Pilot in The Bronx is Reshaping Meals in New York City Schools, describes how two New York City (NYC) public school kitchens transitioned to a full scratch cooked menu and how this is leading the way to long-term change in what NYC school students eat at school.

This is a “systems change evaluation.” That means we spent a lot of time in the two kitchens that were in this pilot. We carefully documented what changed and how change happened. We looked at four big elements of change:

- ***Ingredients and Recipes for Scratch Cooking*** showed us what new ingredients were needed to transform to scratch cooking. We also learned about how recipes had to be practical, kid-appropriate, and, of course, meet the nutritional standards of our national school meal programs.
- ***A Kitchen for Scratch Cooking*** helped us understand how the kitchens were set up. We saw walk-in coolers transition from boxes of packaged food to fresh foods in clear bins. We saw raw protein zones that ensured food safety. We saw fresh fruit and vegetable chopping set up in areas visible to students as they went through the serving line.
- ***Cooking from Scratch*** showed us what goes on when school meals are scratch cooked. We saw sauces made from fresh whole ingredients, smoothies made with immersion blenders, and bone-in raw chicken marinated overnight, then cooked the following day.
- ***Feeding the Community*** showed us how serving lines were set up to entice students to try new foods. While teachers, principals, parents, and students were excited about the scratch cooked meals, this was still a big change. Change is hard and change takes time. We learned that constant communication about, and attention to, school meals by everyone in the school community is needed to meet Danton’s vision of “after bread, education.”

If you are from NYC, we hope you enjoy learning what happened during this pilot. We think you will be particularly interested in ***Chapter IX A Path to Expansion***, that shows how we need collaboration, coordination, and investment from government, the Department of Education, and everyone in schools to work toward the Office of Food and Nutrition Services’ goal for all students to get scratch cooked meals every day. If you are from outside of NYC, we hope you are inspired and learn what it takes to move toward more scratch cooking at the schools in your community.

Sincerely,



Pamela Koch, EdD, RD

Key Takeaways

With parents, students, politicians, and advocates clamoring for better school food, our study shows that the largest school system in the country can successfully turn back the clock and serve scratch cooked meals to students.

Our study also showed that this was no small feat. Instead, moving from many processed foods to entirely scratch cooked meals required complex systems change given the massive size and scale of New York City (NYC) Department of Education (DOE) and Office of Food and Nutrition Services (OFNS).

Successfully transitioning kitchens during the *Return to Scratch Cooking Pilot* was not a given — it depended on political will from the top, creativity from external partners, and buy-in from many DOE departments and school community members. As with any pilot, the initial model evolved over time, from a focus on individual kitchens to exploring how to introduce some scratch cooked items citywide. While the focus of this study was not on economic outcomes, our findings show that food and labor costs have the potential to be cost neutral at scale.

The ultimate goal is for all NYC students to have full scratch cooked meals year-round. The New York City Council has called for DOE to give them a plan and timeline for fully transitioning to scratch cooked food service.

Our research shows that in order to scale further, the city will have to make a serious investment in kitchen infrastructure, staff training and advancement, coordination of internal and external stakeholders, and promoting school meals in partnership with community partners. All of these elements are critical to the long-term systems change involved in shifting how we feed our city's children in the coming years.



Scratch cooked meal.

Executive Summary

Introduction

The New York City (NYC) Department of Education (DOE) assumed responsibility for school meals in 1918 (Ruis, 2017). In the hallways of the NYC DOE Office of Food and Nutrition Services (OFNS) there are photographs of kitchens from the 1920s–1950s depicting school food workers preparing meals from scratch, which continued through the 1990s. However, in the 1980s when the United States Department of Agriculture (USDA) decreased school meals funding, particularly for kitchen equipment and upgrades, and the U.S. food supply transitioned to processed foods, many school food programs transitioned to serving more pre-made processed products. This trend toward processed food products continues. Since the early 2000s there has been significant discussion, demands and actions by health and nutrition professionals, researchers, school personnel, parents, and advocates to move away from highly processed and packaged foods, and go back to scratch cooked meals.

In 2004, the NYC DOE OFNS, the largest school food service provider in the country, initiated the first of many student meal initiatives, SchoolFoodPlus. NYC also made food access and the food system a priority in 2007 by establishing a Food Policy Coordinator in the Mayor’s Office. The passing of the Healthy Hunger Free Kids Act (HHFKA) in 2010 created a national spotlight on nutritious school meals. Advocacy and initiatives aimed at school meals increased exponentially over the past decade. One hundred years since the then “Board of Education” assumed responsibility for school meals, the time was right for a radical strategic change and the development of the Return to Scratch Cooking Pilot (RSCP).

Since a full scratch cooked menu had not been produced in NYC kitchens in two decades, a scratch cooking pilot in a few kitchens was essential for providing the understanding and strategies to achieve the goal of all kitchens moving toward more scratch cooking in the future. Additionally, OFNS decided that an external partner, experienced with implementing full scratch cooking for all school meals (e.g., breakfast, lunch, supper, snack) under the HHFKA guidelines would facilitate their success. Thus, OFNS entered a partnership with Brigaid, a for-profit school food consulting company, founded by Chef Dan Giusti. The Bronx was selected for the RSCP because it is one of the poorest of 62 NY state counties, with the highest incidence of diet-related disease. From its inception in early 2017, the purpose of the RSCP was to inform and guide citywide expansion of scratch cooked food service for all NYC public school students. From 2017–19, Brigaid consulted, then partnered, with OFNS toward achieving this goal.

This evaluation of the RSCP had three goals:

- 1) Document the systems change that occurred in the two kitchens that were part of the RSCP during the 2018-2019 school year.
- 2) Understand how a wide range of stakeholders experienced the RSCP.
- 3) Based on lessons learned by the RSCP, provide implementation guidance to facilitate expansion of scratch cooked food service* for all NYC students.

For this report, for expansion of scratch cooking, we use the definition of **scratch cooked food service**,* from City Council Int. No. 1676 (Introduced August 14, 2019). This definition is, “food service that prioritizes the preparation of meals or snacks on a daily basis at or near the site of consumption with ingredients in their most basic form.”

* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.



Serving line.

Scratch Cooking Systems Change

A systems change approach was employed because radical change in an organization of NYC DOE OFNS's magnitude requires a deep evaluation of the systems that would be disrupted for the innovation to affect sustainable change. Systems are dynamic and alive, as they are constantly changing and adapting. Systems change research examines the three parts of a system; *elements*, *interconnections*, and *purpose*.

For this evaluation there are four *elements*:

- 1) ***Ingredients and Recipes for Scratch Cooking***: Identifying and procuring new ingredients and recipes for scratch cooked meals.
- 2) ***A Kitchen for Scratch Cooking***: Selecting and setting up kitchens with the physical infrastructure for receiving, storing, and preparing raw ingredients, including raw proteins, for scratch cooked meals.
- 3) ***Cooking from Scratch***: Hiring and training kitchen teams to store, prepare, serve, and manage scratch cooked meals. OFNS contracted Brigaid to introduce a chef in school kitchens to lead scratch cooked meals.
- 4) ***Feeding the Community***: Serving, informing, collaborating with, and gathering feedback from school stakeholders about scratch cooking.

Within these elements there are four *interconnections*:

- 1) ***Policies***: Policies are at multiple levels of the system including federal, state, city, organizational, and school that influence the management of school meals and still need to be complied with, even as the systems change.
- 2) ***Practices***: Practices are the necessary tasks that occur throughout the system from planning, to preparing, to serving meals.
- 3) ***People***: People are all the people who play a role in the system including: OFNS leaders and school-based staff, students, principals, teachers, school staff, parents, and others in the school community.
- 4) ***Promotion***: Promotion is the communication and marketing that builds awareness, support, and enthusiasm for the systems change. Promotion could be internal to OFNS for employees and external from OFNS for the school community. Promotion also includes food and nutrition education that is supportive of school meals.

The *purpose* was to provide scratch cooked food service in NYC DOE kitchens.



Fresh fruit.

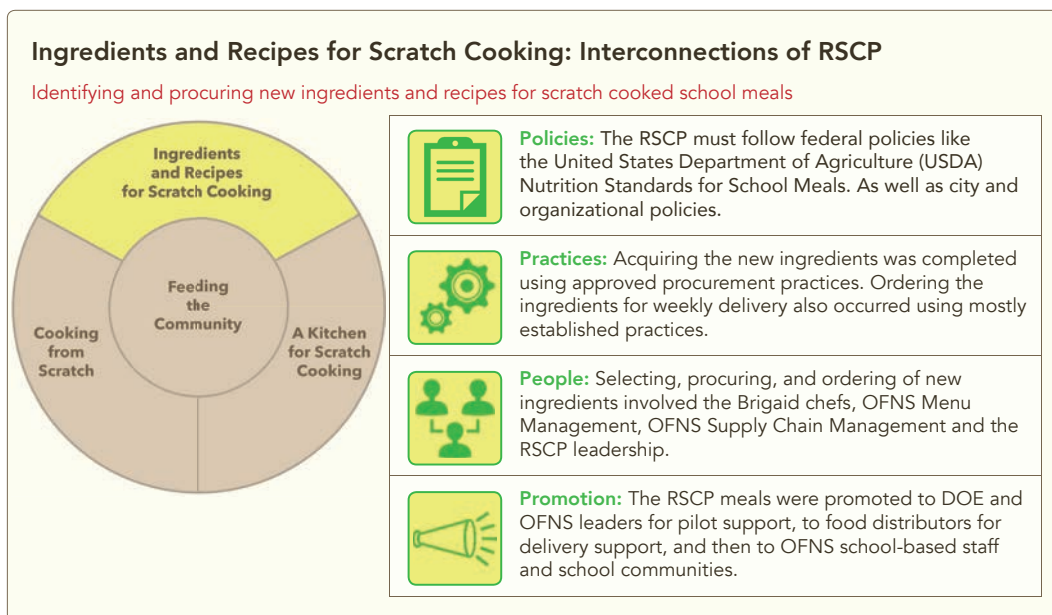
Evaluation Methods

This qualitative evaluation captured the development of the RSCP during the 2017–18 school year and the implementation during the 2018–19 school year. This pilot took place in two sites, called Site A and Site B. Site A implemented the full scratch cooked menu for the full school year for four co-located high schools. Site B started in February with a partial scratch cooked menu, then served a full scratch cooked menu from March to June. Site B served one K–8 school. There were seven sources of data collected and analyzed for this evaluation:

- 1) **Interviews:** Conducted and analyzed 57 interviews with 11 key players and 43 school stakeholders.
- 2) **Kitchen Observations:** Conducted five two-day observations; observations occurred from early morning until the last lunch was served, and documented the procedure of preparing and serving scratch cooked meals in the pilot kitchens.
- 3) **Document Review:** Reviewed over 200 RSCP documents including recipes, meeting agendas, job descriptions, training manuals, and metric reports.
- 4) **Attend Meetings:** Attended approximately 15 meetings at OFNS headquarters, the pilot schools, and other locations in which the RSCP was discussed.
- 5) **Photographs:** Took, organized, and analyzed 3,000+ photographs of the kitchens, equipment, food, food preparation, and food presented on the serving lines.
- 6) **Student School Lunch Attitude Surveys:** Collected and analyzed 358 student surveys with 4th and 7th grade students at one of the pilot sites that were administered pre and post scratch cooked meals.
- 7) **Community Dinner Satisfaction Surveys:** Collected and analyzed 558 surveys at a Community Dinner served during parent-teacher conferences at one of the RSCP sites.

Ingredients and Recipes for Scratch Cooking

The first element of systems change for the RSCP was creating menus for breakfast, lunch, supper, and snack in compliance with the USDA Nutrition Standards for School Meals and the more restrictive NYC and OFNS nutrition standards. Selecting and ordering the ingredients for the RSCP recipes also required understanding OFNS procurement *policies* and *practices*. This process involved *people* from OFNS Menu Management, Supply Chain Management, and Information Technology as well as Chef Dan Giusti and Chef April Kindt from Brigaid. The *promotion* of the long term strategy and benefits requires buy-in among DOE and OFNS stakeholders.



Key Findings

- Planning involved understanding and working within existing policies.** Planning the RSCP menu involved understanding all of the federal, state, city, and OFNS policies impacting which ingredients could be used to prepare recipes and when those recipes could be served on the monthly menu. The menu, recipes, and ingredients were developed by Brigaid and finalized collaboratively with OFNS Menu Management and Supply Chain Management departments.
- Procuring ingredients was a complex process.** Ordering the ingredients for the RSCP in time for September 2018 school meal production was a critical task that began with menu planning. OFNS and Brigaid then used strategic approaches to procure new items, negotiate cost and delivery with contracted distributors, and abide by ordering dates and product ordering minimums. The ordering process also included forecasting meal production based on recipe popularity. This process was ongoing from months before the first students at an RSCP school sampled the entrée, and through months into students and teachers experiencing the RSCP. The Brigaid Regional Chef led the ingredient ordering process and was the primary contact for OFNS.

- **Partnering with Brigaid facilitated rapid initiation of the pilot.** Brigaid had a year of student feedback on the recipes they used in New London, CT. Most of the initial recipes used in the pilot were Brigaid recipes. Tasting the RSCP recipes with OFNS staff occurred as part of introducing the menu. OFNS school-based staff and students were not involved with approving the initial menu.
- **Combining OFNS and Brigaid recipes accelerated later in the pilot.** More synergy with recipes occurred as OFNS and Brigaid had more time to work together. Additionally, as OFNS's Menu Management became more involved in scratch cooking, some Brigaid recipes were replaced by OFNS recipes, and OFNS recipe preparation instructions were revised by Brigaid. This allowed for the development of scratch cooked recipes that could be used in more of the OFNS menus across NYC schools than just the Scratch Cooked menu.



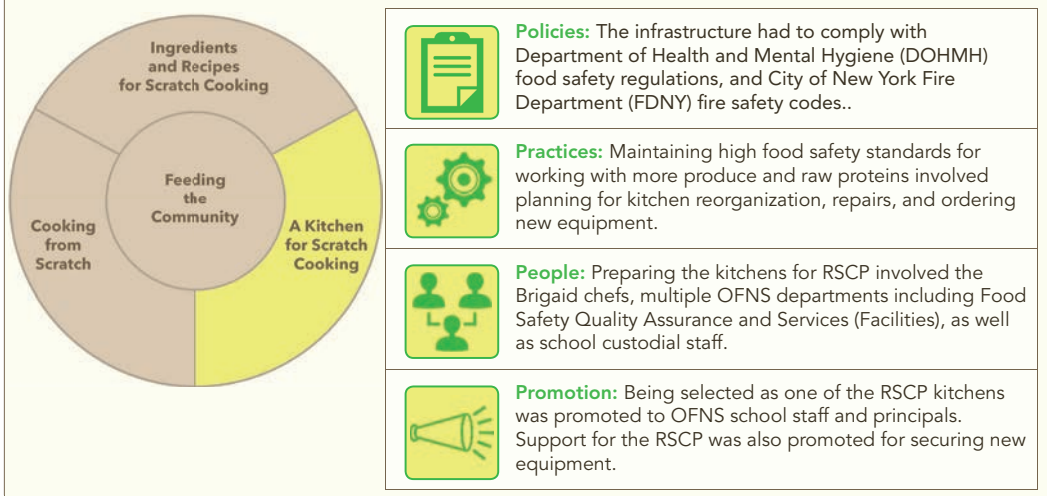
Smallwares.

A Kitchen for Scratch Cooking

The second element of change for the RSCP was identifying and organizing the kitchen to store, prepare, and cook recipes made from an increased volume of raw products, including raw proteins, in compliance with all Department of Health and Mental Hygiene (DOHMH) and Fire Department of the City of New York (FDNY) **policies** (regulations and codes) for food and fire safety. Meeting, and exceeding, the requirements necessitated kitchen upgrades, plumbing and electrical work, ordering of special large equipment (especially dishwashers) and smallwares, deep cleaning of all surfaces, and creating designated food production zones. Performing this work involved **practices** for approving expedited work orders so that the kitchen organization supported the new food production. The **people** involved represented multiple levels within DOE and OFNS from directors of School Services (Facilities) and regional supervisors, to school custodians, and tradespeople. Finalizing the RSCP kitchens also meant **promoting** the RSCP to the school community, including OFNS school-based staff, principals, and custodians who would share responsibility for performing the work.

A Kitchen for Scratch Cooking: Interconnections of RSCP

Selecting and setting up kitchens with the physical infrastructure for receiving, storing, and preparing raw ingredients, including raw proteins, for scratch cooked meals.



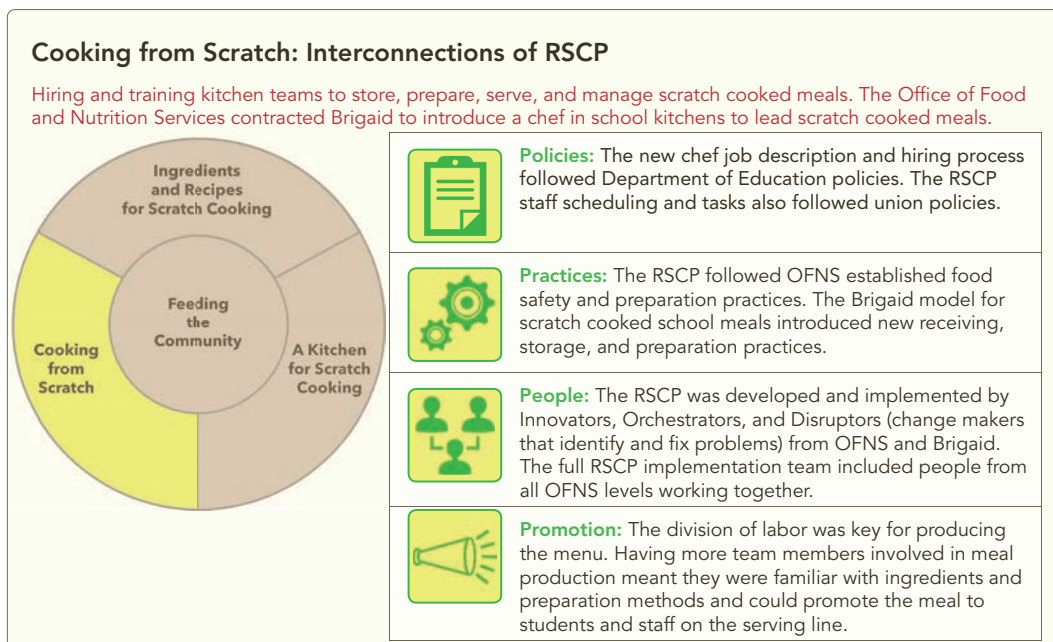
Key Findings

- Selecting kitchens for RSCP involved many people and many kitchen features.** Kitchen assessment included the Brigaid consultants, OFNS leadership, Bronx superintendents, and Bronx principals. The kitchens were assessed for kitchen infrastructure and facilities, and for meeting food and fire safety codes, which was key for passing inspection. Additionally, discussions with school principals to determine if they would be responsive and supportive of the evolving implementation process were important for selection.
- Preparing RSCP kitchens was a long, detailed process.** Preparing the RSCP kitchens required months of planning. Then there was a systematic reorganization of work spaces into more clearly defined zones (e.g., raw protein, produce prep, hot zone). There were systems developed for daily coordinated communication between multiple departments to manage the workflow of kitchen repairs, equipment delivery, and installation. Kitchen preparation also included deep cleaning of all food storage, preparation, serving, and eating spaces, as well as office cleaning and reorganization. The preparation was led by the Brigaid consultants and necessitated involvement from DOE building facilities, OFNS staff from multiple levels, school custodial staff, and tradespeople for electrical and plumbing expertise.
- Using designated zones for kitchen tasks was a key to success.** Producing scratch cooked school meals in RSCP kitchens reinforced the importance of zones to create a kitchen structure that allowed for safe, efficient, and timely meal service. Zones made it clear to everyone in the kitchen that specific tasks were done in specific places. Zones were key to maintaining food safety practices. Zones were also key for having space for the current day's meal preparation, side-by-side with advanced preparation for items to be served on future days. The zones were introduced and implemented by the Brigaid consultants.

- **Using raw proteins took multiple systems changes.** OFNS had not used raw protein in any of their kitchens for several decades before this pilot. Meeting all the fire safety codes was accomplished through kitchen inspections and upgrades. Achieving all the food safety standards for working with raw proteins was accomplished through designated kitchen storage, production spaces, and supplies for raw protein. Commercial dishwashers were also donated and installed for additional food safety protection. Meeting, and working toward exceeding, fire and food safety standards was prioritized by OFNS leadership and Brigaid consultants. Brigaid consultants worked with OFNS Training and Food Safety Quality Assurance to implement and train all staff on food safety protocols.

Cooking from Scratch

The third element of systems change for the RSCP was hiring and training consultants, chefs, and staff to prepare, cook, and serve the raw ingredients in the reorganized kitchens in compliance with all of the DOE and OFNS employment *policies*, and according to the meals program recordkeeping requirements. Training for the new food handling and recipe production *practices* occurred on-the-job by Brigaid. New *people* were also hired like the Brigaid consultants, an executive chef for each kitchen, and additional school lunch helpers to support the increased tasks. *Promotion* of the new foods began with educating OFNS school-based staff about the new ingredients and cooking techniques, and incorporating them into the morning huddle agenda.



Key Findings

- Creating the executive chef position took coordination and a long chain of approvals.** Implementing the Brigaid model of hiring a chef for each RSCP school meant creating a new position within the NYC DOE. This required OFNS to receive DOE Human Resources and Budgeting approval for advertising, interviewing, and hiring for the new position. Maintaining maximum flexibility for this position was essential since the roles and responsibilities were expected to evolve and change throughout the pilot.
- Hiring the executive chef necessitated creating a new interview process.** Hiring for the executive chef introduced a new extensive process adapted from the Brigaid model that included traditional interview questioning. Additionally OFNS created brand new procedures for observing the potential chefs' culinary skill and creativity over two days of preparing sample meals in a NYC public school kitchen. Brigaid consultants and senior OFNS leadership were involved in the interviewing process to jointly select the best candidates for the RSCP.
- Training OFNS school-based staff for scratch cooking was mostly done on-the-job.** Training OFNS school-based staff to produce scratch cooked meals involved communication of skill levels, coordination of scheduling according to seniority, and one-on-one on-the-job training. The training was led by the Brigaid consultants and reinforced by an OFNS kitchen leadership team composed of the new executive chef, school food service manager, and cook. The personalized training facilitated skill development, with employees working more independently and two employees being promoted during the RSCP.
- Preparing recipes multiple times built OFNS staff confidence.** OFNS's scratch cooked menu had a three-week rotation. This allowed OFNS staff to prepare the same recipes multiple times over the school year, which is the normal OFNS practice. As OFNS staff had more exposure to each recipe they were able to successfully perform more and more tasks on their own with little guidance from the executive chef, school food service manager, and cook.



Making tomato sauce.

- ***Serving scratch cooked food service for an entire school year was achieved in New York City public schools.*** The partnership between OFNS and Brigaid safely served PreK-12 students scratch cooked meals made from raw proteins including chicken, turkey, beef, and whole eggs.
- ***Managing the evolution of the RSCP in two kitchens required continuous strategic alignment.*** Throughout the pilot, strategies and procedures were aligned and re-aligned to meet the objectives set by the RSCP leadership team. The pilot was able to be successful because the leadership from both Brigaid and OFNS worked in collaboration to re-balance responsibilities among the kitchen leadership team, to clarify roles, and streamline accountability.
- ***Transitioning from an executive chef to a culinary manager will work for expansion.*** The RSCP leadership team learned a lot about what it takes for scratch cooking to be successful in NYC public schools. While the executive chef was essential for the initial pilot of scratch cooking, future schools would be able to successfully scratch cook meals with a kitchen leadership team led by a culinary manager that would replace the executive chef and school food service manager. A culinary manager would be a person who had some food service and culinary expertise, but not necessarily a full chef. This culinary manager would work with a cook and assistant cook. This structure would be more aligned with OFNS organizational structure and is essential for expanding scratch cooked food service.



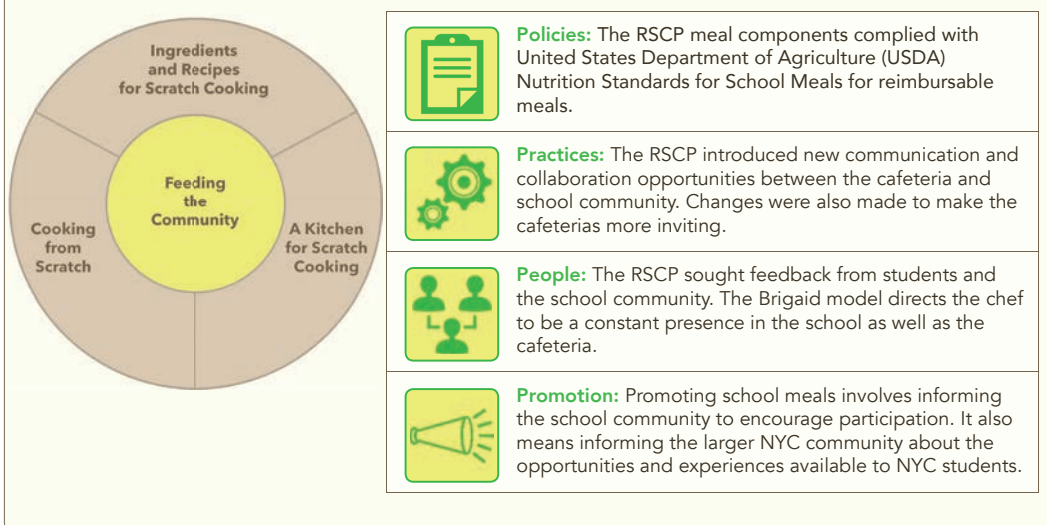
Serving line.

Feeding the Community

The fourth element of systems change for the RSCP was addressing the perception of, and stigma around, school meals and gaining buy-in from the entire school community of students, staff, principals, and teachers for school meals. Encouraging school meal participation did not require changing DOE or OFNS *policies*, as the existing policies already allowed teachers and principals to purchase school meals. However, the schools established different processes for implementing these *policies*. In making the food appealing and available to the entire community, the RSCP also worked to make the cafeteria welcoming and implemented new *practices* around school dining, and collaborating with school partners. The community included all the *people* associated with the school including parents. *Promoting* the RSCP occurred throughout the RSCP schools as well as through local and national media.

Feeding the Community: Interconnections of RSCP

Serving, informing, collaborating with, and gathering information from school stakeholders about scratch cooking.



Key Findings

- Involving school communities in promoting school meals was part of the model, but was not implemented consistently across all schools.** Informing the school community about their school meals is an important and ongoing process shared by OFNS and the school leadership for maintaining student participation. The Brigaid model stresses menu awareness and ongoing feedback for tailoring recipes to the school community. When OFNS leadership identified that school meal participation was declining, they worked with the school to post the breakfast and lunch menu throughout the schools and announce the menu as part of morning announcements.
- Creating a physically attractive as well as a caring and calming cafeteria environment makes meals more enjoyable.** One of the sites added an additional eating space that was smaller and quieter to give an additional option for students and staff. Many teachers and students ate together in this space. The K–8 site used the cafeteria public announcement system to encourage students to try the meals and share their opinions with other students. Once in a while OFNS school-based staff came out of the kitchen and into the cafeteria to hear what students thought about the meals. These provide examples of meeting the need for an atmosphere where the school community enjoys eating together. Constant interaction between students, school lunch aides, principals, and chefs can foster this environment.

- ***Encouraging teachers to buy school lunch creates school meal ambassadors.*** Teachers participated in a luncheon a few days before school started to try some of the scratch cooked menu items. During the luncheon teachers learned how they could purchase school meals during the school year. Teachers also learned about the changes to the menus, about the ingredients being used, and had the opportunity to ask questions of OFNS and Brigaid leadership. Many teachers purchased school meals throughout the entire school year and encouraged students to eat school lunch.
- ***Respecting OFNS school-based staff integrates them into the school community.*** Having everyone in the school respect the work of OFNS school-based staff as culinary professionals can be achieved with ongoing communication that informs students and parents about how OFNS prepares food with care and expertise. While this did not happen consistently throughout the school year at the two pilot sites, some examples were teachers touring the kitchen, and OFNS staff coming into the cafeteria demonstrated the benefits of building this respect for OFNS school-based staff.
- ***Hosting parents for events when school meals are served makes them feel connected.*** At each pilot school there was at least one event for parents during parent-teacher conferences. At one site, parents were able to taste samples of some of the scratch cooked items. Most parents said they really liked the items, as collected by “dot voting” on a poster. At the other site, there was a Community Dinner in which parents and students received a full meal. Through a survey parents and students reported that they were highly satisfied with this meal, thought it was better than other school meals they had previously eaten, and overwhelmingly agreed that this meal should be on the menu for all NYC schools.
- ***Integrating school meals into educational experience builds excitement.*** Integrating school meals into the educational experience for students takes the commitment and coordination of all school and OFNS staff. This is important to build excitement about school meals. The Brigaid model encourages that the executive chef regularly interact with students and the school community to gather feedback on school meals. At one of the pilot sites, a small step was taken with a Community Based Organization (CBO) where the CBO staff member facilitated tastings of scratch cooked recipes in the cafeteria and in some of her educational sessions. The staff member also created a new salad dressing recipe with students that was introduced on the salad bar. Thirdly, the staff member translated the scratch cooked recipes served at the Community Dinner for parents to be able to make these recipes at home.

However, *Ingredients and Recipes for Scratch Cooking*, *A Kitchen for Scratch Cooking*, and *Cooking from Scratch* took precedent over *Feeding the Community* in this pilot. Only initial steps on integrating school meals with education were accomplished. Yet, the example above describing the relationship with a CBO shows the possibility and potential of this kind of integration.

Metrics

Metrics are used to measure how a new initiative compares to pre-existing benchmarks. The most standard metric for school meals is student participation, i.e., taking the school meal. In addition to student participation, OFNS and Brigaid also identified other important metrics to track, because of the vast systems change undertaken for this pilot.

Student participation is measured as a percentage, and calculated as the number of meals served divided by average daily student attendance. For this pilot, student participation declined when compared to the previous school year. While a 5% to 7% increase in student participation was expected, the data revealed about a 10% decrease across the two sites. Year-to-year student participation data may have unexplained variations as student participation data are collected in different ways across DOE schools.

Food, supply, and labor costs vary by student participation, or the number of meals served. When more students take meals, costs increase and vice versa. Because there are certain fixed food, supply, and labor costs, increased student participation is more cost effective. This report presents data on percent increase or decrease for food, supply, and labor costs, as compared to the previous school year. These costs are reported per 100 meals. This accounts for the impact of fluctuating student participation on those costs. In this pilot, food, supply, and labor costs showed promising trends.

Over the 10 months of the pilot, **food costs** showed an increase of 6% at Site A. Site B served scratch cooked meals for five months. At Site B, food costs decreased by 12%. This decrease at Site B may be due to what was learned at Site A. Additionally, food costs would be expected to decrease as scratch cooked ingredients are purchased at higher volumes across the entire school system.

Supply costs increased at Site A by 16% and decreased by almost 10% at Site B. Like food costs, this decrease at Site B could be attributed to what was learned at Site A.

Labor costs were expected to increase by 40% over the previous year. For both sites, labor costs averaged 120% higher than the previous year. A closer look at the data over the 10 months of the pilot at Site A uncovered a downward trend. During the first three months of scratch cooking (September to November), labor cost averaged 176% higher than the previous year. However, the last three months of the pilot (April to June), labor costs averaged 64% higher than the previous year. The final month (June), had labor costs 28% higher than the previous year, below the projected increase of 40%. This implies that as OFNS school-based staff become more skilled at scratch cooking, initial increases in labor costs can decrease.

Overall these metrics show attention needs to be paid to the entire school community working on increasing student participation. Additionally, these data show that food costs have the potential to further decrease (beyond the decreases shown at Site B) as OFNS continues to learn from scratch cooked recipes menu development. Scratch cooking requires more labor and is expected to increase labor costs. This increase can be minimized through initial and ongoing training of OFNS school-based staff. Finally, since food, supply, and labor costs are calculated accounting for student participation, if student participation increases these costs could be expected to be lower.

A Path to Expansion

The third goal of this evaluation is, “based on lessons learned by this pilot, provide implementation guidance to facilitate expansion of scratch cooked food service across all New York City schools.” As stated previously, “**scratch cooked food service**”^{*} means food service that prioritizes the preparation of meals or snacks on a daily basis at or near the site of consumption with ingredients in their most basic form” (from City Council Int. No. 1676, Introduced August 14, 2019).

When the RSCP was first conceived, it was envisioned as a 20+ year plan to implement a full scratch cooked menu at DOE schools. However, societal, policy, and advocacy trends accelerated the rate of expansion of scratch cooking.

The ultimate goal of providing scratch cooked food service for all students in all schools, both during the school year and for summer meals will take a multi-pronged approach. This includes policies and financial investment from government, as well as coordination and collaboration across many stakeholders. To reach this goal there are four interrelated phases of expansion.

Phase 1- Expansion within OFNS

Scratch cooking started as a vision of a few in OFNS upper administration. To expand scratch cooking, to reach the goal of all meals meeting the definition of scratch cooked food service, necessitates all OFNS departments and all employees at all levels to be involved in, excited about, and committed to scratch cooking. The following key milestones demonstrate how what was learned in this pilot can pave the way for all students to eat scratch cooked meals.

Achievements

- More OFNS departments engaged in scratch cooking including Menu Management, Supply Chain Management, Training and Staff Development.
- Brigaid role evolved from working primarily with Stephen O’Brien, Director of Strategic Partnerships and Policy, to working directly with several OFNS departments.
- Food safety regulations and fire safety codes were achieved in the two pilot kitchens.
- Positive feedback from students, teachers, and principals about meals inspired further expansion.
- This pilot provided the experience necessary to continue to expand scratch cooking.

^{*} The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

Recommendations

- Continue to develop scratch cooked recipes that can be served across menus.
- Expand culinary training for scratch cooked food service for all OFNS school-based staff.
- Continue to solicit feedback from students, teachers, and principals as new scratch cooked recipes are developed.

Phase 2 -

Expand Full Scratch Cooked Menu to More Kitchens

OFNS plans to and should continue to have more kitchens participate in the full scratch cooked menu. This will allow OFNS to continue learning about implementing scratch cooking in NYC kitchens as well as establishing demonstration and training sites for scratch cooking.

Achievement

- Committed to implementing full scratch cooked menu in two new kitchens for the 2019–20 school year.

Recommendations

- Continue expansion of full scratch cooking to new kitchens every school year.
- Transition from Executive Chefs to Culinary Managers for future kitchens on the full scratch cooked menu.
- Utilize the kitchens on the full scratch cooked menu as culinary training sites for all OFNS school-based staff.
- Explore other innovative models, such as a network of central kitchens, for providing scratch cooked food service to schools that have no kitchens or very small kitchens.

Phase 3 -

Systematize Scratch Cooking

The demand for scratch cooking to expand to other schools and boroughs grew throughout the 2018–19 school year because community members visited the sites and experienced scratch cooked meals in NYC public schools. In order to meet this demand, the OFNS and Brigaid partnership took initial steps to provide some scratch cooked recipes citywide. It is notable that one year after the initial scratch cooked pilot in two kitchens, eight menus, that serve 75% of OFNS school codes — these codes count schools and also include programs that are within schools — have some scratch cooked items. For September 2019 there were five days on which all eight menus served similar scratch cooked entrées. There needs to be a steady increase of more days with scratch cooked items and for this to be expanded to all OFNS menus.

Achieving the goal of all students receiving scratch cooked meals will take a multi-pronged approach with collaboration and coordination among government, DOE, and

community stakeholders. This collaborative approach involves deep systems change to the four elements of the RSCP. Therefore recommendations are provided here for the first three elements of systems change for the RSCP (*Ingredients and Recipes for Scratch Cooking*, *A Kitchen for Scratch Cooking*, and *Cooking from Scratch*). Recommendations for the fourth element (*Feeding the Community*) are provided in Phase 4.

Achievements

- Scratch cooked items were offered on eight OFNS menus with five common menu days in September 2019.

Recommendations

Ingredients and Recipes for Scratch Cooking

- Continue to develop scratch cooked recipes that can be implemented in all DOE kitchens.
- Leverage DOE's immense buying power to obtain competitive prices for whole food ingredients that can be the basis of scratch cooking.
- Track performance of new menu items using food production records.
- Increase procurement contracts that are directly with individual producers versus contracts with distributors that work with a catalog of producers.
- Increase procurement of locally produced ingredients.

A Kitchen for Scratch Cooking

- Invest in kitchen infrastructure.
- Ensure all kitchens have basic equipment for scratch cooked food service.
- Assess and upgrade the kitchens with the most limited infrastructure.
- Consider having hubs that can either scratch cook complete meals or prepare parts of meals such as baked goods, pizza dough, and sauces made from vegetable-based ingredients.



Blending marinara sauce.

Cooking from Scratch

- Hire and train culinary managers from the pool of current school food service managers that would oversee one or two kitchens instead of the current model of overseeing up to five kitchens.
- Implement more culinary-based training for new OFNS school-based staff and for ongoing professional development for current staff.

Phase 4 - Build Excitement and Acceptance for Scratch Cooked School Meals

RSCP started one year after OFNS transitioned to universal free lunch. Universal free lunch has the potential to reduce the stigma associated with school lunch to create wider acceptance of school meals as a normal part of the school day. Thus, the time was right to work toward other innovative school meal changes such as scratch cooking. However, the recipes served during this pilot introduced new and often unfamiliar foods to students. The metrics data showed a drop in student participation during this pilot. The qualitative analysis revealed that there was limited communication to the school community about the radical change happening in the kitchens; media attention about this pilot was limited and late in the school year; and there were limited opportunities to collect feedback from students about the recipes. Direct and consistent attention to building students' acceptance of, and excitement about, scratch cooked food is essential for scratch cooking to be successful.

Recommendations

Feeding the Community

- Provide resources to principals that would enable them to expand time students have to eat.
- Create enjoyable eating experiences for the school community.
- Provide funding and resources to improve the physical cafeteria space.
- Promote use of OFNS school food app for providing information and obtaining feedback.
- Continue the OFNS Partners Meetings, initiated on February 1, 2019.
- Work with schools to promote school meals and provide food and nutrition education connected to school meals and curricular standards.

Evaluation

- Conduct outcome study on consumption of school meals.
- Evaluate the effects of the RSCP and school partnerships on attitudes toward school meals.
- Conduct outcome study on how scratch cooking impacts kitchen and plate waste.

Conclusion

OFNS serves about 900,000 meals a day to students in the largest school district in the U.S. Many students eat multiple meals at school making potential positive impacts of scratch cooking on students' diets, health, academic achievement, and sense of community enormous. This pilot showed the feasibility of implementing a full scratch cooked menu in two NYC school kitchens serving five schools. This pilot also showed that introducing more scratch cooked recipes citywide is possible. OFNS already works with many partners, and by working in partnership with CBOs can strengthen food and nutrition education that connects school meals to curriculum and builds excitement for eating new foods. To reach OFNS's goal of all students having scratch cooked meals, both during the school year and summer will take collaboration and coordination with government, DOE, advocates, parents, partner organizations, and students. NYC is already seen as a national model for innovation in school meals and can now be seen as a model for scratch cooking.



Scratch cooked meals

I. Introduction

Return to Scratch Cooking Pilot

When school opened in September 2018, one kitchen of the New York City (NYC), Department of Education (DOE) Office of Food and Nutrition Services (OFNS) initiated a full scratch cooked menu. While there was little fanfare about this at the time, this catalyzed monumental changes that grew over the 2018–19 school year, and planted the seeds for continued expansion of scratch cooking for NYC schools. Eric Goldstein, who was the Chief Executive Officer of School Support Services managing OFNS when the Return to Scratch Cooking Pilot (RSCP) was initiated, described it like this, “[In the] hallways at the New York City Department of Education...we have pictures of kitchens and cafeterias from the [19]20’s, 30’s, 40’s, 50’s and they look different from the cafeterias from today. And from a strictly culinary point of view, there was something very attractive about that [cooking]. And, that is something we want to recapture.” (Eric Goldstein) Since the then NYC Board of Education assumed responsibility for school meals in 1918 (Ruis, 2017), this “return to scratch cooking” began exactly 100 years after school meals became an official part of education in NYC. Thus, this pilot opened the second century of NYC school meals.



Salad bar featuring a colorful array of fresh vegetables and a composed salad.

“There are big systems in place that were designed years ago and perpetuated through inertia ... When we were looking at making a sort of radical strategic change, the only thing that was available as an option that really made a lot of sense was scratch cooking.”

– Eric Goldstein

Time Right for Return to Scratch Cooking Pilot

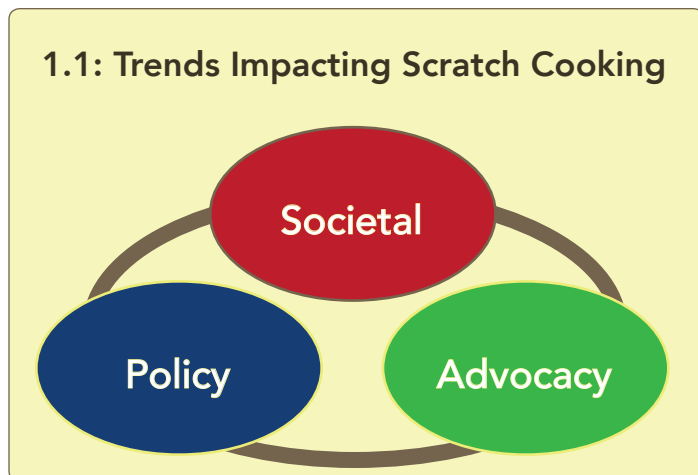
During the 1980s, 1990s, and 2000s, many school food programs in the United States moved toward more pre-made processed products, particularly for the grain and protein (entrée) portion of the meal. The reasons for this were a combination of policy changes and decreased funding toward cooking equipment and changes in our food supply that included an ever increasing proportion of our food supply being processed foods. There have been several attempts toward more culinary-based kitchens that are cooking from basic ingredients. For example, SchoolFoodPlus, initiated in 2004, had the goals of enhancing student health and academic achievement and strengthening New York State agricultural economy through procurement of local foods. In 2006 OFNS initiated a partnership, that continues until today, with Wellness in the School that supported a move toward more scratch cooking and is now in over 135 schools nationwide. In 2008, New York City joined SchoolFood Focus, a movement toward using the power of procurement of large school districts to make school meals

more healthful, sustainable, and regionally sourced. And, in 2012, New York City was a founding member of the Urban School Food Alliance that works to provide access to high quality meals so students eat well to be able to do well in school.

Yet, none of these initiatives were a comprehensive movement toward a future where New York City school meals would be scratch cooked across all kitchens. The pilot was a strong commitment from OFNS upper administration to make lasting change toward more meals cooked in NYC school kitchens. OFNS upper administration was excited about the success of a full scratch cooked menu being offered across entire the school district in New London, Connecticut, which was being led by the organization Brigaid. Brigaid provided a unique chef driven model that would work with OFNS on the menu planning, kitchen design, staffing model, and promotion necessary for scratch cooking. This model was not being offered by other organizations working on school meals. Chef Dan Giusti, Founder of Brigaid, was also excited to partner with NYC, the largest school system in the country. Chef Giusti described the potential of this partnership as, “affect[ing] large change on a big scale in New York City.” Chef Giusti, as well as OFNS administrators wanted NYC to set an example for other districts. Additionally, there were societal, political, and advocacy trends that made the right time for scratch cooked meals in NYC schools. See **1.1**.

Societal Trends

The societal trends were beautifully summed up by Tracy Cashin, Director of Operations, “when you look at



food as a whole in this country there has definitely been a shift. So just removing ourselves from school food for a moment and looking at food, and you do see the shifts that are happening even at the local supermarkets, in terms of people being more mindful of ingredients and going back to eating food, as opposed to something that’s in a box or bag.” Now that people have realized that processed foods out of boxes and bags are not good for our health, our relationship with food, nor the planet, it expanded excitement and interest in dedicating time, funding, and resources to meals that are scratch cooked from basic ingredients right within NYC schools.

Policy Trends

Federal policy is also moving school meals toward more scratch cooking. In 2010, President Barack Obama signed a reauthorization of the Child Nutrition Act, The Healthy Hunger Free Kids Act that included new standards for school meals that put an increased focus on fruits and vegetables, whole grains, and reducing sodium in school meals. This was championed by First Lady Michelle Obama. Over the last decade, school meals, which had traditionally had bipartisan support, unfortunately, became a political battleground. Due to these politics, some of these standards have been rolled back in the current presidential administration. Nonetheless, the spotlight shining on school food provides a platform to elevate the importance of serving meals made from simple basic ingredients, which goes beyond meeting nutrient requirements.

New York City has also made food policy a priority. Since 2007 NYC has had a Food Policy Coordinator. In 2010, Manhattan Borough President Scott Stringer issued FoodNYC: A Blueprint for a Sustainable Food System. This was followed by Christine Quinn, then City Council Speaker, release of FoodWorks: A Vision to Improve NYC’s Food System. More recently, many NYC politicians have made food equity and justice a priority. For example, Brooklyn Borough President Eric Adams has been instrumental in an announcement that all NYC school will have Meatless Mondays starting in September 2019 and getting processed meat out of schools. Council Speaker Corey Johnson released a report, “Growing Food Equity in New York City,” on August 1, 2019. One of the 34 food equity recommendations specifically addresses scratch cooked menus in



New York City Council Speaker Corey Johnson released this report, with a call for scratch cooking plan for NYC schools, on August 1, 2019

schools, “The City should study and create an implementation plan to ensure that every school child has access to scratch-cooked, healthy, delicious, and culturally appropriate menu items. This requires funding capital upgrades in school kitchens and increasing the School-Food budget to purchase fresh foods.” [Johnson, Corey. *Growing Food Equity in New York City. A City Council Agenda. August, 2019.* New York City Council Speaker Corey Johnson]. Also in August 2019, New York City Local Law 1676-2019 (Int. No. 1676) was introduced calling for, “DOE to report on implementing scratch-cooked school food service.”

Advocacy Trends

There has also been advocacy for access to healthy school meals. Based on hunger advocacy work that began in the 1960s, Community Food Advocates’ “Lunch 4 Learning NYC” campaign was successful in New York City initiating universal free lunch when school opened in September 2017. Since 2004, the Coalition of Healthy School Meals has been advocating for more plant-based meals in NYC schools. In 2005, Wellness in the Schools began advocating and supporting more scratch cooking in NYC schools. Beginning in October 2018, the NYC Healthy School Food Alliance has advocated for a holistic plan for school food that reimagines how students eat with four goals: 1) more real food made by real people; 2) more nutrition and culinary education; 3) more school gardens; and 4) ensuring students have 30 minutes to eat lunch.

* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

Thus, the societal, policy, and advocacy initiatives made the time right to pilot full scratch cooked kitchens in NYC schools.

Goals for this Evaluation

This evaluation had three goals:

- Document the systems change that occurred in the two kitchens that were part of the Return to Scratch Cooking Pilot (RSCP) during the 2018–19 school year.
- Understand how a wide range of stakeholders experienced the RSCP.
- Based on lessons learned by this pilot, provide implementation guidance to facilitate expansion of scratch cooked food service* for all NYC students.

Define Scratch Cooking

While the term scratch cooking is used all the time, there is no clear definition of what is and is not scratch cooking. This is even more complicated when scratch cooking is done in institutional kitchens, and within a school meals program that has a limited budget and strong nutrition standards. Many of the top executives in the Office of Food and Nutrition Services discussed that scratch cooking* is already being done in NYC school meals, particularly with the salad bar ingredients and composed salads. Also, OFNS makes sauces from scratch to be added to pre-cooked proteins such as chicken. This pilot attempted to make as many items by beginning with raw ingredients as possible. Thus, in this pilot, proteins came into the kitchen raw, and were cooked within the school kitchen. Vegetables came into the kitchen fresh and were washed, prepared, chopped, and cooked in the kitchen. Fruit was fresh, whole, peeled and cut in the kitchen. Legumes delivered dry that were soaked and cooked in the kitchen. “They never cut a potato in a New York City school, at least not in my experience. So now they’re cutting up raw potatoes, they’re making pizza dough from scratch. (Chris Tricarico)”

1.2: Key Player Statements of Scratch Cooking

“It’s taking the food as basic and least processed as possible and making it into something that the students would enjoy eating, that they might not be getting at home. That’s scratch cooking to me.”
 – Anne O’Donnell, Director of Supply Chain Management

“Scratch cooking is the preparation of a menu using whole foods that are purchased as close to their original form as possible, with minimal processing and ingredients. The menu may have items such as baked bread or precooked meat items on them that support large scale institutional food service when necessary.”
 – Stephen O’Brien, Director of Strategic Partnerships and Policy

“Preparing food from scratch means to utilize only ingredients that are whole and unprocessed and/or minimally processed (processed in some way, but do not include any added sodium, sugar or fat).”
 – Brigaid Chef Dan Giusti, Founder of Brigaid

To everyone in OFNS, moving toward full scratch cooking goes hand-in-hand with assuring that food safety policies and practices keep pace with the changes in food preparation. When food is processed and pre-prepared in a factory, many of the necessary food safety practices have been addressed in the factory. But, when fresh foods come into OFNS kitchens, much more food safety is the responsibility of OFNS staff. Hence food safety is discussed throughout this report.

However, when we think more broadly about what it means to have all 1000+ kitchens in NYC public schools scratch cooking, the definition of scratch cooking* becomes more tempered to be achievable. See 1.2 for three perspectives on scratch cooking. For this report we are using the definition from Int. No. 1676, “Scratch

cooked food service’ means food service that prioritizes the preparation of meals or snacks on a daily basis at or near the site of consumption with ingredients in their most basic form.” Many words and phrases describe procuring, preparing, and presenting food when it is scratch cooked. See 1.3.

Why the Bronx

The location of this pilot was exclusive for schools in the Bronx. OFNS made the strategic decision to limit the pilot to one borough so that there was consistent chain of command from one Regional Supervisor and one primary Distributor for food and supplies. The Bronx is one of the poorest counties of New York States’

1.3: Contextualizing Scratch Cooking

Procuring food <i>for scratch cooking</i>	Preparing food <i>for scratch cooking</i>	Presenting food <i>for scratch cooking</i>
Raw Ingredients	Utilizing	Serve
Whole	Producing	Consume
Unprocessed	Cut	Access
Minimally Processed	Season	Feed
Original Form	Cook	Present
Fresh	Assemble	Food
Unfinished	Safely	Friendly
Basic Ingredients	Teamwork	Appetizing
High Quality		

* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

62 counties, has the highest incidents of diet related disease, and also has a high rate of homeless shelters. Additionally, many new initiatives are tried first in other Boroughs. Thus, the Bronx was chosen as the county to start scratch cooking.

Small Steps for a Big Impact: Beginning with a Pilot

Since a full scratch cook menu was not the norm in NYC school kitchens since the late 1990's. Implementation of a full scratch cooked menu was a big shift and involved systems change. Thus, this pilot in a few kitchens was essential for providing the experiences, understandings, and detailing the procedures for all kitchens to move toward more full scratch cooking. Stephen O'Brien, OFNS Director of Strategic Partnerships summarized this saying, "A system needs to be challenged, a system needs to record those challenges, a system needs to honor the mistakes that were made. As we all know from any good management program, you get better through mistakes...I'm excited ... [to] do something that's a little different from the norm in order to move a whole system." (Stephen O'Brien)

Chef Dan Giusti, Founder of Brigaid, saw the pilot as necessary to create new norms, that is to make scratch cooking just normal operating procedure. He discussed what it is like now that full scratch cooking is across the New London, Connecticut school district. "We have a chef in every school and they cook from scratch, and nobody cares [because chefs in the school have become just the new normal]. I actually think of that as a really positive thing." (Chef Dan Giusti)

This pilot was seen as having outward facing benefits by elevating the importance of school meals and changing to more positive perceptions of school meals. The pilot also had inward facing benefits of being an incubator of change for the whole system, with the scratch cooking kitchens literally serving as test kitchens for the development of recipes made with "very clean ingredients." (Stephen O'Brien)

Thinking Bigger: Expansion

From its inception, the core purpose of the RSCP was to inform and guide citywide expansion of scratch cooking for NYC public schools. The original plan was to increase the number of kitchens with full scratch cooking, with a primary goal of 12 kitchens over the first two years. These kitchen would provide feasibility testing for recipes and student acceptance. The secondary goal was to provide more scratch cooking citywide, across all kitchens. During the 2018–19 school year, there were two top-level leadership changes within the Department of Education. This switched priorities, making the primary goal citywide expansion, and the secondary goal increasing full scratch cook kitchens.

First Richard Carranza replaced Carmen Fariña as New York City School's Chancellor on April 2, 2018. This was during the development of the pilot. Second, Eric Goldstein was the Chief Executive Officer of School Support Services, which included transportation, school food, and athletics. Mr. Goldstein championed the RSCP and was instrumental in obtaining the connection with Brigaid and obtaining initial approvals. However, due to problems with the city's school buses in September, 2018, Chancellor Carranza fired Eric Goldstein. Chris Tricarico replaced Eric Goldstein in late 2018.

These administrative changes played a significant role prioritizing expansion of scratch cooking citywide. Chancellor Carranza made his top priority equity and providing the same great educational experiences across all schools. Chris Tricarico had extensive prior experience in the Department of Education as both a principal and in administration. As such, Mr. Tricarico understood the importance of students participating in school meals to obtain the nourishment they need to do well in school, as well as to finance the program. Thus, Mr. Tricarico is making it a priority for principals and others in schools to increase their understanding and perception of school meals. Mr. Tricarico also wants to make increasing participation and creating a positive meal experience a shared responsibility and to bring in the school community. More scratch cooking would increase interest and excitement about school meals. As said by Stephen O'Brien, these administrative changes moved expansion of scratch cooking citywide "from a simmer to a rapid boil." (Stephen O'Brien)

II. Scratch Cooking Systems Change

Systems

The New York City (NYC) Department of Education (DOE) is the largest public education school system in the United States. In September 2018 the NYC DOE operated 1,840 schools, with over 1 million students, in 31 community school districts, across 5 boroughs (NYCDOE, Data at a Glance, 2019). This system is enormous, and the task of serving meals to over a million students per day requires many well organized processes that ensure each student is fed every day. The office charged with providing food to NYC students is the Office of Food and Nutrition Services (OFNS), with over 8,000 employees and a \$550 million budget (Ladders, 2019). The *development* of the Return to Scratch Cooking Pilot (RSCP) primarily involved one of the ten OFNS departments, Strategic Partnerships, and Brigaid, a for-profit school food consulting company. As RSCP progressed through *implementation*, all OFNS departments were involved as well as everyone, from principals to students, at the RSCP school(s).

A systems change approach was employed because radical change in an organization of NYC DOE OFNS's magnitude requires a deep evaluation of the systems that would be disrupted for the innovation to affect sustainable change. This report discusses these systems as a mechanism to understand the complexity underneath the development and implementation of the RSCP.

Systems are dynamic and alive, as they are constantly changing and adapting. The theoretical lens of this evaluation is systems thinking based on the research of Donella Meadows, who defines systems as, "an interconnected set of elements that is coherently organized in a way that achieves something." (Meadows, 2008) Dr. Meadows emphasizes that when thinking about systems, it is critical to examine the three parts of a system; *elements*, *interconnections*, and *purpose* (Meadows, 2008). Systems change then is how the *interconnections*

shift to transform the *elements* to achieve the *purpose*. In the RSCP, there are four *elements*. See **2.1**

- 1) ***Ingredients and Recipes for Scratch Cooking***: Identifying and procuring new ingredients and recipes for scratch cooked meals.
- 2) ***A Kitchen for Scratch Cooking***: Selecting and setting up kitchens with the physical infrastructure for receiving, storing, and preparing raw ingredients, including raw proteins, for scratch cooking.
- 3) ***Cooking from Scratch***: Hiring and training kitchen teams to store, prepare, serve, and manage scratch cooked meals. OFNS contracted Brigaid to introduce a chef in school kitchens for leading the implementation of scratch cooked meals.
- 4) ***Feeding the Community***: Serving, informing, collaborating with, and gathering feedback from school stakeholders about scratch cooking.

The *interconnections* are policies, practices, people, and promotion (of school meals) See **2.2**. The interconnections within each element are portrayed in **2.3**, **2.4**, **2.5**, and **2.6**. These were transformed by RSCP for the *purpose* of providing scratch cooked food service in two DOE kitchens.





By developing a pilot for six kitchens, that was implemented in two kitchens within the first year, OFNS was able to isolate the systems changes in a way that allowed for a focused assessment of the changes and adaptations that were needed in order to allow the system to proceed in this phase of innovation. After all, the feeding of one million students more scratch cooked meals each day was always the larger goal. This pilot was essential to understand how to create sustainable systems change that would eventually positively impact the entire student population.

2.1: The Four Elements of the Return to Scratch Cooking Pilot (RSCP)



2.2: The Interconnections of the Return to Scratch Cooking Pilot (RSCP)

The RSCP defines systems interconnections as the policies, practices, people, and promotion that occurred across the four elements of the system (See 2.1).

<p>Policies</p> 	<p>Practices</p> 	<p>People</p> 	<p>Promotion</p> 
<p>Policies are at multiple levels of the system including federal, state, city, organizational, and school that influence the management of school meals and still need to be followed, even as the system changes.</p>	<p>Practices are the necessary tasks that occur throughout the system from planning to preparing to serving meals.</p>	<p>People are all the people who play a role in the system including: OFNS leaders and school-based staff, students, principals, teachers, school staff, parents, and others in the school community.</p>	<p>Promotion is the communication and marketing that builds awareness, support, and enthusiasm for the systems change. Promotion could be internal to OFNS for employees, and external from OFNS for the school community. Promotion also includes food and nutrition education that is supportive of school meals.</p>

2.3: Ingredients and Recipes for Scratch Cooking: Interconnections of RSCP

Identifying and procuring new ingredients and recipes for scratch cooked meals.



Policies: The RSCP must follow federal policies like the United States Department of Agriculture (USDA) Nutrition Standards for School Meals. As well as city and organizational policies.



Practices: Acquiring the new ingredients was completed using approved procurement practices. Ordering the ingredients for weekly delivery also occurred using mostly established practices.



People: Selecting, procuring, and ordering of new ingredients involved the Brigaid chefs, OFNS Menu Management, OFNS Supply Chain Management and the RSCP leadership.



Promotion: The RSCP meals were promoted to DOE and OFNS leaders for pilot support, to food distributors for delivery support, and then to OFNS school-based staff and school communities.

2.4: A Kitchen for Scratch Cooking: Interconnections of RSCP

Selecting and setting up kitchens with the physical infrastructure for receiving, storing, and preparing raw ingredients, including raw proteins, for scratch cooked meals.



Policies: The infrastructure had to comply with Department of Health and Mental Hygiene (DOHMH) food safety regulations, and City of New York Fire Department (FDNY) fire safety codes.



Practices: Maintaining high food safety standards for working with more produce and raw proteins involved planning for kitchen reorganization, repairs, and ordering new equipment.



People: Preparing the kitchens for RSCP involved the Brigaid chefs, multiple OFNS departments including Food Safety Quality Assurance and Services (Facilities), as well as school custodial staff.



Promotion: Being selected as one of the RSCP kitchens was promoted to OFNS school staff and principals. Support for the RSCP was also promoted for securing new equipment.

2.5: Cooking from Scratch: Interconnections of RSCP

Hiring and training kitchen teams to store, prepare, serve, and manage scratch cooked meals. The Office of Food and Nutrition Services contracted Brigaid to introduce a chef in school kitchens to lead scratch cooked meals.



Policies: The new chef job description and hiring process followed Department of Education policies. The RSCP staff scheduling and tasks also followed union policies.



Practices: The RSCP followed OFNS established food safety and preparation practices. The Brigaid model for scratch cooked school meals introduced new receiving, storage, and preparation practices.



People: The RSCP was developed and implemented by Innovators, Orchestrators, and Disruptors (change makers that identify and fix problems) from OFNS and Brigaid. The full RSCP implementation team included people from all OFNS levels working together.



Promotion: The division of labor was key for producing the menu. Having more team members involved in meal production meant they were familiar with ingredients and preparation methods and could promote the meal to students and staff on the serving line.

2.6: Feeding the Community: Interconnections of RSCP

Serving, collaborating with, and gathering information from school stakeholders about scratch cooked meals.



Policies: The RSCP meal components complied with United States Department of Agriculture (USDA) Nutrition Standards for School Meals for reimbursable meals.



Practices: The RSCP introduced new communication and collaboration opportunities between the cafeteria and school community. Changes were also made to make the cafeterias more inviting.



People: The RSCP sought feedback from students and the school community. The Brigaid model directs the chef to be a constant presence in the school as well as the cafeteria.



Promotion: Promoting school meals involves informing the school community to encourage participation. It also means informing the larger NYC community about the opportunities and experiences available to NYC students.

When working to innovate within a system, people who are capable of understanding the system in a way that they can think through structural changes while challenging power structures that have defined, influenced, and shaped the system historically are critically important.

Systems Entrepreneurs

We can think of the people who are capable of challenging and therefore innovating the system as system entrepreneurs. Systems entrepreneurs are people with proximity to the system, that can engage with individuals most impacted by the problem as assets, who also embody collective leadership, are able to shift interrelated systemic conditions, and ultimately address deeper levels of transformative systems change. (Meadows, 2008) In this report, we discuss systems entrepreneurs as orchestrators, innovators, and disruptors who are able to collectively impact systems changes.

Orchestrator

Facilitates alignment towards common goals and coordinates across groups, organizations, and sectors. The orchestrators for scratch cooking are Eric Goldstein, Stephen O'Brien, and Chris Tricarico. Their role has been to coordinate the work of groups, organizations, and sectors associated with the RSCP including the City of New York, New York City Department of Education, Office of School Support Services, Office of Food and Nutrition Services (OFNS), and Brigaid.

Innovator

Creates new, actionable solutions to address dysfunctions in the system. The innovators are Chef Dan Giusti and Chef April Kindt from Brigaid. Their role was to introduce new functions for how OFNS kitchens prepared scratch cooked school meals.

Disrupter

Creates visibility into system dysfunction and/or brings grievances of individuals or groups to public awareness. The disrupters are the changemakers that identify problems and facilitate dialogue toward improving how individuals and groups function within larger systems. Chef Dan Giusti played this role throughout and other key players took on this role in specific situations.

Chef Dan Giusti formally incorporated Brigaid in April of 2016 and less than five months later his new company was cooking and serving students meals prepared from scratch in New London, Connecticut. Starting a new business and introducing a new business model makes Chef Giusti the definition of an entrepreneur. In systems change there are three types of entrepreneurs, innovators that create new solutions to address system dysfunctions, orchestrators that facilitate goal alignment across groups and organizations within the system, and disruptors that bring system dysfunctions or grievances to the forefront of public awareness. Among the RSCP leadership team, Chef Giusti was the primary innovator, Mr. O'Brien the primary orchestrator, and Chef Giusti also the disruptor identifying and encouraging discussion and resolution of dysfunctions. Chef Kindt was also an innovator in her new role with Brigaid.

III. Evaluation Methods

Study Design

The qualitative evaluation of the Return to Scratch Cooking Pilot (RSCP) was originally conceived as a five-year (or five-phase) project. Phase 1 (2017–18 school year), documented the development of RSCP. Phase 2 (2018–19 school year) conducted a systems change evaluation on the implementation of RSCP at the initial two kitchens. Phases 3 to 5 (2019–20, 2020–21, and 2021–22 school years) are planned to assess students' outcomes, such as dietary consumption, attitudes, conceptual understandings, and health status, as well as studies of changes in food waste from ordering to production to what students throw away. At the time of writing this report, adequate funding has not been secured for Phases 3 to 5.

This report is on Phases 1 and 2. Both Phases were approved by the Institutional Review Boards (IRB) of Teachers College and the New York City (NYC) Department of Education (DOE). Additionally there is an approved Data Sharing Agreement between the Office of Food and Nutrition Services (OFNS) and Teachers College, Columbia University that allowed OFNS to share documents with the research team.

In short, this qualitative evaluation captured the development of the RSCP during the 2017–18 school year and the implementation during the 2018–19 school year.

This pilot took place in two sites, called Site A and Site B.

Site A implemented the full scratch cooked menu for the full school year for four co-located high schools.

Site B started in February with a partial scratch cooked menu, then served a full scratch cooked menu from March to June. Site B served one K–8 school.

Goals for this Evaluation

As stated in *Chapter I: Introduction*, this evaluation had three goals:

- Document the systems change that occurred in the two kitchens that were part of the Return to Scratch Cooking Pilot (RSCP) during the 2018–19 school year.
- Understand how a wide range of stakeholders experienced the RSCP.
- Based on lessons learned by this pilot, provide implementation guidance to facilitate expansion of scratch cooked food service* for all NYC students.

Data Collection Methods and Analysis

We had seven types of data for this evaluation that are described below and detailed in **3.1**

Interviews

We conducted interviews in both Phase 1 and Phase 2. During Phase 1, we conducted interviews with key players which we audio-recorded, and then had transcribed by professional transcription services. The key players hold unique positions within OFNS and Brigaid where we could not guarantee their confidentiality. Therefore we obtained their consent to use their names and they reviewed the transcripts of their interview(s) to provide corrections and clarifications. We interviewed some key players twice, once before during the development (prior to September 2018) and a second time during the implementation (Spring 2019).

* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

3.1: Data Collection Details

Data Type	Counts	Details
Interviews: Key Player	14 interviews 11 key players	Stephen O'Brien, Director of Strategic Partnerships and Policy* OFNS Chef Dan Giusti, Founder Brigaid Chef April Kindt, Brigaid Regional Chef Eric Goldstein, Chief Executive Officer School Support Services Armando Taddei, Deputy Director OFNS Nicole Scarangelo, Director of Menu Management OFNS Tracy Cashin, Director of Operations OFNS Cherise Tafe, Bronx Regional Director OFNS Anne O'Donnell, Director Supply Chain Management OFNSs Zelda Bryant Ashby, Bronx Regional Director OFNS Chris Tricarico, Senior Executive Director*OFNS
Interviews: School Stakeholders	43 interviews	Teachers (12), Principals (4), School Staff (5) Community Based Organizations (2), Parents (2), and OFNS School-based Staff (18)
Kitchen Observations	5 two-day observations	Caribbean Chicken November 2018 (one kitchen) Meatloaf March 2019 (both kitchens) Beef Taco June 2019 (both kitchens)
Document Review	200+ documents	Documents related to meetings and milestones for developing the Return to Scratch Cooking Pilot (Meetings Agendas and Handouts) Documents related to the Executive Chef position job description, interview, and training procedures (Job descriptions, Interview Questions and Rubrics, Training Schedule) Documents related to development of the Scratch Cooking Menu and Recipes (Ingredient list, Recipes) Documents related to identifying, selecting, and recruiting the schools for the Return to Scratch Cooking Pilot Documents related to programming and nutrition education in conjunction with the Return to Scratch Cooking Pilot Documents related to implementing the Return to Scratch Cooking Pilot in schools (Project Management Timeline, Work Schedules) Documents related to collecting feedback from students on the Return to Scratch Cooking Pilot (Student Surveys, Community Dinner Surveys) Scratch Cooking Metric Summary (Metric Report) that included monthly data on student attendance, school meal participation, labor costs & hours, food costs, and supply costs
Attend Meetings	About 15 meetings	Meetings at OFNS headquarters, kitchens, and others places where RSCP was discussed
Photographs	3000+ photographs	Photo documentation of changes to the kitchen facilities and menu production

* These are current titles as of October 2019. At the time they were interviewed. Stephen O'Brien was the Director of Strategic Partnerships and Chris Tricarico was the Acting Interim Executive Director.

Continued

3.1: Data Collection Details (continued)

Data Type	Counts	Details
Student School Lunch Attitude Survey	358 surveys	191 surveys completed January 2019 with 4th and 7th grade students (before scratch cooking - pre surveys) 167 surveys completed June 2019 with 4th and 7th grade students (after scratch cooking - post surveys)
Community Dinner Satisfaction Survey	558 surveys	Surveys collected at a Community Dinner served during parent-teacher conferences at one of the pilot schools in March 2019

During Phase 2, we conducted school stakeholder interviews. The stakeholders were principals, assistant principals, teachers, community based organizations, counselors, nurses, deans, lunch supervisors, and parents, as well as OFNS school-based staff. These interviews were audio-recorded, and transcribed by a professional transcription services. The identity of the school stakeholders who were interviewed were kept confidential. Each interviewee was given a pseudonym (fake name) during the transcription process. In this report, quotes from principals and assistant principals are attributed to “Principal,” all other quotes from members of the school community are attributed to “School Staff,” and quotes from OFNS school-based staff are attributed to “OFNS Staff.”

The data from the interviews was the main source of data for this evaluation. We used all other sources of data to support what we learned from analysis of the interviews.

To analyze the interviews, we created a coding protocol that applied a systems change lens. A review of the literature identified the Intervention Level Framework (Johnston, L. M., Matteson, C. L., & Finegood, D. T., 2014) based on the work of Meadows 2008, in order to “advance understanding of the various system levels and specific interventions required to support large-scale change.” (Johnston, 2014, p 1270). In adapting and applying the Intervention Level Framework (ILF) coding concept, we identified primary codes that captured major processes and secondary codes that captured specific details on how systems were adapted and changed. Each primary and secondary code had an operational definition.

We used the qualitative research software program, Nvivo12, to apply the primary and secondary codes to sections of the interview transcripts. Imagine this as using a highlighter on the transcripts and having a different color highlighter for each code. To be sure the coding structure was appropriate, we had one researcher code one of the key player interviews. Then, three researchers reviewed the coding and discussed and revised the primary and secondary codes and also refined the definitions of the codes. Once the coding protocol was finalized, we conducted inter-rater reliability, that is when different researchers apply the codes in a similar way. Two researchers applied the codes to the same two key player interviews. Using the NVivo coding comparison, the two researchers coding were compared. They had good consistency (>.60). A third researcher was added to the team. She completed inter-rater reliability with one of the original researchers and also had good consistency (>.60). Once high inter-rater reliability was established across three researchers, one of these researchers coded each of the interviews.

Three researchers reviewed the portions of the transcripts coded with the primary and secondary codes to understand the systems change in each of the system elements (*Ingredients and Recipes for Scratch Cooking; A Kitchen for Scratch Cooking; Cooking from Scratch; and Feeding the Community*) and the interconnections within each of these elements (*policies, practices, people, and promotion*). This analysis served as the basis of Chapters 4, 5, 6, 7, and 9 with the other data sources (e.g., kitchen observations, document review, and photographs) being used to support and verify the analysis of the interviews (called triangulation of the data in qualitative research).

Kitchen Observations

During Phase 2, we conducted the two-days observation with a team of two researchers. This process began when the executive chef arrived (about 6:30am) and concluded when the last lunch period of the day ended. The process used a simple form created specifically for these observations that recorded the details of preparing and serving raw ingredients for scratch cooked meals. The observation required two days because most of the scratch cooked recipes include at least one day of advance food preparation. Menus that included more than two days of prep, like pizza because of the proofing and rising process, were not observed. The observations also prioritized days where staff would be working with the new raw proteins. A team of two was needed as staff would be involved in multiple production activities in different areas and advance prep continued during lunch service. Once lunch service began, one researcher observed the serving line, and the other researcher continued to observe in the kitchen.

We used these observation notes during the data analysis of the interviews to verify and provide details, especially for the elements of *A Kitchen for Scratch Cooking* and *Cooking from Scratch*.

Document Review

During both Phase 1 and Phase 2 we reviewed documents from OFNS. The lead researcher organized, logged, and reviewed all documents received from OFNS. As the research team analyzed the interview data (discussed above), the lead researcher presented the appropriate documents to review, and what was learned from these documents was incorporated in the analysis.

Attend Meetings

During both Phase 1 and Phase 2 we attended meetings at OFNS headquarters, at the pilot schools, and other meeting in which the RSCP was discussed.

Photographs

During both Phase 1 and Phase 2, we took photos of the kitchens, equipment, food, food preparation, and food presented on the lunch line. To protect the identities of people (e.g., OFNS employees, school staff, and students)

in the kitchens and cafeterias, we avoided capturing people in these photos. However, we made an exception for hands, as hands were integral to document the food preparation process. We organized all photos by pilot site and by month. The photos were also coded using NVivo and were used throughout the data analysis and report writing as visual illustrations of what we learned from the other data sources.

Student School Lunch Attitude Survey

During Phase 2, we created a one-page student attitude survey. This survey included two questions on eating school lunch (ate lunch today and how many days in the previous week), seven question on what students thought about the lunch service, six questions on what students thought about school lunch in general, and one question on how much of their school lunch they usually ate. We administered this survey to all 4th grade and 7th grade classes at the K–8 pilot site prior to scratch cooking initiation and after the students had the full scratch cook menu for three months. We compared the pre and post surveys for statistical differences using the statistics test called T-test.

Community Dinner Satisfaction Survey

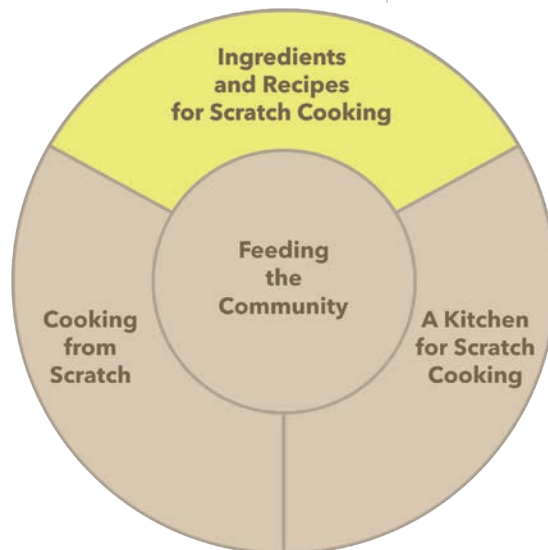
During Phase 2, we created a half-page survey with three questions to assess satisfaction with the Community Dinner served on the day of parent-teacher conferences at one of the pilot sites. The survey had three questions: 1) how was the meal; 2) how does the meal compare to other school meals you have had before; and 3) should this meal be on the menu at all NYC schools. We used descriptive statistics to report the results from this survey.

Return to Scratch Cooking Pilot Timeline

The RSCP began with initial planning in 2016 and continued until the first kitchen started in September 2018. The pilot ran through June 2019 and expansion activities continued through August 2019. For more details see [3.2](#).

3.2: Return to Scratch Cooking Pilot Timeline

Date	Activity
2016	<i>Brigaid forms partnership with New London, CT school district for scratch cooked meals</i>
April	Brigaid formally incorporated as a business
September	Brigaid starts scratch cooked meals in 4 of 6 New London, CT schools
November	OFNS key stakeholders visit New London, CT
2017	<i>OFNS initiates conversations with Chef Dan Giusti about implementing scratch cooking in NYC</i>
February	Chef Dan Giusti visits NYC to meet with Eric Goldstein and Stephen O'Brien
May	Stephen O'Brien spends 3 days working with Chef Dan Giusti in New London
October	OFNS posts executive chef job description
December	Stephen O'Brien invites researchers who already had studies with OFNS in process to discuss evaluating the RSCP OFNS & Brigaid begin reviewing resumes and interviewing applicants for executive chef position
2018	<i>OFNS invites Teachers College to evaluate the RSCP and implements RSCP in first kitchen</i>
January	Tisch Food Center from Teachers College proposes 5 year evaluation
February	Brigaid & OFNS meet with Bronx Superintendents and Deputy Chancellors to present RSCP
May	Brigaid & OFNS conduct two-day executive chef practical interviews OFNS leadership, directors, supervisors, and managers visit New London, CT
June	OFNS & Brigaid host RSCP orientation & luncheon for RSCP kitchen staff from six potential sites
July	First executive chef begins training
August	First RSCP kitchen hosts teacher luncheon & kitchen tour
September	First RSCP kitchen begins scratch cooked food service Chris Tricarico appointed Acting Executive Director Office of Food and Nutrition Services
October	Second executive chef begins training
November	OFNS introduces first draft of Scratch Cooking Metrics Report
2019	<i>OFNS initiates Partners Meetings and implements RSCP in second kitchen</i>
February	OFNS starts hybrid scratch cooked food service at second RSCP kitchen OFNS hosts first Partners Meeting with external Food and Nutrition Education programming partners
March	Second RSCP kitchen implements full RSCP menu and hosts first Community Dinner Chef Dan Giusti and Stephen O'Brien present RSCP at OFNS 1Kitchen Meeting
June	OFNS & Brigaid confirm 21 RSCP developed recipes supporting 5 lunch menu days on fall menu
July	Scratch cook food truck serves free hot summer meals
August	New OFNS fall menu items served at NYC DOE Chief Operations Officer leadership retreat



IV. Ingredients and Recipes for Scratch Cooking

Overview

The magnitude of the New York City (NYC) Department of Education (DOE) Office of Food and Nutrition Services (OFNS) was introduced in **Chapter II: Scratch Cooking Systems Change**. Interventions like the Return to Scratch Cooking Pilot (RSCP), in complex, layered systems of this size, require ingenuity and discerning focus on key elements of change. The RSCP introduced new menus for school meals, including breakfast, lunch, supper, or snack depending on the school. Introducing new menus also included introducing new foods, made from new recipes with ingredients that needed to be ordered and delivered to meet the needs of the RSCP schools and potentially the needs of all NYC public schools. To help with clarity of this chapter, we will define three terms: menu, recipe, and ingredient.

A **menu** refers to a monthly schedule of the daily food items that are served for a particular meal (e.g., breakfast, lunch, supper, snack). OFNS finalizes their menus months in advance so that the monthly schedule is available for their staff, the schools, and the parents of NYC public school students.

A **recipe** includes the ingredients for preparing the food item, steps in preparing and assembling the food item, and instructions for serving the food item. All OFNS recipes are analyzed through their nutrient database and taste-tested with NYC DOE students before being included on a menu.

An **ingredient** is a component of a recipe. The ingredients used to prepare OFNS recipes go through an extensive procurement process before they are approved for ordering and including in school meals.



Chili ingredients (mise en place) for advanced recipe preparation.

Therefore, introducing a new menu was a layered process of creating monthly schedules, selecting and testing recipes, and procuring ingredients. Typically, procuring new ingredients is a process that takes 18 to 24 months and involves multiple departments, like Menu Management, Supply Chain Management, Operations, and Food Safety Quality Assurance, within OFNS.

Brigaid had been serving scratch cooked school meals

in New London, Connecticut (CT) for approximately one year when they partnered with OFNS. Chef Dan Giusti had a catalogue of recipes that used numerous raw products, including raw proteins, as ingredients for developing the monthly Brigaid breakfast, lunch, supper, and snack menus. The Brigaid menus and recipes would become the foundation of the RSCP menus, thereby introducing these new ingredients into OFNS kitchens and menu creation process. The Brigaid recipe development process began with basic recipes then used student feedback to adapt and refine recipes for that school. This process was completed at multiple New London schools facilitating student ownership of their menu and cultural relevance. This process was also planned for the RSCP schools, which was very exciting considering the diversity of NYC public school students.

“The thing is, you want to make the students feel comfortable and get a taste of everybody’s culture. Sometimes if you get a taste of what it is, you understand something about it, another culture, be it their music or their food, you start to learn to be a little more calm and respectful of people.”

– School Staff

Through the partnership, Brigaid and OFNS embarked on creating scratch cooked meals that students would eat. This reflected the synergy between both the existing OFNS and new Brigaid recipes and ingredients. These recipes would also serve as the launching of sustainable improvements to the larger OFNS system created through recipe collaboration that would become part of OFNS recipe database. In order for the menu and recipes to be included in OFNS recipe database they had to meet the meal-based nutrition standards of the United States Department of Agriculture (USDA) that are discussed in the **policies** section. Introducing new ingredients for OFNS to order meant going through the procurement

process discussed in **practices**. The **people** section identifies the key stakeholders involved in leading the RSCP menu development and ingredient ordering process. The **promotion** section outlines the early stages of communicating the new menu, recipes, and ingredients to the NYC DOE and OFNS leadership. The negotiation with OFNS distributors to supply the new ingredients is also addressed in **promotion**.



Student plate: broccoli, spaghetti and meatballs, whole wheat garlic knot, pineapple.



Policies

School meals, and thereby the recipes and ingredients, are impacted by policies at the federal, state, city, and organizational level. For example, the USDA National School Lunch Program (NSLP) has nutrition guidelines for the amount of calories, saturated fat, and sodium that can be served during a week of school lunches. The USDA NSLP guidelines also include minimum servings sizes according to grade level. For example if serving fruit to grades K–8, the daily serving should be at least ½ cup, but for grades 9–12 each daily serving should be 1 cup. These serving guidelines exist for all meal components; fruits, vegetables, grains, meat/meat alternatives, and milk.

The City of New York, as outlined in **Chapter I: Introduction** has a strong focus on food policy that addresses

the quality and equity of foods purchased with city funds and available to city residents. There are also current initiatives to grow food equity through strong policies in NYC. Both current and proposed policies relate to food nutrients, and food contracting and procurement procedures. Some of the NYC food standards policies exceed the USDA NSLP standards and city agencies, like the DOE, are required to follow the NYC policies.



Preparing chopped watermelon.

Additionally, OFNS has its own nutrition standards. Some of these exceed the USDA NSLP standards. Using local ingredients is a priority of New York State (NYS) and OFNS. However, due to this pilot only having two kitchens and relatively small orders, compared to the typical scale for OFNS, procuring local ingredients was difficult, but important to consider as scratch cooking expands in the future.

OFNS menus, recipes, and ingredients were designed to meet all of these guidelines and to be prepared efficiently and safely in a variety of OFNS school kitchens.

The RSCP was a large scale systems change because, over time, those ingredients had become more packaged and processed making the time right to conduct this RSCP.

The transition from traditional school meals to scratch cooked meals necessitated procuring a diverse range of fresh ingredients outside of what was traditionally procured by other New York City Schools. See 4.1. This meant that the recipes and ingredients for creating the RSCP menus had to be carefully selected to maintain these standards. The Brigaid recipes that had been analyzed through the New London nutrient database and met the USDA meal-based nutrition standards, would still need to be analyzed by OFNS nutrient database and meet their standards. Further, OFNS has a list of prohibited ingredients that are not used in school meals that is communicated to parents and adhered to regardless of school meals interventions like the RSCP. Therefore the process of creating the RSCP menus involved evaluating the weekly menus for each meal, analyzing the recipes with Brigaid recommended ingredients, and identifying whether ingredient substitutions were needed to meet OFNS nutrition standards. This collaborative process also included identifying whether OFNS had a similar recipe already in their database. For example, Brigaid had a coleslaw recipe served on their BBQ Brisket sandwich, which was replaced by OFNS coleslaw recipe with a similar flavor profile.

Finalizing recipes and ingredients yielded approximately 170 items across three contracts, the bread, milk, and food distribution contracts. The next process was identifying whether the ingredients were part of OFNS Food Ordering System (FOS) or would need to

4.1: Examples of New Ingredients

Dairy	Seasonings	Dry Goods	Raw Protein	Fresh Produce
Butter	Allspice	Baking Powder	Chicken Drumstick	Avocado
Buttermilk	Cayenne	Corn Meal	Chicken Thigh (boneless)	Collard Greens
Feta Cheese	Dried Mustard	Dried Beans	Chicken Thigh (on the bone)	Ginger Root
Greek Yogurt	Fennel	Kosher Salt	Egg	Green Beans
Sour Cream	Ground Clove	Molasses	Fresh Turkey Breast	Idaho Potato
	Sage	Rice Wine Vinegar	Ground Beef	Lime (whole)
	Tarragon Leaf	Whole Wheat Flour		Rosemary
	Thyme	Yeast		Sweet Potatoes



Progression of making chicken with Jerk marinade from raw ingredients to finished product.

go through the procurement process. The procurement process also relates to policies, but in order to meet the September 2018 timeline and comply with NYC and OFNS procurement policies, the RSCP leadership team explored *practices* that would allow for ordering the new ingredients.

As stated in the overview section of this chapter, sustainability of the RSCP was part of the planning and decision making process. The Menu Management department in particular worked with Brigaid to develop recipes that would not only meet OFNS standards, but could potentially be prepared in most OFNS school kitchens.



Practices

The procurement of new ingredients was a significant undertaking that required the development of new processes to gain access to the ingredients needed to execute the RSCP. Procurement refers to obtaining access to the ingredients which involves; identifying suppliers with the ingredients that meet OFNS nutrition standards, knowing the contracted price and quantities the ingredients were available, and whether ingredients were in OFNS FOS. If the ingredient was not in OFNS FOS then it could not be ordered and delivered to RSCP kitchens. Therefore, in order to procure the ingredients needed, adaptations to the larger ordering system, were identified in collaboration with OFNS Contracts Management Unit so that ingredients could be procured and ordered. One strategy involved identifying whether

another NYC agency had a contracted procurement for the ingredient. If so, OFNS as a city agency, could obtain access to order that ingredient through the larger system of contracted procured foods. This procurement process was referred to as “piggy-backing” off orders on other city or government contracts.

Another strategy was the use of small purchase orders of \$25,000 or less, which is the maximum amount OFNS can contractually spend without going through the larger procurement process. These strategies were used during the first months of the RSCP until the complete procurement process was resolved. During this time there was also increased internal scrutiny on the RSCP as an unintended consequence of being a new initiative and OFNS leadership changes. The increased attention to the details on the checks and balances for policy compliance confirmed that the procurement *practices* complied with procurement *policies*.

After OFNS Supply Chain Management department obtained access, the process for ordering and delivering ingredients was addressed. Items that were in the FOS could be ordered electronically to produce itemized purchase orders. Items that were not in the system were placed by manual purchase orders created internally then reconciled after delivery. Working with OFNS departments to understand the complete ordering and delivery schedules was essential to menu planning. For example, all orders for all three contracts needed to be placed 10 working days before the desired delivery date. For the RSCP, and other OFNS kitchens, this meant that the product needed to be delivered in time for advance prep before the day of service. As stated in the overview of this chapter, the Brigaid scratch cooked recipes used more whole, fresh, products and raw proteins with more of the preparation completed onsite in OFNS school

kitchens. This meant more frequent deliveries and planning meals according to serving the freshest food possible. For example, fresh raw chicken was scheduled for delivery on Tuesdays, so that it could be prepped Wednesday, then cooked and served on Thursday. In order for the chicken to arrive on a Tuesday it would need to be ordered the Tuesday two weeks before the date of delivery.

Forecasting ingredient usage based on unknown numbers of projected meals also influenced both procurement and production of meals. These were new meals and recipes, untested by NYC public school students and although higher student participation was anticipated, accurate forecasting for ordering would take a few months. One implication of manually ordering ingredients was the inability to as closely monitor food costs since manual receipts were generated in the beginning of the pilot. Projecting and managing per meal food cost was challenging because of the varying procurement methods. Another consequence of ordering new items through the expedited process involved learning that some products, like the bulk grains, had order minimums that significantly increased inventory, appeared as over ordering, and raised questions about shelf life food for food safety. Communication among OFNS, suppliers, and RSCP leadership team identified the optimal shelf life and revised ordering strategy to meet minimums and safely store the ingredients. By December 2018 contracts were established and as the RSCP advanced, the RSCP teams gained more control for managing food costs.



Butter being added to freshly made whipped potatoes.



People

Since the inception of the RSCP, the procurement of ingredients, especially raw proteins, was identified as one of the most important tasks to address because of the lengthy procurement process. The initial contracting with Brigaid was conducted in order to bring in experts, Chef Dan Giusti and Chef April Kindt, to develop the initial ingredient list, which yielded a list of 170 ingredients for scratch cooked food service. This initial list of ingredients was then evaluated by Nicole Scarangelo, Director of OFNS Menu Management. The collaboration between Chef Giusti, Chef Kindt, and Ms. Scarangelo at the beginning of the RSCP was critical for meeting the September 2018 deadline and continued to develop during the RSCP. The cooperation by OFNS Supply Chain Management and Contract Management Unit departments ensured that the pilot could begin in September 2018 by using the procurement practices they identified.

These new ingredients, approved for delivery to the RSCP kitchens for meal preparation, would be handled by OFNS school-based staff. Peeling fresh ginger root, slicing pounds of raw onions, cleaning raw chicken thighs and measuring multiple spices, was a significant shift away from pre-packaged food that came wrapped in plastic, such as sliders. The work of producing these meals is discussed in depth in *Chapter VI: Cooking From Scratch*.



Before scratch cooking: pre-made sliders that were heated and served in the plastic wrapping.

As stated in the overview of this chapter, the Brigaid model for refining recipes included collecting feedback from students. The student perception and acceptance of the new meals would impact forecasting volume of production and ordering. The RSCP leadership team understood that adjustment by students takes time, and that while they may enjoy the new scratch cooked meals, students may also miss their favorite foods that were no longer available. The development of familiarity for students was what would drive their acceptance and excitement around the new scratch cooked meals. The student and school community response to the RSCP menu are discussed in *Chapter VII: Feeding the Community*.



Promotion

Internal promotion of ingredients and recipes was critical to start the RSCP in September 2018. Therefore the partnership with Brigaid and purpose of the RSCP as a strategic move toward the future of OFNS was explained through a series of meetings and top down directives. Implementing the RSCP meant creating menus for each meal, four meals (breakfast, lunch, supper, and snack), for each grade level category, four categories (elementary, junior high, high school, and early childhood), which meant 16 menus per month, that represented numerous recipes that all had to be

evaluated for daily and weekly compliance with OFNS menu standards. The ingredients for these recipes would need to be procured and ordered through approved, but indirect and more manual processes. This was a significant task that grew to include multiple OFNS departments and needed buy-in of OFNS and DOE leadership.

Eric Goldstein, Chief Executive Officer School Support Services, played a critical role in promoting the RSCP to the appropriate DOE officers whose approval would be needed for authorizing piggy-backing and short term contracts. Chef Giusti, a renown chef of Michelin rated restaurants, also had the culinary expertise and experience of working with these ingredients in school kitchens to garner support for initiating the RSCP. Once OFNS and Brigaid were committed to the RSCP, internal promotion of the new ingredients and recipes began by introducing the RSCP at a Bronx superintendents meeting in February 2018.

During the early phases buy-in was also sought from distributors who were asked to add these items to existing distribution contracts at much smaller volumes than other citywide items. Serving more fresh products also meant smaller individual school orders because fresh fruit has a shorter shelf life than canned or frozen fruit. These smaller estimates (4,000 meals per day for the first year of the RSCP) based on an initial six RSCP kitchens out of over 1,300 kitchens in NYC's public schools, were less attractive to some suppliers who were used to the larger individual and citywide orders. Then the school year began with one not six sites, 900 meals a day not 4,000 meals a day, ordering the new RSCP ingredients. OFNS management faced challenges working

“So we were informed last school year in the springtime that our school was selected by the superintendent to participate in this new program called Scratch Cooking. I went to a professional development at the Bronx field support office along with my superintendent, so my superintendent and I were there and also all the superintendents from the Bronx as well with all the selected schools as well. ...the chancellor as well as the deputy chancellor thought that the Bronx would be the ideal place to actually start this program.... They talked to us about the benefits of the program...[new ingredients] raw protein and vegetables.

– Principal



with distributors to recognize that these pilot amounts could increase and that these small volumes were important to prove the feasibility of scratch cooked food service. The first months involved ongoing conversations promoting the RSCP to suppliers and apprising them that the Brigaid collaboration was generating recipes using the new ingredients that would expand citywide.

Promotional materials were also developed by OFNS in the form of new posters that better showcased the use of fresh ingredients. These posters highlighted fresh cut fruit and kale chips, among other items now offered in scratch cooked meals. The RSCP schools have also started their own promotional activities of being one of the few schools with scratch cooked food service.



Scratch cooking promotional materials.

“[Scratch cooking] is highlighted in all of our recruitment materials and in the open houses and it gets a big response. ... Yeah, they can’t believe that we have it, they say, ‘Is it really fresh?’ ... And then we name some of the meals we have here and they say, ‘Really?’ The parents are really pleased that it’s healthy, especially in this community and the surrounding communities because of the health issues that they try to encourage students to have something other than a soda and a bag of Doritos for breakfast, which is not all the kids but you’d be surprised how many choose that because that’s what’s readily available in the community. So the fact that something else is readily available in the community is a big deal. Parents of potential students love it, students are excited to hear about things like smoothies or, you know, a breakfast egg and cheese sandwich, they’re very excited and we do use it to recruit students.

– Principal

Summary

The first element of systems change for the RSCP was creating menus for breakfast, lunch, supper, and snack in compliance with the USDA Nutrition Standards for School Meals and the more restrictive NYC and OFNS nutrition standards. Selecting and ordering the ingredients for the RSCP recipes also required understanding OFNS procurement *policies* and *practices*. This process involved *people* from OFNS Menu Management, Supply Chain Management, and Information Technology as well as Chef Dan Giusti and Chef April Kindt from Brigaid. The *promotion* of the long term strategy and benefits requires buy-in among DOE and OFNS stakeholders.

Key Findings

- Planning involved understanding and working within existing policies.*** Planning the RSCP menu involved understanding all of the federal, state, city, and OFNS policies impacting which ingredients could be used to prepare recipes and when those recipes could be served on the monthly menu. The menu, recipes, and ingredients were developed by Brigaid and finalized collaboratively with OFNS Menu Management and Supply Chain Management departments.
- Procuring ingredients was a complex process.*** Ordering the ingredients for the RSCP in time for September 2018 school meal production was a critical task that began with menu planning. OFNS and Brigaid then used strategic approaches to procure new items, negotiate cost and delivery with contracted distributors, and abide by ordering dates and product ordering minimums. The ordering process also included forecasting meal production based on recipe popularity. This process was ongoing from months before the first students at an RSCP school sampled the entrée, and through months into students and teachers experiencing the RSCP. The Brigaid Regional Chef led the ingredient ordering process and was the primary contact for OFNS.
- Partnering with Brigaid facilitated rapid initiation of the pilot.*** Brigaid had a year of student feedback on the recipes they used in New London, CT. Most of the initial recipes used in the pilot were Brigaid recipes. Tasting the RSCP recipes with OFNS staff occurred as part of introducing the menu. OFNS school-based staff and students were not involved with approving the initial menu.
- Combining OFNS and Brigaid recipes accelerated later in the pilot.*** More synergy with recipes occurred as OFNS and Brigaid had more time to work together. Additionally, as OFNS's Menu Management became more involved in scratch cooking, some Brigaid recipes were replaced by OFNS recipes, and OFNS recipe preparation instructions were revised by Brigaid. This allowed for the development of scratch cooked recipes that could be used in more of the OFNS menus across NYC schools than just the Scratch Cooked menu.



V. A Kitchen for Scratch Cooking

Overview

This chapter addresses the second element of systems change, the kitchen, specifically creating a kitchen for scratch cooking. When most people think about school buildings they think of the classrooms, library, cafeteria, gymnasium, and auditorium. Rarely do people think about whether the school has a kitchen and even less about the kitchen space, storage, and equipment. That people think about the school cafeteria, and not the kitchen might be because of thinking of spaces that students are able to access. However, it could also be because the preparation of school meals has become thought of as “thermalizing,” (thawing and reheating pre-cooked and frozen ‘foods’) and not cooking raw ingredients to prepare meals. When you think about school meal preparation as cooking raw ingredients like eggs, chicken, and beef that are served to students, the kitchen facilities for climate controlled storage, sinks for washing ingredients and handwashing, fire suppression systems, and space for high volume production are very important. Identifying kitchens with fire-suppression systems, dishwasher compatibility, and walk-in refrigerators and freezers was one of the initial steps for the pilot.

New York City (NYC) Department of Education (DOE) has school buildings built as early as the mid 1800s that are still in use for public education. Over the years the buildings have been updated to comply with building code regulations and at one time many

school kitchens also had dishwashers. However, as the foods served became packaged and processed, and the plates and flatware became disposable, the dishwashers were removed. Likewise, the fire codes for re-heating pre-cooked proteins are not the same as cooking raw proteins so kitchen upgrades were not always required. The Return to Scratch Cooking Pilot (RSCP) meant putting the dishwashers back in kitchens, confirming working fire suppression systems, walk-in refrigerators, and walk-in freezers. Preparing kitchens also included plumbing and electrical upgrades to install new equipment and organizing the kitchen into work zones.

A small team from OFNS and Chef Dan Giusti from Brigaid visited approximately 25 kitchens that were initially identified by the Bronx regional director and her team of supervisors as meeting the scratch cooking requirements. The selection of the kitchens was based on kitchen infrastructure that would set the kitchens up for success, “first six schools need really good kitchens to ‘nail it’ came down to cold storage and sinks.” (Chef Giusti) That meant kitchens where the fire suppression did not need repair; the dishwasher could be easily installed; there was cold storage for the increase in fresh, raw products including capacity for separate cold storage for raw proteins; space to create designated work zones for preparing raw produce separate from raw proteins; and storage space for the new smallwares that would be used for storing raw and prepped products. Good kitchens also included a school team (principal,

school food district supervisor, and school food service manager) that supported the changes. Good kitchens did not mean new kitchens as they selected schools built during different time periods and one of the schools was built in 1897.

The kitchens for the RSCP had to meet all of the *policies* for the safe storage and preparation of the new foods. It was also important that the kitchen organization supported *practices* of working with new ingredients. Planning and completing the work was a coordinated process involving many *people* and included *promoting* the RSCP to obtain buy-in and necessary equipment.



Policies

The first kitchen requirement for the pilot was the fire suppression system. The fire suppression system is a requirement for food service establishments that operate appliances which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system according to the policy of the Fire Department of the City of New York (FDNY). Further, the fire suppression system vendor must be licensed and perform bi-annual inspection of the system. The FDNY also performs annual inspections of the system. Proper functioning and cleanliness of the fire suppression system is also a policy compliance requirement for the Department of Health and Mental Hygiene (DOHMH).

All OFNS kitchens must have a permit from DOHMH and are subject to a minimum of two routine inspections to ensure they remain in compliance throughout the school year. Also important for cooking raw proteins was an operational and clean grease trap for disposing of fat, oil, or grease. Some of these kitchen DOHMH inspection items are under the purview of the school custodian to either address themselves, or contact the NYC DOE Services (Facilities) to arrange for resolving the issue. In preparing for the RSCP Chef Kindt and Stephen O'Brien communicated with school custodians, OFNS, and DOE Services to address cleaning the hoods

over cooking equipment, fixing sinks, replacing ceiling and wall tiles, drain and light covers, and repairing holes in walls. The DOE Services Director visited the school kitchens to do a walk-through of the issues Chef Kindt identified, and work with the school custodians to complete the repairs.



Before scratch cooking there was a hole in an out of the way place.



This hole was repaired to make the infrastructure complete.

The DOHMH also requires that hand sinks be present in the food preparation areas. There were handwashing sinks present in both of the 2018–2019 RSCP kitchens, as well as all OFNS kitchens to meet this requirement. However, scratch cooking increased the number of food handling processes for meal preparation and increased the number of people in the kitchen so an additional handwashing sink was installed in one of the kitchens.

Several items on the DOHMH inspection refer to cross contamination of raw products, usually raw proteins and raw produce. In complying with DOHMH policy, OFNS obtained and installed new reach-in refrigerators that would be designated for raw proteins to ensure that there would be minimal opportunities for cross contamination.



Practices

The RSCP introduced new practices for kitchen organization as well as planning for the kitchen reorganization. The section describes the *practices* for obtaining and installing new dishwashers, equipment, creating kitchen zones, and cleaning the kitchen in preparation for scratch cooking. One of the 2018–2019 RSCP kitchens had not received new equipment in over a year when the new equipment started arriving in Spring 2018. The other kitchen had received water jets in December 2017, but prior to receiving a steam table in April 2018 had not received new equipment since May 2016.

Dishwashers

The second kitchen eligibility requirement was compatibility (e.g., space, plumbing, and electricity) for installing a dishwasher, the most significant piece of new equipment. The 2018–2019 RSCP kitchens previously had dishwashers and the hoods from the removed dishwashers were still in place. The dishwashers were not required by DOHMH policies but were considered best practice for maintaining the highest standards for food safety. The kitchens had three compartment sinks for manual washing (cleaning, rinsing, and sanitizing) dishes at the proper water or solution temperature and for the appropriate time. While meeting these standards is still possible with manual washing, the dishwasher provides additional quality assurance for safety. The normal process for purchasing new equipment is to follow OFNS procurement guide of working with the school, DOE services, and appropriate OFNS departments to create a product specification for obtaining

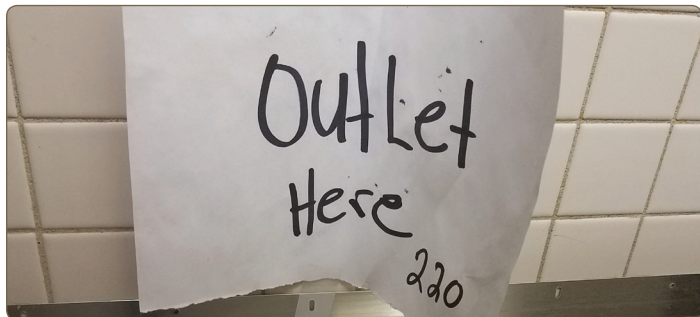
and reviewing bids by suppliers which can take 18 to 24 months. The pilot had an immediate need for the dishwashers so instead of the months long communications process within OFNS, then with suppliers, Chef Giusti and Chef Kindt worked with Mr. O'Brien to schedule a two days Facilities Tour of the RSCP kitchens in May 2018 which brought multiple OFNS departments together with equipment distributors to take measurements and plan equipment needs. This cut down the planning time for identifying the type of dishwashers as well as the space and electrical preparation that was needed for installation. However, they were not able to secure OFNS, DOE, or city funds to purchase dishwashers and worked to identify OFNS and or Brigaid supporters to donate the dishwashers. OFNS is still in the process of procurement for additional dishwashers.



Dishwasher.

Equipment

Scratch cooking also required new food storage, preparation, cooking, and serving equipment, some of which required electrical installation.



Electrical upgrades were part of preparing kitchens for scratch cooking.

The equipment that did not need installation included, buffalo chopper, immersion blender, food processor, slicer, racks, and carts. Some of this equipment the kitchens already had or were able to transfer from another OFNS kitchen or warehouse. The installed equipment included a large mixer (floor not tabletop), kettle steamer combination, ovens, steam tables, milk chests, and reach-in refrigerators and freezers. Fewer of these items were able to be transferred from other OFNS sites, so were new purchases. Obtaining the equipment and completing the installation was a multi-step process as only one work order per piece of equipment was allowed at a time. For example, the work order for the installation of the mixer could not be put in until the mixer was received. In one example, the old steamer needed a work order to be uninstalled, then a work order to have it removed, then once removed could place the work order to have new steamer delivered, and finally work order for new steamer to be installed. Managing the work orders and confirming that tasks were completed as scheduled involved many people but primarily Chef Kindt, DOE services, school building custodians, and OFNS field teams of school food service managers, Bronx district supervisors, and Bronx regional director checking in with the OFNS field office for confirming scheduled workflows. The usual practice of obtaining approvals and scheduling was followed, but in order to ensure the equipment was installed on time, the two sites were given priority and work orders were approved for evening and weekend installation.

Racks, carts, and smallwares were ordered in addition to the large equipment. The racks purchased for the RSCP kitchens were primarily used for storage and organization of new smallwares, and the carts for transporting mise en place and equipment to the appropriate work station. Brigaid provided OFNS with a list of approximately 145 smallwares items of which only 42 items were in OFNS system. This list included new items like multiple sizes of clear containers with clear or color coded lids, color coded cutting boards, digital scales, pots, pizza peel (paddle), five gallon salad spinner, and loaf pans. The list also included additional inventory of smallwares typically used by OFNS such as: hotel pans, spoodles, knives, mixing bowls, and sanitizing buckets. These smallwares were needed because the practice of receiving and preparing food changed under scratch cooking. For example, the typical OFNS practice was for fresh produce that was delivered in boxes, to be stored in the walk-in refrigerators in that same box. However, with scratch cooking, the new storage practice was to transfer the produce from the box to a clear container for storage. Further, the new raw proteins would be received and stored in the new reach-in refrigerators, separate from the raw produce. The new equipment and smallwares reflected a different way of thinking about the kitchens as a culinary space and focusing on how raw products were going to enter and move through OFNS kitchens.

Kitchen Zones

The third eligibility requirement was climate controlled storage, specifically a walk-in refrigerator and walk-in freezer to accommodate the increase of raw products. The previous chapter, *Ingredients and Recipes for Scratch Cooking*, detailed the new raw ingredients, including raw proteins, stored and prepared in these kitchens. To ensure that the highest food safety standards were followed, the raw proteins were going to be stored and prepared in designated areas called zones. Brigaid introduced the designated preparation spaces during the chef interview process as applicants were cooking in operating OFNS kitchens. Kitchen zoning was further developed as Chef Kindt visited and studied the RSCP kitchens to identify the facilities' needs. Kitchen observation of menu production identified eight kitchen zones.

Kitchen Zone 1 – Dry Storage: The first two scratch kitchens had multiple dry storage rooms with a large main room for most food items, separate smaller room for PCM (paper, cleaning, miscellaneous), and depending on the size of the main room, an additional room for bulk dry goods like grains and potatoes. Within the dry storage area new racks were used for organizing food products and carts used for storing equipment. Before scratch cooking the dry storage areas had more canned fruit, fewer spices and seasonings, and no bulk grains.



Dry storage zone before scratch cooking.



Dry storage zone after scratch cooking.



Dry storage zone after scratch cooking.

Kitchen Zone 2 – Walk-In Refrigerator: The walk-in refrigerator had racks but new racks were added to maximize the space. The biggest difference to the walk-ins was going from seeing brown and white boxes of produce before scratch cooking, to seeing the rainbow of produce through the clear containers.



Walk-in refrigerator zone before scratch cooking.



Walk-in refrigerator zone after scratch cooking.



Walk-in refrigerator zone after scratch cooking.

“When employees returned in the fall they noticed the changes in the kitchen re-organization and equipment. For example, “let’s say the fruit, we kept it in, let’s say, the box that it came in. We just kept it in there. They [Brigaid] came and brought bins. So, when they would put that in there it made the refrigerator and everything look beautiful. And you would walk in, beautiful.”

– OFNS Staff

Kitchen Zone 3 – Walk-In Freezer: The freezers already had racks for storage and did not need additional racks to maximize space. In fact, racks could have been removed because with scratch cooking there were fewer products that were stored in the freezer. Before scratch cooking the freezers were stocked with brown and white boxes of pre-cooked meal components and frozen fruit cups. After scratch cooking the shelves were emptier, stocked with some bread products and more ice packs for food safety during cold prep.



Walk-in freezer zone before scratch cooking.



Walk-in freezer zone after scratch cooking.

Kitchen Zone 4 – Dish Room: Both kitchens already had three compartment sinks with a booster to heat water to the proper temperature and one also had an agitator to circulate water for removing residue. The kitchens also had the ceiling hoods from the previous dishwashers, one of which was removed to install the new dishwasher. Both dish rooms had racks for drying dishes but scratch cooking introduced a larger dish inventory and more frequent washing which increased the need for drying space.



Dish room zone before scratch cooking.



Dish room zone after scratch cooking.

Kitchen Zone 5 – Raw Protein: The raw protein zone was a new area that included a minimum two compartment sink, flat working surface, and storage for red and yellow cutting boards, gloves, foodwrap, utility pails, and sanitizing buckets labeled for “Raw Protein Only.” This zone also included reach-in refrigerators labeled on the front as “Raw Protein” in or near the zone. Color coding the cutting boards and labeling the plastic food wrap, gloves, and buckets as “Raw Protein” served the multiple purposes for organizationally stocking the zone with the needed supplies, and for food safety of not using those items when preparing raw produce which eliminated potential for cross-contamination.



Raw protein zone before scratch cooking.



Raw protein zone after scratch cooking.



Raw protein zone after scratch cooking.



Raw protein zone after scratch cooking.

Kitchen Zone 6 – Hot Prep: The hot prep area was a cooking zone with equipment and smallwares. The biggest change in this zone was the equipment itself with replacing steamers with a kettle steamer combination and replacing ovens. During active meal preparation this area also had mobile pan racks, frequently used in OFNS kitchens, as foods were prepared for batch cooking.



Hot prep. before scratch cooking.



New equipment being delivered and then installed.



Kitchen Zone 7– Cold Prep: The cold prep area was often the most used zone of the kitchen with multiple tables and a nearby handwashing sink. Most of the tables had drawer storage with gloves and tape for labeling, as well as shelf space for green and white cutting boards. This area did not need to change for scratch cooking because the cold prep process for salads and sandwiches did not change, but it did increase.



Cold prep before scratch cooking.



Cold prep after scratch cooking.

On the left there are new colorful posters on the wall, an OFNS recipe hanging on a hook, floor mixer with tree for hanging attachments, and color-coded cutting boards under the table.

On the right there is a new kettle steamer and new prep table with a drawer for storing gloves and labeling tape.

Kitchen Zone 8 – Produce Prep: The produce prep zone was labeled “Fruit and Vegetables Only” and included at least one deep well sink for washing fruits and vegetables and a flat surface for cutting fruits or vegetables. Although the zones were used for studying the organization of the kitchen, produce prep zones were not limited to the kitchen area and were also part of the serving line(s).



Produce prep zone before scratch cooking.



Produce prep zone after scratch cooking.

To set the scratch cooking pilot up for success, every aspect of the kitchen from door to plate had to be thought through. Brigaid and OFNS planned for each square foot of kitchen and serving space, for each piece of equipment when in or not in use, each piece of food from when delivered through served to students, and for how each employee would enter and work in the space.

Cleaning

After planning for the space with the Facilities Tour and equipment ordering, the next step was cleaning the space. Brigaid and OFNS prioritized food safety and kitchen cleanliness. The months before the first kitchen started scratch cooking, Chef Kindt led the floor, to wall, to ceiling cleaning of every surface to prepare for the new equipment and food, including the serving lines and office spaces used by the cooks and SFSM. In both kitchens office desks were removed to make the spaces more functional. In one kitchen the removal of a corner desk opened up an area that was previously hard to clean. Cleaning and organizing identified unnecessary items and made future cleaning easier for pest control.



People

Creating a kitchen for scratch cooking involved numerous people from OFNS, Brigaid, the individual school sites, and unknown number of office support and tradespeople. This was a year-long collaborative process between Brigaid and OFNS. A small team from OFNS visited Brigaid kitchens in New London, CT in 2017 to see necessary kitchen features to aid in selecting the potential NYC RSCP kitchens. A larger group from OFNS visited Brigaid kitchens in early May 2018. This early May trip to Brigaid kitchens in New London had an invite list of over 40 with 30 attending. Throughout this first year there were numerous meetings, email threads, and one-on-one conversations about what the six kitchens needed to be set up for success.

The late May 2018 Facilities Tour was a traveling group of ten from Brigaid and OFNS leadership. At each of the six kitchens, custodians from the school joined the tour as well as OFNS school food service managers or district supervisors, when available. The Facilities Tour was conducted twice with two different dishwasher distributors. The coordination of schedules and commitment of paid labor hours for the Brigaid visits and Facilities Tour illustrates the commitment to scratch cooking and the value of the experience and perspective of OFNS lead-

ership. Although the RSCP began as a very top-down approach by a small team from OFNS working with Chef Giusti and Chef Kindt, the New London trip opened the conversation to other OFNS departments and provided them with an opportunity to have their questions answered and concerns addressed.



Promotion

The trip to New London was an opportunity to promote the idea of scratch cooking to OFNS leadership. This was the first time most of OFNS team tasted Brigaid recipes that met all of the USDA meal-based nutrition standards. Attendees toured the kitchens, spoke with New London school food employees, and observed students taking and eating lunch. Throughout the day the OFNS team members had opportunities to ask Chef Dan Giusti questions about the Brigaid model and ask the New London school food leadership about the impact of implementing scratch cooked meals.

Chef Giusti and Chef Kindt visiting potential RSCP sites provided another opportunity to promote scratch cooking to district supervisors, SFSM, and OFNS school-based staff. These were usually quick, informal visits focused on examining the kitchen facilities for scratch cooking, but there were opportunities for OFNS staff to ask questions and advocate for their site to participate in the RSCP. As SFSMs and cooks heard more about the scratch cooking pilot their interest and their advocacy for their site increased.

Although the RSCP leadership team was able to gather all appropriate department heads for fast-tracking the dishwashers, they are following the equipment procurement policy to purchase the dishwashers. Between July 2017 and August 2019, OFNS Grants Officer assisted with submitting requests to 12 potential supporters for funding or gifts-in-kind totalling over \$550,000. Raising funds was not new for OFNS but the urgency meant talking with their supporters about the potential expansion before the RSCP started. OFNS was successful in securing an in-kind gift for one dishwasher.

Summary

The second element of change for the RSCP was identifying and organizing the kitchen to store, prepare, and cook recipes made from an increased volume of raw products, including raw proteins, in compliance with all Department of Health and Mental Hygiene (DOHMH) and Fire Department of the City of New York (FDNY) *policies* (regulations and codes) for food and fire safety. Meeting, and exceeding, the requirements necessitated kitchen upgrades, plumbing and electrical work, ordering of special large equipment (especially dishwashers) and smallwares, deep cleaning of all surfaces, and creating designated food production zones. Performing this work involved *practices* for approving expedited work orders so that the kitchen organization supported the new food production. The *people* involved represented multiple levels within DOE and OFNS from directors of School Services (Facilities) and regional supervisors, to school custodians, and tradespeople. Finalizing the RSCP kitchens also meant *promoting* the RSCP to the school community, including OFNS school-based staff, principals, and custodians who would share responsibility for performing the work.

Key Findings

- *Selecting kitchens for RSCP involved many people and many kitchen features.* Kitchen assessment included the Brigaid consultants, OFNS leadership, Bronx superintendents, and Bronx principals. The kitchens were assessed for kitchen infrastructure and facilities, and for meeting food safety and fire safety codes which was key for passing inspection. Additionally, discussions with school principals to determine if they would be responsive and supportive of the evolving implementation process were important for selection.
- *Preparing RSCP kitchens was a long, detailed process.* Preparing the RSCP kitchens required months of planning. Then there was a systematic reorganization of work spaces into more clearly defined zones (e.g., raw protein, produce prep, hot zone). There were systems developed for daily coordinated communication between multiple departments to manage the workflow of kitchen repairs, equipment delivery, and installation. Kitchen preparation also included deep cleaning of all food storage, preparation, serving, and eating spaces, as well as office cleaning and reorganization. The preparation was led by the Brigaid consultants and necessitated involvement from DOE building facilities, OFNS staff from multiple levels, school custodial staff, and tradespeople for electrical and plumbing expertise.
- *Using designated zones for kitchen tasks was a key to success.* Producing scratch cooked school meals in RSCP kitchens reinforced the importance of zones to create a kitchen structure that allowed for safe, efficient, and timely meal service. Zones made it clear to everyone in the kitchen that specific tasks were done in specific places. Zones were key to maintaining food safety practices. Zones were also key for having space for the current day's meal preparation, side-by-side with advanced preparation for items to be served on future days. The zones were introduced and implemented by the Brigaid consultants.

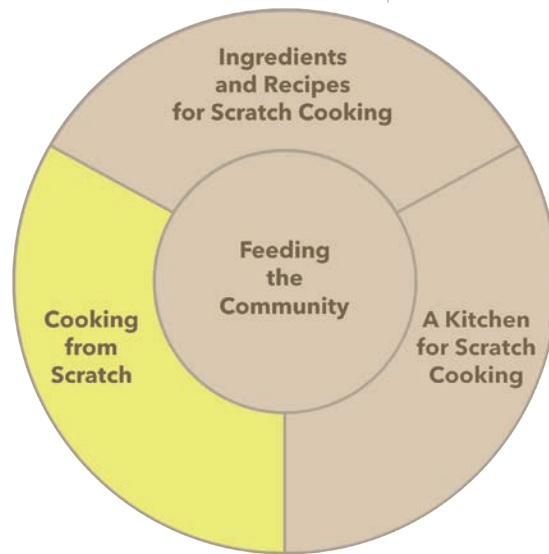
- **Using raw proteins took multiple systems changes.** OFNS had not used raw protein in any of their kitchens for several decades before this pilot. Meeting all the fire safety codes was accomplished through kitchen inspections and upgrades. Achieving all the food safety standards for working with raw proteins was accomplished through designated kitchen storage, production spaces, and supplies for raw protein. Commercial dishwashers were also donated and installed for additional food safety protection. Meeting, and working toward exceeding, fire and food safety standards was prioritized by OFNS leadership and Brigaid consultants. Brigaid consultants worked with OFNS Training and Food Safety Quality Assurance to implement and train all staff on food safety protocols.



Installation of new handwashing sink and electrical for new raw protein reach-in refrigerator.



Kitchen.



VI. Cooking from Scratch

Overview

The first element of systems change focused on the food, the second on the kitchen, and this chapter focuses on the work of cooking from scratch. This study defined scratch cooking as, “Scratch cooked food service”^{*} which means food service that prioritizes the preparation of meals or snacks on a daily basis at or near the site of consumption with ingredients in their most basic form.” (NYC Int. No. 1676-2019).

Scratch cooking was not new to the Office of Food and Nutrition Services (OFNS) as some hot vegetables, sandwiches, and composed salads on the salad bars are made from scratch. However, scratch cooked entrées, especially those made with raw proteins, was not how OFNS was currently preparing most meals. The Brigaid model for re-introducing scratch cooking in schools was to hire an executive chef (chef) with culinary expertise



Seasoned zucchini ready to cook.



Salad bar with fresh vegetables and composed salad.

to train staff on new recipes for implementing the menu. The chef became an employee of the school district, not Brigaid, but was trained by Brigaid and completed a daily log that was reviewed by the Brigaid Regional Chef as part of the ongoing mentoring and quality control management. When Brigaid partnered with OFNS they had implemented their model in one school district with six school buildings. OFNS serves over 1300 buildings, with 350 buildings in the Bronx. Chef Gisuti shared that his original plan after New London, CT was a larger school district with maybe ten or so schools up from the six in New London. Partnering with the largest school district in the country, within two years of starting Brigaid, was a great opportunity and new role for Chef Giusti. The Return to Scratch Cooking Pilot (RSCP) also introduced a new position for Stephen O’Brien who became OFNS Director of Strategic Partnerships and Policy to guide the planning and implementation of the RSCP. Following the Brigaid model also meant a

^{*} The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

new Brigaid regional chef for the Bronx and chefs hired by the New York City (NYC) Department of Education (DOE) to implement the new menu. The introduction of these new positions; director of strategic partnerships and policy, Brigaid regional chef, and executive chef, also impacted the roles of existing positions within OFNS. The daily responsibilities of at least six positions, representing dozens of employees within OFNS hierarchy and kitchen teams, were impacted by the RSCP. These positions were: OFNS Bronx regional manager, Bronx district supervisors, school food service managers (SFSM), cook in charge (cook), assistant cook, and school lunch helpers (SLH).

The RSCP literally started from scratch as OFNS had no guide for preparing and serving full scratch cooked meals. Although there was not a guide for the scratch cooking intervention, Mr. O'Brien recalled a past OFNS intervention where a technical assistance specialist visited poor performing accounts (kitchens) to improve the quality of the school meals. The technical assistance specialist would spend weeks with that team providing training, culinary expertise, and marketing of improvements to the school community to encourage meal participation. The initial improvements experienced under the short term technical assistance model were not sustained, and after three to six months food quality and participation would begin to decline again. The plan for scratch cooking was sustained high quality meals so assigning full time trained culinary expertise was a priority. Since OFNS did not have a model for scratch cooking, the culinary expertise came through a partnership with Brigaid. Integrating the school knowledge and experience of the SFSM, cook, and assistant cook, with the culinary expertise and recipe familiarity of the Brigaid regional chef and executive chef was a critical phase for scratch cooking described as, "adding a new

organ to the system, introducing the chef, need to make sure that it isn't rejected and that it can work in the system." (Eric Goldstein). RSCP also added increased OFNS school-based staff to integrate in RSCP kitchens.

The **policies** section of this chapter focuses on the creation of new positions and responsibilities for the chefs and OFNS kitchen team in compliance with city, DOE, and OFNS policies. The **practices** section addresses details of daily menu production including one-on-one, on-the-job training. The section on the **people** illustrates how starting from scratch created entrepreneurs within a century old organization and the role these entrepreneurs played in systems change. The last section of this chapter, **promotion**, focuses on the interactions within OFNS hierarchies and within the schools at the serving line where most of the communication and meal enthusiasm between OFNS and students, staff, and teachers occurs.



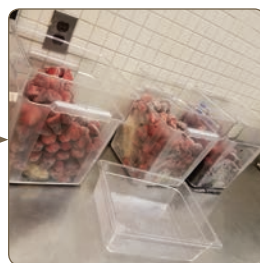
Policies

Executive Chef

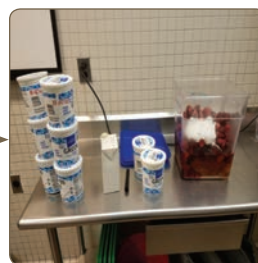
The position of Executive Chef for the Office of School Support Services, School Food did not exist before the RSCP. Writing the job description was a months long process, then the description went through a review and approvals process through Budgets and Human Resources before it was posted. Applicants applied through the DOE application system and expressed



Frozen browned bananas



Mixed fruit for smoothies



Smoothie ingredients



Blending fruit smoothie

Smoothies were often prepared and then stored overnight to be ready to serve at breakfast.



Cleaning lettuce in the salad spinner in the one of the produce prep. zones.

interest directly to Brigaid. There were even a few applicants who contacted Chef Giusti through his instagram account. Applicants who contacted Brigaid or Chef Giusti's social media were informed of the policy that they had to complete a DOE application in order to be considered for the position.

The chefs are employees of the DOE, therefore their onboarding process included background checks by DOE as any other employee. The chefs became part of the kitchen team but their job description was not governed by nor under purview of unions like other OFNS staff. The most direct and significant impact of this distinction was that the chef was not limited to working 7 hours a day like the SFSM, cook, assistant cook, and SLH. This was important because, “oversee the timely preparation and production of menus while maintaining the highest possible quality,” as written in the chef job description, meant making sure that each recipe component was ready for the next step. Brigaid and the chefs were responsible for planning and ensuring that the SLH staff was set up for success for preparing and serving high quality meals on time the next day. Chef Giusti shared that through conversations with OFNS leaders he learned of their concerns relating to menu quality and consistency. For example,

sometimes food items are not delivered on time or at all, and that items that are delivered may not pass inspection for receipt and need to be rejected. Since the new menu required more fresh ingredients that needed to be delivered close to the time of their use, as well as advanced prep, the chef was essential for skilled troubleshooting for recipe or menu adjustments if there were delivery issues. Preparing for contingencies required filling the positions with a title that had flexibility.

OFNS School-based Staff

OFNS allocates labor hours for meal production and service according to student participation (number of students taking a school meal, i.e., counts), and meal programs (breakfast, lunch, snack, supper). The full staffing profile also takes into account other factors like menu types and program service times. The resulting staffing formula determines the total number of staff and the titles of the staff. As one OFNS staff explained, “normally schools that feed, I believe it’s 600 and over, usually have a cook and an assistant cook ...below that [600] is usually the cook and then the staff [SLH]. ...if they’re feeding up to 1000 or over 1000, then we get the third cook. So, it’s based on counts...That’s why counts is very important in the kitchen.” (OFNS Staff) Some employees will have multiple time cards so that the hours are allocated to the appropriate meal program. As an OFNS staff member explained, “They have to use a separate time card for lunch, and then also for supper, and then another separate time card for snack because the supper is funded by the state. ...If the state does an audit, they want to see their time card. And then if we get audited by another city agency, they got to see the breakfast and lunch time card.” (OFNS Staff) RSCP introduced a new menu type for all meal programs, new production *practices*, and student participation was expected to increase, so the normal staffing formula was modified.

Kitchen Team Leadership

Before scratch cooking and the introduction of the chef, OFNS kitchen leadership teams included the cook, assistant cook, and SFSM. Most SFSMs are responsible for three to five sites so it was the cook who was accountable for most of the daily food production, facility management, staff management, and record-

keeping. The SFSM and district supervisor evaluate the cook's performance and the cook and SFSM evaluate the school lunch helpers. Introducing the Brigaid regional chef and executive chef increased the leadership team from three, to four or five when the Brigaid regional chef was in the kitchen also playing a training supervisory role. The roles and responsibilities of this larger leadership team shifted and overlapped regarding food ordering and production, food safety, staff management, and recordkeeping. For example, the SFSM was previously responsible for placing orders but that responsibility was shifting to the chef. However, initially ordering shifted to Chef Kindt who was most familiar with the new recipes and ingredients until the chef could assume those responsibilities. Chef Kindt was also the most familiar with the Supply Chain Management team and process by having completed OFNS SFSM training and participating in meetings about the RSCP procurement process. Further complicating the ordering process, was that the Food Ordering System (FOS) was part of a suite of management applications (payroll, repairs, HACCP, and other recordkeeping) only accessible by the SFSM. Therefore, after being trained on the FOS they were faxing orders until the Information Technology department gave the chefs access to only the FOS system.

Another example of the complicated new team structure relates to the completion of Food Production Records (FPR).

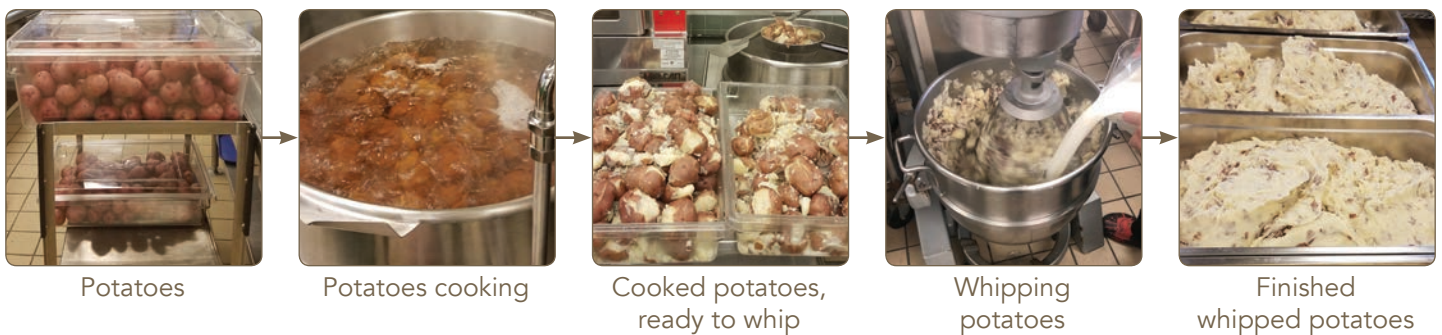
- **Before scratch cooking** the SFSM was responsible for recording planned production needs with recipes and instructions at least five days in advance, and during each visit reviewed them for accuracy and compliance, then initialed the page to signal it has been reviewed. The cook was responsible for recording actual portions prepared,

portions served, leftover, and discarded.

- **After scratch cooking** the SFSM was responsible for submitting paperwork to district offices and preparing all state mandated reports pertaining to food services. The chef was responsible for overseeing the completion of FPR and determining preparation amounts by completing the planned section of the FPR, and the cook filled out production records other than the menu and what was planned to be served.

What remained consistent between the before and after stated responsibilities is that planned production and actual production were supposed to be completed by different positions. The lack of clarity and imbalance of recordkeeping lasted for five months before the responsibilities were specified and reassigned. The transition of kitchen leadership team responsibilities for staff supervision and recordkeeping was a contributing factor for one OFNS staff transferring to a different non-scratch cooking kitchen.

RSCP was implemented within a significant policy environment. The hours employees worked are part of a union labor policy. The performance evaluation structure was also understood as part of union labor agreement so clarity on who could provide feedback on employee performance and how it was communicated was a policy issue. Scheduling employees and assigning staff tasks according to the school meals program, in compliance with the labor hours allocated for that meal program, was a policy issue. Employees time cards are legal documents. The FPR and student participation are also governed by policies at the state and federal levels. The chef job description, staff scheduling and supervision, food ordering and production recordkeeping, and meal participation highlight the many prescriptive



Starting from whole potatoes, whipped potatoes were made with the skins left on.

processes, i.e., management bureaucracy, and policies involved in preparing and serving school meals. The RSCP was important for identifying the *policies* that would be affected by scratch cooked food service and providing high quality meals.



Practices

From the beginning of thinking about scratch cooking in NYC public schools the question was, “how will this actually work?” There were lists of ingredients, equipment, kitchen specifications, and *policies* that could be visualized and then grouped as either, “yes we have it and are doing it,” or “no we don’t and aren’t yet.” The questions about *practices* that were pondered during the RSCP included, how do we hire a chef, how do we train staff, how do we maintain high standards for food safety, and how will the new ingredients, recipes, consultants, chefs, and increased staff come together to produce the menu? The process of changing these *practices* were the systems change to cook scratch meals.

Hiring for Cooking from Scratch

The hiring process was based on the Brigaid model that included one-on-one traditional interview and a two-days practical cooking interview where applicants prepared a meal compliant with USDA NSLP guidelines and a meal that would be purchased as an affordable Community Dinner. This was a new hiring practice for OFNS and a lot of thought went into who would be a part of the hiring process, what questions would be asked, how they would be asked, and how much information applicants would be given to prepare for the two days, four to six hours per day, practical interview. OFNS Human Resources was involved in the process from approving and posting the position, screening applications, scheduling phone interviews, scheduling the practical interview, providing applicants with information about the practical interview, and then emailing candidate with an offer.

The phone interview was a group interview with the candidate, Stephen O’Brien, Chef Giusti, Chef Kindt, Bronx regional manager, and OFNS Human Resources representative. The two-days practical interview was the candidate(s) with an interview team including: Mr. O’Brien, Chef Giusti, Chef Kindt, and a member of OFNS Menu Management or Training team with culinary experience. This team observed candidate(s) cooking a USDA NSLP school meal on Day 1 and Ingredient Mystery Basket meal on Day 2. Each team

“Managerial styles have to be different, depending on the kitchen that you’re in. So out of the [six kitchens] that we’re in, of course I know the kitchens’ staff. And of course, knowing them and then speaking to these employees, you definitely have to come with patience. You have to be able to thoroughly explain what you need the employees to do, and that might be one to ten times a day where you’re explaining the same thing, so patience is definitely key. Professionalism, how you speak to people. ... Because people is the hardest part of our job, but people is what we do.” She went on to add, “it’s like bringing a new family member into an existing family. Will he or she fit in well with the family members that are already there?”

– The Bronx Regional Manager



member interviewed the candidate one-on-one, interviewed the candidate together (panel interview), and asked the candidate(s) questions as they presented their meals. This was a demanding interview process for the candidate as well as the interviewers, who completed a two page rubric for each candidate on each day. Brigaid and OFNS planned to hire six chefs with culinary technical skill, as well as a management style and personality that would match the dynamics of each of the six kitchens. This was an extremely selective process.



An ingredient mystery basket meal, which was the second day of the interview process where the candidate prepared a possible Community Dinner meal.

Upon reflecting on the interview process, Chef Giusti, Mr. O'Brien, and Chef Kindt shared that, the interview process, with new interview scoring and evaluation rubrics worked for identifying people who could do the job and adapt to the DOE OFNS organizational structure. Observing and interacting with each candidate over the two days was important because the interview team needed to observe the candidate's food safety practices, mise en place organization, time management, and interpersonal skills, as well as cooking techniques.

The interview process started in late 2017 and after a few applicants canceled or did not show for the practical interview in early May, all of the steps in the process were examined to see how they could be improved. Scheduling Brigaid and OFNS staff and space was a commitment of resources that was wasted if candidates canceled. This was still the early stage of the pilot when Mr. O'Brien was one of the few OFNS leaders invested in scratch cooking and pressure was applied top down to start the hiring process in order to allow time, eight weeks, for chefs to complete their training by the start of 2018-2019 school year. The decision was made for Mr. O'Brien to contact candidates who passed the phone interview and provide them with the practical interview information instead of Human Resources. Designating Mr. O'Brien as the point person provided the candidate with someone who could answer questions first hand regarding the food preparation, kitchen equipment, and layout, as well as the logistics of the hiring process.

Training for Cooking From Scratch

The OFNS partnership with Brigaid included a training plan for chefs and the staff because an OFNS chef training program did not exist. The training curriculum was built from the Brigaid chef training, incorporated OFNS policies and procedures from the training that cooks and SFSMs receive, then adapted based on their culinary knowledge and planned job responsibilities. The Executive Chef Training Curriculum objectives were, "To implement federal and state mandated meal programs while using the freshest ingredients providing NYC students with appetizing, delicious, and healthy meals," with a goal, "to develop executive chefs to cook, train, and lead the daily operations of a SchoolFood Scratch Cooking Kitchen." (Office of Food and Nutrition Services, 2018) This was a mix of classroom and on-the-



Fruit was cut in an area visible to students to create excitement and interest in fresh cut fruit.

job training at one of OFNS' training kitchens for learning OFNS procedures, and interacting with OFNS leaders in the Training, Operations, Meal Accountability (student participation), and Food Safety departments. Chefs also participated in mandated training throughout the year that all OFNS employees receive regarding fair labor and employment practices. The cooks, assistant cooks, and school lunch helpers (SLH) received on-the-job training from Chef Kindt and later the chefs. The SLH training was tailored to the tasks identified for their planned primary duties and known skill level. Chef Kindt met with the SFSMs and cooks to review the skill level of the SLH and assign meal preparation duties that would become their work schedule of hourly activities. The advanced planning worked, but what the implementation team learned, and worked best going forward, was giving school food staff time to be introduced to the new menu, practice recipes, adjust to the increased work, and then assign tasks based on observed skill levels.

However, the SLH staff from the first RSCP kitchen did not have time to be introduced to the new menu because the employees did not return early for the start of the school year to receive additional training. There were challenges by not allowing time to transition or ease into the full scratch cooked menu. Besides instructing SLH staff to change production practices all at once, the role of the chef, specifically, what oversight and leadership role the chef had with the SLH staff, was not clear. Further, the role of Chef Kindt as a consultant was temporary and unclear because she was training the chef, cook, assistant cook, and SLHs at the same time. Initially all of the training was on Chef Kindt until the chef became more familiar with the recipes, scale of production, and managing staff to take over training. "She's really the only one who's familiar with executing

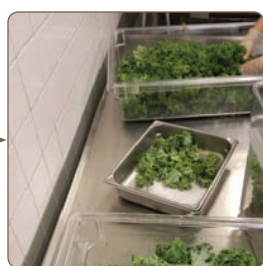
and how this all works. It was tough. Second day, we're cooking. We're feeding. It wasn't like, they weren't bringing people in three days in advance. It wasn't happening. It was the second day, we were cooking." (OFNS Staff) Chef Kindt adjusted her one-on-one training to the skills of the SLH, showing an ability to scaffold culinary concepts and tasks. One school-based staff member described their training as, "just-in-time," meaning on-the-job, as needed to perform the task. However, other SLH staff felt like they were just being told what to do by too many different people and did not interpret the instruction as training. Since the training and cooking occurred simultaneously, the following examples illustrate how cooking from scratch built on the current OFNS training as stated in the cook and SFSM training.

Food Safety for Cooking From Scratch

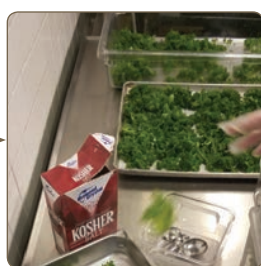
OFNS and Brigaid prioritized high food safety standards throughout the entire pilot. The driving motto was 'all children safe food at all times.' After scratch cooking, the focus for food safety was on raw proteins because these products introduced new potential risks. There were planned changes to reorganize the kitchen specifically for food safety. Additionally, new food safety *practices* included limiting the handling of the raw proteins primarily to chefs, cooks, and assistant cooks. All of these changes increased the food safety practices in the RSCP kitchens. The chef job description stated, "The chef will maintain food safety and sanitation standards," and one chef agreed that the most reflective part of the interview on their actual role was the emphasis on food safety and sanitation. The following examples, observed during observational data collection, illustrate the *practices* of maintaining food safety.



Cleaning
kale



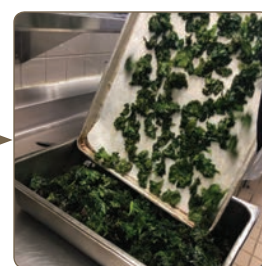
Pruning
kale



Seasoning
kale



Kale
ready to cook



Kale
ready to serve

Kale chips were a hit with students and teachers.

Station Set-Up and Sanitation

All OFNS staff are trained on cleaning and sanitizing their work stations and equipment. Three slides of the training powerpoint provide instructions for making sanitizing solution in a red bucket, testing solution with PHydron Chlorine test strips, storing solution at each station, and when to change the solution. Scratch cooking built on this training to include a new process for cleaning and sanitizing dish rags, a new ratio of water to bleach for sanitizing in kitchens with raw proteins, designating equipment to be used in certain stations, and the cleaning process for that equipment. The designated work area, labeling of containers, and cleaning process made the increased food safety practices for raw protein visible for all employees to ensure acclimation to food safety protocols even if they were not working with those ingredients.



Making food safety a priority means food safety equipment at each station, such as buckets and gloves.



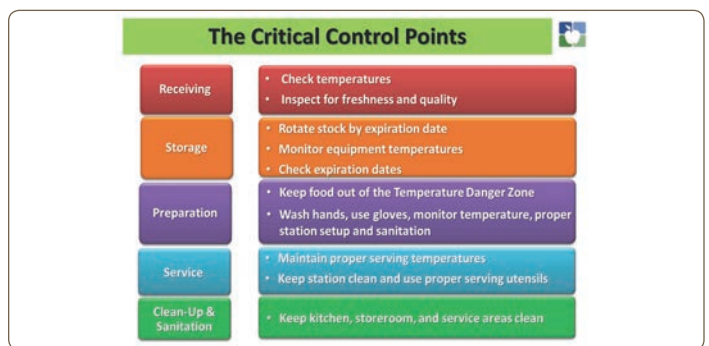
NYC OFNS cook manual slide on station set up.

Thermometer Calibration and Usage

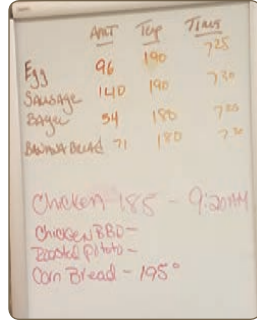
All OFNS staff are trained on calibrating thermometers and checking temperatures of food items. Scratch cooking stressed checking temperatures of meat by checking multiple spots of a pan of meatloaf or turkey breast, or each chicken thigh. One employee recalled working with Chef Giusti on a chicken day and that he always said, “I don’t care how much they yell they need chicken. Every piece of chicken needs to be temped.” You zone them out and you temp that chicken before it comes out. When my staff is like, “I need chicken.” [I say] “Hold on one minute, they’re temping the chicken.” That’s what you gotta tell them. You temp every piece of chicken. Not one chicken leaves that kitchen without being temped.” (OFNS Staff) Scratch cooking also made the recording of food temperatures public by having employees record temperatures on the white boards. This served multiple purposes of allowing the kitchen leadership team to monitor temperatures by checking the white board, documenting temperatures for recording in their end-of-day book work, and further depicting a new kitchen environment.

Cooking From Scratch

Receiving Deliveries: The NYC OFNS cooks training covers Receiving with nine slides. The slides focus on inspecting deliveries, dating, and recordkeeping. These procedures did not change with the RSCP and when asked about the impact of scratch cooking on their jobs, SLH staff who worked with receiving initially shared that their jobs were not affected by scratch cooking. After being asked about specific receiving procedures, the SLH staff shared that now they take produce out of the delivery boxes and store in the clear containers.



NYC OFNS cook manual slide on food safety control points from receiving to clean-up and sanitation.



Food safety practices were of utmost importance and followed established and created new standard operating procedures (SOPs).



Kale removed from the cardboard shipping box, placed in the clear container for storage in the cooler.

The staff integrated this process so seamlessly that they no longer identified the change because the primary tasks had not changed, (i.e., only accepting products that were of high quality, dating containers, storing products according to food safety procedures, and recordkeeping).

Fruit Preparation: The cook training includes instructions on how to set up the Fruit Preparation Station. The instructions state which spoodle or cup to use for

portioning, what size plastic cup to serve the portion, and how many cups fit on a sheet pan. The difference for the RSCP was that instead of portioning canned fruit, the staff was slicing fresh fruit. Instead of knowing the exact yield for each container of canned fruit, the staff estimated yields for each melon, or pineapple. The staff also had new knives, designated cutting boards, and prep areas for working with fresh fruit. Cutting pineapple, honeydew melon, and cantaloupe were not new to the SLH staff as they had prepared fresh melon and pineapple in previous years when it appeared on OFNS menus, but that was seasonal, not daily. Chef Kindt and the chefs monitored knife skills, modeled proper hold to protect fingers, and how to cut each type of fruit to have pieces of similar size. As one chef assumed more leadership responsibility and interacted with the staff and school community, he learned that the pineapple was a more popular fruit, and also easier to cut than the melon so adjusted ordering to reflect student preference and kitchen capacity.

Cold Sandwiches: OFNS offers cold deli (turkey) sandwiches at many of their kitchens so employees were already trained on proper sandwich assembly. Slides

Thermometer Calibration

- Prepare a cup with a mixture of ice and water - 50% crushed ice and 50% cold water
- Insert the thermometer stem into the jacket holder's built-in wrench and use the pocket holder as a handle
- Do not rotate the head
- Insert the thermometer stem at least 2" into the cup of ice water
- Allow the temperature reading to stabilize before reading the temperature
- A properly calibrated thermometer will read 32°F in ice water
- If the thermometer is not reading 32°F, you must follow the following recalibration steps. Use the hex wrench on the pocket case and rotate the indicator head to correct the error - adjust reading to 32°F
- Discard ice water after testing and calibration
- Sanitize thermometers before & after every use.
- Add one gallon of 75° water to a clean bucket.
- Pour one (1) cup of bleach into the water. ensure bleach is thoroughly mixed. Scoop out one cup for thermometer sanitizing solution.
- Test and sanitize the thermometer if dipped

Food Safety Checklist

The Food Safety Checklist is used to maintain critical areas of food safety and sanitation in the kitchen.

All employees can take part in ensuring these areas are maintained daily.

Area	Mon							Tue							Wed							Thu							Fri						
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM					
Handwashing																																			
Sanitizing																																			
Temperature																																			
Time																																			
Labeling																																			
Storage																																			
Receiving																																			
Preparation																																			
Serving																																			
Cleanliness																																			

Assign staff to complete specific areas of the Food Safety Checklist daily

Receiving

Delivery Types	MILK	BREAD	FROZEN/ GROCERY PRODUCE	PAPER CLEANING & MISC.
Max # Deliveries Per Week:	5	5	2-3	1-2 MONTH
Time Of Delivery:	7:30-2:00	7:30-2:00	7:30-2:00	7:30-2:00
Temperature needed at time of delivery:	YES	NO	YES	NO
What to inspect:	<ul style="list-style-type: none"> Complete order Correct amounts Expiration dates Temperature Damage 	<ul style="list-style-type: none"> Complete order Correct amounts Damage Freshness 	<ul style="list-style-type: none"> Complete order Correct amounts Temperatures Damage Freshness Expiration Production dates 	<ul style="list-style-type: none"> Complete order Correct amounts Damage

The NYC OFNS Cook Manual contains many slides that provide details on food safety procedures, at every step from receiving to serving, as exemplified on these three slides.



Turkey thawing in cooler



Turkey ready to go in oven



Turkey cooling



Slicing turkey with slicer



Slicing turkey with knife

Sandwiches with fresh turkey. At first a slicer was used, then a knife, which produced cleaner more even slices and saved time to clean the slicer. Students appreciated the fresh sandwiches.



Turkey sandwiches ready to serve



Sandwich assembly



Adding turkey



Initial sandwich prep.

96-99 of the cooks training illustrate Sandwich Assembly & Set Up by placing the produce and sandwiches on top of ice packs to maintain food safety temperatures.

- **Before scratch cooking** the pilot kitchens served peanut butter and jelly, and or tuna sandwiches.
- **After scratch cooking** the above sandwich options continued to be offered. Additionally, a deli sandwich made from turkey breast that was delivered raw, roasted, cooled, and sliced in the RSCP kitchen. The practices for slicing the turkey evolved during the pilot year. First, the chefs trained the kitchen staff to assemble the three-part slicer, adjust settings to slice the turkey breast, and then how to clean the slicer. However, cleaning,

sanitizing, and storing the slicer could remove a staff member from the production process for 20 minutes. The chefs also noticed that the slicer, even though it had a sharp blade, was creating a mush or hash of the meat and the amount of wasted meat seemed high.

They experimented with the chef using a sharp knife to cut the breast into slices by hand and found that the different process created less mess, less waste, and less time spent cleaning, without significantly increasing the actual time for slicing the turkey. Using the knife instead of the slicer resulted in the task switching from a SLH to the chef in one kitchen, but in another kitchen the SLH who used the slicer was also trained to complete the task

Sandwich Assembly Station

Step 1 Wash, rinse and sanitize the work station before beginning

Step 2 Gather ice packs, a cutting board, plastic wrap, knife and pans

Step 3 Collect sliced product(s) (cheese, meat, lettuce and tomato) for sandwich production

Step 4 Layout frozen bread on cutting board

Step 5 Place 2oz of Meat/Meat alternate onto bread, add lettuce and tomato if necessary **Change gloves and wash hands every time you change tasks*

Step 6 Assemble sandwiches, cut wrap and refrigerate in small batches to maintain safe temperatures **Hero rolls may be cut "open faced"*

Step 7 Wash, Rinse and Sanitize Station

No food or debris should be noticeable on the slicer or the table supporting it after it is cleaned.

Sandwich Assembly & Set Up

Place sandwiches on perforated sheet pan, on top of ice packs

The NYC OFNS Cook Manual contains several slides on sandwich assembly instructions, equipment, and food safety as exemplified in these slides.

using the knife. Since using the knife accomplished a consistent slice for portioning, kitchens do not need slicers, at least for turkey breast, for scratch cooking.

Hot Entrées: The preparation of hot foods in OFNS cook training covers the FPR, batch cooking, the different types of equipment that can be used for cooking, and the temperatures that foods need to be cooked to and held in warmers. The cook training also includes following instructions on product packaging and gathering ingredients for setting up the work station for preparing a recipe, also known as, *mise en place*. However, the manual does not include setting up stations or following recipes for cooking raw proteins. Brigaid was responsible for providing that training which began with hot protein and grain recipes that met the USDA meal guidelines, designating separate raw protein storage and equipment, designating kitchen zones for raw protein stations, and on-site training for handling raw protein. The Brigaid model also included the chefs from the different sites working as a team of chefs sharing best practices for ongoing training and incorporating student feedback for recipe refinement or development.

Serving the Glazed Meatloaf for the first scratch cooking lunch meant starting the preparation the day before the first day of school so that the raw onions could be diced, sauteed, and cooled before mixing with ground beef, eggs, breadcrumbs, and seasonings, then portioned by weight into pans for cooking. On the first day of school Chef Kindt trained the SLH staff on watching the ovens for how evenly each pan was cooking, checking the temperature in multiple spots before removing from the oven part way through cooking to add the barbecue sauce, how to add the barbecue sauce, then checking temperatures again before removing meatloaf from the oven and storing in warmer for lunch service. Chef Kindt reminded the SLH to use the oven timers and modeled techniques for applying barbecue sauce, from portioning sauce in small batches, to using the spoodle to measure out proper portion and the spoodle bottom to spread and smooth the sauce, or spoodle to measure and then flat spoon to spread and smooth sauce.

Once the meatloaf was ready for service Chef Kindt demonstrated how to cut the meatloaf through a series of halves to yield the 32 servings. First cutting the 12” length of the pan in half, then each of those halves in half using three cuts to make four sections. Then cutting the 20” width in half, each of those halves in half, then



Meatloaf had a lot of steps. At first the chefs had to be involved and as the year went along, OFNS staff could do more on their own. OFNS staff encouraged students to try the meatloaf because it was cooked from scratch like home.

each of those halves in half for seven cuts to make eight sections. She demonstrated this method to the assistant cook and chef, instructing the chef to explain to the staff who would be cutting and serving the meatloaf closer to the time of service. During a line check just before service Chef Kindt saw that a pan was not cut correctly and again demonstrated the halves in half technique with an uncut meatloaf and then asked for a SLH volunteer to slice a meatloaf while she observed. The SLH, having heard, then seen how to cut the meatloaf, was able to demonstrate how to slice the meatloaf to other SLHs. The SLHs' process was slightly different in that she made small starter slices from side to side instead of halves, making sure she had the 4x8 grid before slicing across the pan, but she yielded 32 slices and understood in a way that was meaningful for her and allowed her to explain to the rest of the serving staff. This on-the-job training process of step-by-step instruction was critical for all employees to learn to cook and serve the new menu.



Chicken stored in "raw protein only" reach-in refrigerator.



People

System Entrepreneurs

The people implementing the scratch cooking program represented multiple levels of OFNS hierarchy and the Brigaid team. Brigaid brought the innovators with new *practices* for organizing kitchens, receiving and storing food, training on cooking in school kitchens, and working with school communities. OFNS started the RSCP using a top down approach with leadership ready for innovative change and creating a team of systems change entrepreneurs to develop and implement the program. Chef Giusti and Chef Kindt were the innovators, Mr. O'Brien the orchestrator, and Chef Giusti also the disruptor. Chef Giusti understood his role evolved over time and explained that as a consultant and innovator he facilitated change and allocated his time where change needed to happen. Chef Kindt also understood that as a consultant she balanced her role of being a part of the expertise behind the innovation and temporary member of the kitchen leadership, with not being the final decision maker and or OFNS representative to the school community. Mr. O'Brien, as the orchestrator, also saw his role evolving from initially being at the schools almost daily to assist with implementation, to stepping back and visiting the schools to check in as needed, to again visiting more frequently.

“The raw [protein] ones [containers] have to be in a different refrigerator. We keep them with the raw [protein] stuff. The employee went on to add, “So if you work in that station, you just have to be there. It’s like your home all day, preparing chicken, you gotta clean your station, you gotta make sure that the raw stuff is getting washed and sanitized, has to air dry there, then you have to wait until the dishwasher area’s empty. And then you take all your dishes there, once they wash all your [raw protein] dishes there, they have to drain the dishwasher out, refill it, and then start their dishes...’Cause you don’t want them to put clean dishes in there from another section, when you’re just washing raw stuff, then contaminate the whole kitchen. So it’s just a big process, but as you get used to it, it’s like okay.”

– OFNS Staff



Chef Kindt, Mr. O'Brien, and the chefs were in new positions created through the partnership of implementing scratch cooking. The position of Brigaid regional chef was new, created when Chef Kindt transferred to NYC as part of Brigaid's growth to a second school district, promoting two employees to that position. This was Chef Giusti's first time managing regional chefs, Chef Kindt's first time in that position, and first time OFNS worked with this type of consulting arrangement. Mr. O'Brien was also moved from Director of Food and Menu Management to Director of Strategic Partnerships and Policy as OFNS was exploring partnering with Brigaid to implement scratch cooking. Although both Chef Kindt and Mr. O'Brien were taking on new positions and leadership responsibilities, the chef position was the combination of introducing a new position and person into OFNS hierarchy.

The chef position was important for the RSCP because they were trained by Brigaid to focus on food quality and food safety and worked longer hours to meet the high expectations. The position increased the size of the kitchen leadership team which created some initial confusion but was needed because of the increased food planning and production. The increased production also meant increasing the number of SLH working in the kitchen, as well as the number of hours available to current staff. A new employee who had worked at one of

the pilot sites early in her 120 day probationary period commented, "that day I came it was... [the] cook and a few people [SLH] maybe two or three the most. Where starting September, that was completely different. There were like 20 people or something here." (OFNS Staff)" Another employee permanently assigned to one of the sites agreed that last year, "It was like five of us. Then I came back it was twelve." (OFNS Staff)

OFNS kitchen staff are members of the DC 37 union which means their job descriptions, work schedules (tasks and hours), follow a contracted agreement. Implementing RSCP did not require new job descriptions and staff could choose whether they wanted to work more hours. Staff were given the opportunity to transfer and, depending on their seniority, could have transferred to work preferred hours at non-scratch cooking sites. However, OFNS district supervisors, SFSM, cooks, and most of the SLH who worked at the kitchens before scratch cooking chose to participate in the RSCP. Most of the SLH staff also remained at the end of the first year and returned for the 2019-2020 school year. The retention of the staff was highlighted by Chef Giusti as representative of the strong, positive, and respectful relationships among Chef Kindt, the chefs, kitchen team, and school community.

Earning staff buy-in was important because scratch cooking was going to involve working with more raw

“I was pumped up. I ain’t going to lie. I was pumped up because that’s when they introduced some of the food to us, like what we would be doing, and the food was really great. It was very good, and that’s when I knew then I wanted to be a part of it. I wanted to be a part of it. I wasn’t aware of how deep the work would be in public school. I’ve been in [commercial] dining, so I knew what to expect with that, but in public school I couldn’t visualize it.”

- OFNS Staff

ingredients, more equipment, learning new recipes, new preparation techniques, and working with a new chef. Gauging buy-in was part of the initial visit to the 25 potential sites. Gaining buy-in began with inviting OFNS district supervisors and SFSMs to New London in May 2018 to tour the scratch cooking kitchens and talk with the school food staff about the Brigaid model. In June 2018 the staff from all of the planned sites were invited to a RSCP program orientation where they had an opportunity to taste the new breakfast and lunch foods. Mr. O’Brien presented the background for the scratch cooking pilot including why OFNS chose the Bronx. The staff was formally introduced to Chef Giusti who shared his background, thanked OFNS and everyone in the room for the opportunity to work with them, for making

him feel welcomed, and stressed that people were the most important part of the RSCP. Then Chef Kindt, who most of the staff knew from her visits to their kitchens, presented the planned roles and responsibilities of the new kitchen leadership team of the SFSM, cook, and chef. Chef Kindt explained the plan that the chef would take ordering and inventory off the SFSM plate and the cook would have a partner to help with preparing meals. She stated that it’s not a question of who is in charge, but what does everyone need to do to get the job done, and that during this planning phase they wanted the staff to share their thoughts and concerns. After the presentations, the staff had an hour to ask questions that were answered by Mr. O’Brien, Chef Giusti, or Chef Kindt. The June 2018 orientation was viewed by most of the



Pizza was a four day process. Day 1 mixing dough and storing to rise. Day 3 portioning dough for proofing. Day 4 preparing and baking pizza.

staff as helpful for answering their questions, alleviating concerns about the new menu, and building excitement for the RSCP.

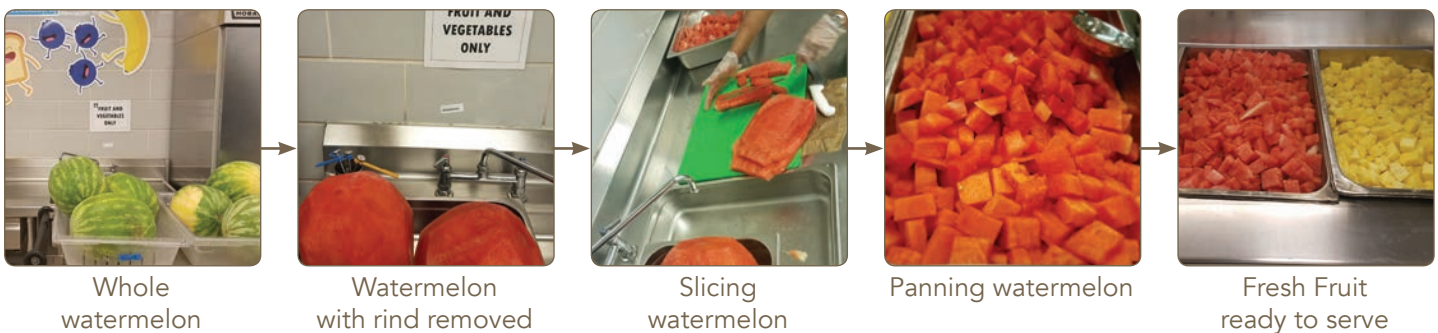
When employees returned in the fall they noticed the changes in the kitchen re-organization and equipment. The SLH staff also received new work schedules when they returned in the fall. The new work schedules, which included information about the meal program, primary tasks, and times of task completion changed, but the tasks were still covered by their job descriptions. The schedules had to be approved by OFNS operations team before the SFSM could discuss and have the employee approve their new schedule. In most cases, the work schedule kept the same food production activities but added more detail.

- **Before scratch cooking** Food Production listed “Assist with production of SchoolFood Standard Recipes”.
- **After scratch cooking** these tasks were broken out into 1) Follow recipes, 2) Measure, weigh, count ingredients, 3) Wash, peel, chop, mix, portion, pan ingredients/menu items, and 4) Assist with food preparation for same / next day service as needed.

Following the new instructions that required paying closer attention to recipes, learning knife skills, and working with new equipment developed the staff’s skills and they were gradually able to work more independently and take on more responsibilities. The kitchen leadership team shared their observations of employee

skill development with each other and used it to assign employees the tasks they performed best and or have them assist with training other employees on those tasks.

Hearing from the SLH staff that they adjusted to the increased work supported what the kitchen leadership team reported about employees working more independently. The increased staff skill and task performance led to the chefs working fewer hours as SLH staff took initiative to complete prep activities needed for the next days’ meals. The skill development also led to two employees being promoted within one of the RSCP kitchens. The culinary expertise and focus of the chef was important to start the pilot but as the kitchen leadership team and SLH staff became less reliant on the chef, the scratch leadership team started rethinking what type of kitchen leadership was needed for expanding scratch cooking. Specifically, that now that the scratch cooking systems change was in place, a SFSM with more culinary training could effectively manage the scratch cooking menu. Additionally, the recordkeeping and employee management confusion would be resolved by having the cook and SFSM perform those functions at scratch cooking schools just as they did at non-scratch cooking schools. Since the scratch cooking schools require an increased focus on food safety and preparation, the SFSM would only be responsible for one school, instead of up to five schools, with the title of culinary manager indicating the focus on scratch cooked meals.



Fresh fruit was a big hit with students. The students enjoyed being able to see whole fruits in the cafeteria and often fruit was cut in a place students could see. At breakfast students often saw a preview of what fruit was going to be served at lunch, creating even more excitement about eating fruit.



Promotion

The chef job description stated that selected candidates will engage with, and gather feedback from students, management, and staff on the new menus. However, the first feedback about the menu occurs between the SLH staff and the school community on the serving line. It was important that the SLH staff knew the ingredients as well as the appropriate serving sizes and components for reimbursement. Educating the SLH staff occurred while working together preparing the raw ingredients used in the recipes, and during the morning huddles where the chef and cook provided additional information about the recipes and serving sizes. During successive observations, the chef and cook included the SLH

staff in the huddle asking the ones who prepared an item to share the quantities and or ingredients. For example, the number of turkey sandwiches and whether they included lettuce, tomato, and cheese, the dressing for a composed salad, or fresh fruit options.

The SLHs that washed, chopped, and mixed ingredients could speak about the quality of the meal as they served students and were heard encouraging students to try the food saying, “Taste it, try it”, “this is 5 star, cooked from scratch like home” and “Trust me, different from before.” Teachers going through the service line asked questions about the foods and appreciated hearing about the new recipes. One teacher shared that talking with the school food staff was a new experience for her and sensed their pride in the food they prepared and served. School staff also shared that they asked for recipes and cooked school foods at home. SLH staff also reported preparing school food recipes at home and using their new culinary scratch cooking skills in their home cooking.



Spaghetti and meatballs were an item that both staff and students thought of as a home cooked meal.

Summary

The third element of systems change for the RSCP was hiring and training consultants, chefs, and staff to prepare, cook, and serve the raw ingredients in the reorganized kitchens in compliance with all of the DOE and OFNS employment *policies*, and according to the meals program recordkeeping requirements. Training for the new food handling and recipe production *practices* occurred on-the-job by Brigaid. New *people* were also hired like the Brigaid consultants, an executive chef for each kitchen, and additional school lunch helpers to support the increased tasks. *Promotion* of the new foods began with educating OFNS school-based staff about the new ingredients and cooking techniques, and incorporating them into the morning huddle agenda.

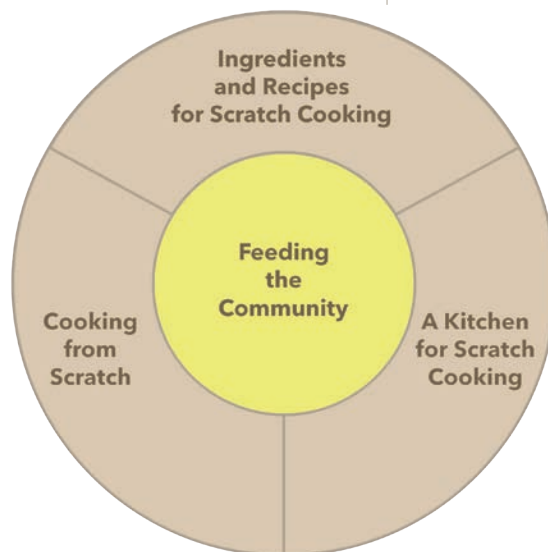
Key Findings

- *Creating the executive chef position took coordination and a long chain of approvals.* Implementing the Brigaid model of hiring a chef for each RSCP school meant creating a new position within the New York City Department of Education. This required OFNS to receive DOE Human Resources and Budgeting approval for advertising, interviewing, and hiring for the new position. Maintaining maximum flexibility for this position was essential since the roles and responsibilities were expected to evolve and change throughout the pilot.
- *Hiring the executive chef necessitated creating a new interview process.* Hiring for the executive chef introduced a new extensive process adapted from the Brigaid model that included traditional interview questioning. Additionally OFNS created brand new procedures for observing the potential chefs' culinary skill and creativity over two days of preparing sample meals in a NYC public school kitchen. Brigaid consultants and senior OFNS leadership were involved in the interviewing process to jointly select the best candidates for the RSCP.
- *Training OFNS school-based staff for scratch cooking was mostly done on-the-job.* Training OFNS school-based staff to produce scratch cooked meals involved communication of skill levels, coordination of scheduling according to seniority, and one-on-one on-the-job training. The training was led by the Brigaid consultants and reinforced by an OFNS kitchen leadership team composed of the new executive chef, school food service manager, and cook. The personalized training facilitated skill development, with employees working more independently and two employees being promoted during the RSCP.
- *Preparing recipes multiple times built OFNS staff confidence.* OFNS's scratch cooked menu had a three-week rotation. This allowed OFNS staff to prepare the same recipes multiple times over the school year, which is the normal OFNS practice. As OFNS staff had more exposure to each recipe they were able to successfully perform more and more tasks on their own with little guidance from the executive chef, school food service manager, and cook.

- ***Serving scratch cooked food service for an entire school year was achieved in New York City public schools.*** The partnership between OFNS and Brigaid safely served PreK-12 students scratch cooked meals made from raw proteins including chicken, turkey, beef, and whole eggs.
- ***Managing the evolution of the RSCP in two kitchens required continuous strategic alignment.*** Throughout the pilot, strategies and procedures were aligned and re-aligned to meet the objectives set by the RSCP leadership team. The pilot was able to be successful because the leadership from both Brigaid and OFNS worked in collaboration to re-balance responsibilities among the kitchen leadership team, to clarify roles, and streamline accountability.
- ***Transitioning from an executive chef to a culinary manager will work for expansion.*** The RSCP leadership team learned a lot about what it takes for scratch cooking to be successful in NYC public schools. While the executive chef was essential for the initial pilot of scratch cooking, future schools would be able to successfully scratch cook meals with a kitchen leadership team led by a culinary manager that would replace the executive chef and school food service manager. A culinary manager would be a person who had some food service and culinary expertise, but not necessarily a full chef. This culinary manager would work with a cook and assistant cook. This structure would be more aligned with OFNS organizational structure and is essential for expanding scratch cooked food service.



Prepping potatoes



VII. Feeding the Community

Overview

The development of all of the logistical and procedural aspects of the Return to Scratch Cooking Pilot (RSCP) was just the beginning of delivering high quality meals to students. Success of the RSCP could not be achieved without buy-in from the community of individuals educating, advising, and caring about the students at the pilot schools. This community includes principals, teachers, deans, nurses, school lunch aids, counselors, community based organization representatives, and administrative, custodial, and security staff. The community also includes the students themselves and their parents. Setting up the RSCP for success would take a community interested in participating in a pilot, meaning that the school community would embrace the new school meals, as well as be responsive partners through the evolving implementation process.

The efforts to generate community buy-in were based upon the Brigaid model of creating a community where the chef within a school is able to interact with the community beyond the students. As an innovator, Chef Giusti advocated for the further investment in this type of community building in order to better support the pilot as it proceeded. The perspective held by Chef Giusti and Brigaid was that presenting the chef and preparation of school meals as a profession introduces culinary arts as a career path. Also by talking to and feeding students, feeding adults, and ultimately feeding New Yorkers, a

shift in the culture surrounding food, specifically school meals, could begin so that the community exposed to scratch cooked meals is more in tune with, and embraces the importance of a positive food culture, “because nutrition does go along with everything that we teach, believe it or not because if we don’t have healthy bodies, we’re not doing our job.” (School Staff)

The RSCP leadership team strategy for gaining buy-in included formal and informal presentations and conversations with principals, school leadership, and teachers then reaching out to students and parents. Stephen O’Brien and Chef Giusti first presented the RSCP at a Bronx School Superintendents and Principals Professional Development (PD) meeting, then scheduled individual meetings with principals, encouraging principals to invite members of their school leadership team, teachers, and others the principal wanted to invite. These school meetings were held as part of the school selection process for identifying the six kitchens from the potential 25 kitchens. During the PD and individual meetings, Mr. O’Brien explained the student and staff benefits of participation, and that RSCP would present a new relationship between the cafeteria and the school community.

One principal recalled that, “They were considering different campuses and they were wondering if we were interested, and then essentially people that got it together, agreed, and said yes and were organized would be in the running.” (Principal)

Another principal attending the Bronx PD explained, “Currently in the present set-up, we usually don’t talk much to the school cafeteria staff other than to say hello, if we go on trips, X, Y and Z, but we really don’t say much. Under this new program, they explained to us that there is going to be a much more close relationship between the cafeteria and the administration in order for the program to work.” (Principal)

The buy-in strategy also included inviting principals to visit New London, CT to observe and eat scratch cooked lunch service; opening school meal participation to principals, all school staff, and teachers; and inviting parents to participate in Community Dinners. Teachers at the first school were welcomed back to school with a scratch cooked lunch before students returned. “We all got to try the food, it was delicious. We all got to go up to get the food served the way the kids would. And go in the lunch line and make some choices about what we wanted and then, yeah, it was great.” (School Staff) During the lunch they were informed that they would be able to purchase the school meals for breakfast and lunch and invited to tour the kitchen. One of the teachers added that, “[I] Went on tour with six or seven people, first time in [school] kitchen, “I think some of the people have been here a while and they were happy to see the change. Everything was very clean. It looked like new equipment. They went through a short procedure about how things would be prepared.” (School Staff)

One of the most innovative concepts of the Brigaid model was the inclusion of Community Dinners. The Community Dinner is a meal prepared by a Brigaid chef every Wednesday night in one New London school cafeteria that can be purchased by any adult or child for eating in the cafeteria or taken home and does not require affiliation with the school district or any schools. Aspects of the Community Dinner were implemented at one site where parents were invited to enjoy a free school meal in the cafeteria. The event received positive feedback. The other site conducted tastings instead of full meals.

While these efforts went a long way to generate community acceptance, Chef Giusti and other leadership recognized that more could have been done to ensure that students especially, were aware of and understood the importance of the changes in their school meals. The engagement and awareness of students also seemed to be

dependent upon the enthusiasm of the students’ teachers and principals, as they have the most direct contact with and influence over students.

“I think that one of the biggest promotions that we had was when we invited the parents to taste the menu, and the parents were eating with their kids in the cafeteria. This never happened before here, ever ... The feedback, it was incredible. Everybody was just like wow, this is so good. This is what they eat. This is what the kids are eating in the cafeteria. I receive no complaints about school foods anymore.”

– Principal

In this pilot with five schools, four of which shared the same cafeteria, interviews with stakeholders indicated more buy-in from students and teachers for scratch cooking when principals publicly shared their enthusiasm for the program before and during the roll out of the scratch cook menu.

“I happen to know that we don’t have a lot of healthy food choices in the neighborhood. So, he [principal] was very proactive and responsive to emails he got. He was excited that they were like okay, you’re the one. We chose you. It might’ve been a few emails back and forth. I remember specifically stating that he did not waste any time responding. He was very interested.” (School Staff)

Ultimately, one of the goals of the RSCP, indeed a goal of the Office of Food and Nutrition (OFNS) overall, is to work more closely with principals so that they too become invested in their students’ participation in school meals. One principal remarked that simply being let into the kitchen to better understand the behind-the-scenes allowed them to feel that their, and their students’, feedback was being heard and addressed. Christopher Tricarico, the Senior Executive Director of OFNS, is a former NYC DOE principal and is committed to imple-

“They [SFMS] are going to be meeting with the principal at the beginning of the year, my office, we’re going to [be]... talking about programming, talking about menu, talking about new things on our menu, we’re going to do some student taste testings at an individual school of new items, we’re doing menu review, we’re going to take the menus to the principals up front and then their participation, lunch and breakfast participation, and then give the superintendents their breakfast and lunch participation. You walk down the street and ask the principal at the school over there what his attendance is, he’ll tell you 98.2. You ask him what his participation for breakfast is, he’ll have no clue.”

– Chris Tricarico

menting formal communication processes between the SFMS and principal.

As community buy-in was being generated for the RSCP, one aspect of collaboration that was not capitalized on enough in the initial stages were partnerships with local community organizations involved in culinary arts, wellness, and/or food and nutrition education. Some community organizations expressed interest in serving as a bridge for students to better understand how the meal they are consuming at school related to urban farming, nutrition, and cooking. One community organization also outlined an idea to use scratch cooking kitchens as a showcase and potential training opportunity for students interested in culinary arts following high school.

The RSCP demonstrated the importance and need of a community that respects and appreciates school food. A school lunch helper (SLH) remarked that while the menu is well developed and a lot of care goes into the preparation of the food, most students do not know the amount of work that goes into preparing the meals. If this appreciation was further developed, it could drive students to want to take and eat school meals. One teacher also remarked that while students are encouraged to take lunch, some still toss the trays as they exit the line.

By building an appreciation and respect for the food, and respect for the people who are preparing food for them, students could deepen their appreciation for the labor and effort it takes to cook for them each day. This could help create a stronger community around school meals and potentially reduce waste. One Principal shared, “Many adults eat healthier lunches than in the past. Many of our staff takes advantage of the scratch food program, and I think that’s interesting, because when the staff members eat lunch with the students or eat the same lunch as the students, it creates another kind of bond in the culture over food, and I think that’s a very positive thing.” (Principal)

The *policies* section explains which members of the school community have access to school meals. In *practices*, the school stakeholders share perspectives on the dining experience, from changes in the serving line and seating areas, to the mood and community affect in the cafeteria and classrooms. The opinions of school stakeholders are also discussed in *people*, specifically how scratch cooked food service introduced new conversations and potential classroom connections with school meals. In *promotion* the planned and actual public announcements of scratch cooked food service are discussed. Lastly, this chapter addresses the Community Dinner programming, and the potential policy and practice implications for promoting school meals.



Policies

OFNS manages and serves free school meals to all students as part of a federal meal programs. Students are the primary audience and their meals are reimbursed. As previously discussed, teachers were given the opportunity to participate in the pilot by purchasing scratch cooked meals for breakfast and lunch. OFNS school meals policies allows for meals to be purchased by adults, \$3.00 for breakfast and \$5.00 for lunch. This access allowed teachers to better understand the changes that were made to the menu, which then motivated some teachers to encourage their students to participate in school meals. The two kitchens each implemented a different system. One kitchen's system was for each individual school to collect cash from teachers in exchange for a ticket or receipt, and teachers then used that ticket or receipt to purchase meals. Then at the end of the month the schools turned the cash in to the SFSM for OFNS staff to reconcile the collected tickets and receipts with the cash. While this took some staff time for both the schools' administrative office staff and for OFNS staff, it was easy for the teachers and encouraged teacher participation. "Yeah, it has been the same process since the start of the year, so tickets for teachers cost \$5, \$5 per ticket, so like, I buy \$50 worth of tickets once a week. \$25 for me, \$25 for my wife [who also works in this building]." (School Staff). The other kitchen had an automated system that should have taken little to no staff time, but did not work well and may have discouraged enrollment. One teacher explained that, "the [enrollment] website caused me some issues in setting up an account and stuff. It's not the best. It didn't work for me easily, so that's why I don't use it as often because it was just difficult." The principal agreed that there were some issues with the system but, despite the hurdles of the system, some staff still chose to participate, an indication of the value they thought they were getting for the \$5 meal.



Practices

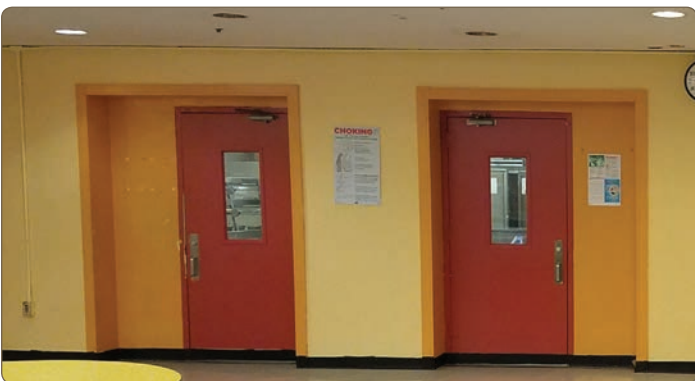
The introduction of scratch cooked meals in the two pilot kitchens created opportunities for community involvement, particularly with respect to Community Based Organizations (CBO) operating in the field of urban farming or healthy eating. Engagement by these CBOs was limited though, because the opportunities to be involved in the pilot were not explicitly defined. A few of the CBOs expressed interest in collaboration with the kitchens during the pilot. One CBO assisted with tastings that related to the RSCP menu and sought opportunities to support the scratch cooked menu. The chefs at both sites had begun talking with school CBOs about the plan for the 2019-20 school year.

In New London, the chef had a presence on the lunchline, in the cafeteria, and around the school. The chef talked with students daily about the foods and how they were prepared. This built students' excitement and interest about the scratch cooked meals and may have greatly encouraged the students to take and eat their school lunch. However, the constant chef presence in the school did not happen in the same way during the RSCP. This was mostly because the chefs initially devoted their time to training SLH staff for preparing school meals and were working toward having a greater presence in the school.

The environment of the school dining experience was another critical component in shaping students' attitudes around school lunch. OFNS is responsible for providing high quality meals, to support students' education and learning. However it is the school staff (assistant principals, deans, lunch aids, counselors) who are responsible for the atmosphere students experience in the cafeteria. OFNS creates the food and the school creates the dining experience. It is critically important for OFNS to work with the school staff to ensure both a high quality and positive meal experience. To say it a different way, scratch cooking can only be successful if the school staff create a positive, welcoming, and nourishing atmosphere in the cafeteria. One of the pilot schools changed the name from "cafeteria" to "dining hall" to change the way



The former teachers' cafeteria that had become an unused space was retooled to open a third serving line and alternative dining space that was used by both teachers and students.



The doors for the entrance to the serving line, that had previously been narrowed to one door, were returned to their original state of double doors. This allowed for both sides to be entrances and exits.

“I eat lunch in the cafeteria with the students or with other staff members. ...It's very enjoyable, and it's very enjoyable because the food is very enjoyable. ... It actually feels like having a real lunch. Like, you're having a real meal. You're sitting down. You are talking, and people are enjoying what they are eating, so it's an enjoyable experience. ... Last year ... it was only for students, and last year there was no incentive for people to go down there.... Last year I would go down after having my lunch just because I enjoy spending time with the students, but there was not a gathering of like, let's sit down and have that good 30, 35 minutes as part of the day.

- School Staff



the cafeteria was perceived by students.

Renovations in one of the pilot schools also allowed for adding a second and third lunch line, and for opening a smaller cafeteria space. The multiple lines decreased students' wait times as well as encouraged teachers to come to the cafeteria to eat alongside colleagues and students during lunch periods, rather than skipping lunch or eating lunch in their classroom. "This [scratch cooking] has really changed things when you can just run downstairs with a lunch ticket and get really good healthy, fresh food... for me it's been, life-changing."

(School Staff)

The scratch cooked menu made teachers more enthusiastic to get involved in the school lunch experience. In the interviews the teachers expressed that they now felt connected to, and pride toward school meals. Teachers and guidance counselors spent more time in the cafeteria now as well, adding to a feeling of feeding the community. Teachers also remarked that the mood in the cafeteria was completely different and that the energy within their classroom had increased since the inception of the pilot.

Quotes from School Staff

“When you go downstairs to the cafeteria, the meals are fresh and you have plenty of vegetables and you have plenty of salad. You have plenty of healthy food. You feel like you are eating healthy.”

“I think the sense of community and the social aspect of food and interaction and, like, community building. It has been very positive, 'cause you see kids enjoying the food. You see kids talking about it. Kids look forward to going down there, and that wasn't happening before, and they are very social.”

“Students who wouldn't eat last year are definitely eating on a regular basis now. I didn't track the data. I was just teaching one year, and I saw students who didn't eat school food, go about their day eating chips and sodas, to now eating whatever's [being served] for lunch.”

“There are less [fights and misbehaving students after lunch] this year. I think it's because they have the food and they're full and they're okay. If you don't eat, really, you seem not so okay and you easily get agitated.”

“[Before scratch cooking] you have all these kids basically getting in their backpacks, getting chips and eating candy and whatever that could keep them [going] through the rest of the day. I don't see that now, so it's like, “Okay, we are going to start learning now.” And I know that kids are not hungry. I don't see kids digging [in] their bags to see how they feed themselves. That's gone.”

“There's a lot less food waste. Even if you look in the garbage at seventh period, I always emptied my classroom garbage before we start because there were sometimes friends that come out, and now there's so much less food in there, it's a lot of just like trays and utensils and things, but there's a lot less of actual food waste which has been really nice.”



Chili made from raw ingredients that blends vegetables, ground beef, and beans.

In one of the pilot schools, the adoption of scratch cooked meals required adjustments to school schedules in order to accommodate all students in the cafeteria for lunch. Prior to scratch cooking some students ate in their classrooms and never came down to the cafeteria. Shifting from meals that were packaged and delivered to classrooms, to going through the serving line selecting entrées, vegetables, and fresh fruit, eaten sitting down with their peers created a new environment to appreciate food for students. “The positive part is that the students who are a little bit more mature and reasonable who have been eating, and actually they talk about the food from the cafeteria daily as if it were their favorite restaurant. They’d be like, “I didn’t like the chili and potatoes with cheese.” It was like, ‘Oh, I had it with the sour cream and the onions. It was actually really good.’” (School Staff).

The third lunch line in the re-opened smaller cafeteria closed part way through the school year. However, the school that consistently used that room continued to have students and teachers choose it because they liked the quieter atmosphere the small space provided compared to the larger, and louder, cafeteria. The school that used the smaller room for the serving line but not for dining was still able to manage the timing of their lunch format using two lines instead of three. As one school staff described, “So last year all the students were confined to one section of the whole cafeteria, and this year they opened the second section, which used to be like the eating area for teachers, but now that’s the eating area for students as well, so I mean like, in terms of space they opened up the cafeteria for everybody to make use of it.”

Chris Tricarico, Senior Executive Director of OFNS, highlighted that it is the purpose of OFNS to support

education and learning by providing food and education about food in order to promote healthy behaviors and choices at an early age. He shared that collaboration between OFNS and Brigaid is critical to better learn how to do this in practice. He also discussed working with other DOE departments such as Office of School Wellness and the Office of Sustainability. Mr. Tricarico’s perspective is consistent with the perspective of school staff who daily interacted with students eating scratch cooked meals in the cafeteria. One school staff member stated, “The younger you start it, the better you are at having the students make better choices about meals.”



People

At the center of the RSCP are the students, who are the primary audience for school meals, with teachers, parents, and school leadership. There is also OFNS school food staff, Brigaid, OFNS leadership, and community organizations that surround the students in both advocating for and working towards higher quality meals. School stakeholders shared that they have noticed changes in their interactions with the school food staff and the students about food.

To begin to understand students’ attitudes toward the scratch cooked menu, a survey was administered to 4th and 7th grade students from one of the pilot schools. The students took the survey before transition to scratch cooked meals and two months after scratch cooked meals. The survey was anonymous, so students could not be matched from before and after scratch cooking.

Quotes from School Staff

“With scratch cooking, it’s different. So scratch cooking, usually we talk every day. The chef... we have a chef now, and the chef informs me of what the menu is going to be for the week, also asks me if I have any suggestions as to, for example, where to advertise, you know, what lunch period he should come out and speak to the students. For example, he’ll come in and also participate in safety meetings because ... you know, cafeteria is required to participate in the safety meeting. In the past they’d just sit there, they really didn’t say much, but now we have a conversation, and most of the conversation that we had is about the food... oh, this pizza was good or this chicken was good or the cornbread is delicious. These are the type of conversations we never had before.”

“I’ve never really interacted with [OFNS staff] before this year, and now that they have something to ... be more excited about, they get to create there, it seems like they are really happy to work here, happy to be here, which I’ve never noticed before.”

“I love it when you guys offer a Spanish menu. The one thing I do ask and I know there’s this little gripe that I have with the lunch, which I don’t understand because the population here is mostly Spanish, African American, and a lot of West Indian and Africans. They like their rice and peas and rice and beans together. You guys, the cafeteria has this thing that beans, even though it’s a protein, you eat it by itself. I’m like, no, it doesn’t work like that. You put the beans, especially in Spanish protein, you need the rice, the brown rice, which is healthy with the healthy beans, which makes sense.”



Brown rice and onions



Brown rice going into steamer



Beans being mixed into the rice



Sauce ingredients



Initial sauce prep.

Brown rice and kidney beans mixed with sofrito and a tomato-based sauce.



Finished rice and beans



Sauce added to the rice and beans



Sauce finished



Adding tomato sauce

These data, see **7.1**, showed 4th graders had a statistically significant decrease in self-reported participation in school lunch after scratch cooking (65% to 51%). Additionally, 7th graders, see **7.2** had a small but statistically significant decrease in attitudes toward the lunch line that included questions such as, “The school lunch line displays food in a way that looks good to me.” The decrease was from 2.7 (before) to 2.5 (after) on a 1 to 4 scale (higher score more positive attitudes). These decreases may be attributed to lack of awareness by the students of the pilot and their knowledge of the fact that they were being served scratch cooked meals.

Chefs also conducted student feedback meetings in order to get a pulse on what the students thought about the meals they were being served. Initially, these were done in a true meeting fashion, but the setup and lack of promotion of the meeting itself led to only a few voices being shared. These meetings were modified to be survey-based, which allowed chefs to collect many more opinions from students.

7.1: Student Attitude Survey Data, 4th Grade

	Pre (n=98)	Post (n=91)	t	p
Took lunch today (yes/no)	65%	51%	1.94	.05
Days ate lunch (0–5)	3.4±1.7	3.3±1.5	0.18	NS
Ate all lunch [#]	2.1±0.93	1.9±0.88	1.21	NS
Attitude lunch line [#]	2.5±0.53	2.5±0.57	1.07	NS
Attitude general [#]	2.6±0.57	2.6±0.66	0.60	NS

[#] YES definitely = 4; Yes, kind of =3; No, not really = 2, NO, not at all=1 (higher score more positive)

7.2: Student Attitude Survey Data, 7th Grade

	Pre (n=93)	Post (n=76)	t	p
Took lunch today (yes/no)	33%	30%	0.45	NS
Days ate lunch (0–5)	2.5±1.61	2.3±1.60	1.11	NS
Ate all lunch [#]	1.57±0.65	1.58±0.66	0.17	NS
Attitude lunch line [#]	2.7±0.43	2.5±0.59	2.84	.01
Attitude general [#]	3.0±0.59	3.0±0.50	0.05	NS

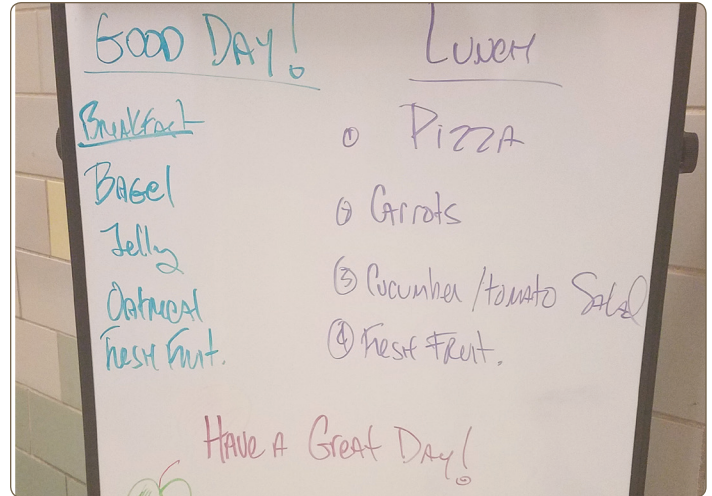
[#] YES definitely = 4; Yes, kind of =3; No, not really = 2, NO, not at all=1 (higher score more positive)



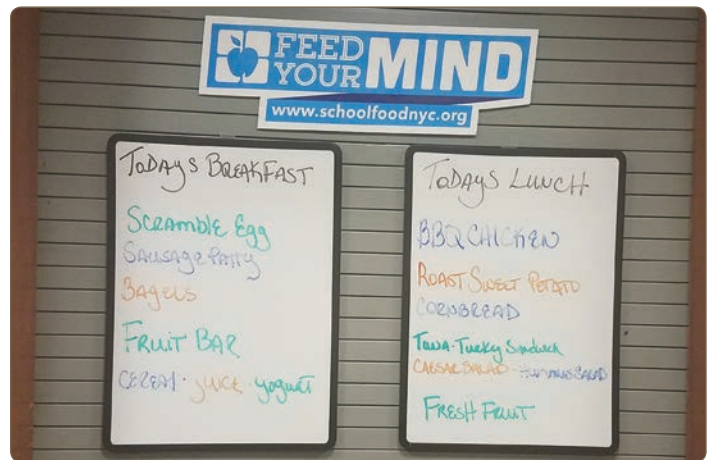
Chef tasting table to encourage students to share their opinions about the new scratch cooked meals.

Survey feedback from students was received almost six months after the program started. Students were recruited to complete the survey in the cafeteria during breakfast before the school day. The survey asked students to self-report the number of days they participated in the breakfast and lunch programs and their attitudes about the lunch experience. A total of 65 students completed the survey with 47% reporting they ate breakfast four or five times a week and 55% ate lunch four or five times a week. Additionally, 82% felt OFNS staff cared about their experience and 83% thought the cafeteria was a nice place to eat.

The development of the RSCP demonstrated the importance of school leadership support when innovating to better meet students' needs. It became very clear that working more closely with principals was important to the success of the RSCP as well as school meals in general. Principals have a much more direct relationship with students and are poised to be influential for increasing student participation in school meals, if they are motivated to do so. Principals who were deeply involved and invested in the success of the pilot for the sake of their students were also able to influence their students' perceptions of school meals.



Above and below are white board(s) with the daily menu that students see during morning arrival.



To this end, teacher support, if developed by motivated principals, also offers another close connection to students to positively reinforce the importance of eating school meals. Teachers who were interviewed during the pilot largely agreed that they were excited about the menu and that they felt it was important for students to be eating both breakfast and lunch at school, especially given the quality of the scratch cooked meals.

“There’s only so much I think they [OFNS] can do. It’s really up to us to get the word out. ... we got it out in terms that the kids know it’s a new program and they know it’s a healthier food choice. But there’s things I think we can do. There’s signs on the walls or some other kind of announcement, “Hey, got big lunch today or whatever.” But getting the word out, there’s other things that we’re thinking of more than, I need to get the word out more about school lunch.

– Principal

“Anything that they bake is outstanding. The muffins, the pizza dough, the cornbread, I’m impressed because I cook a little bit so that whole grain, I’m impressed that they make some really good muffins and... I like that a lot, I eat a lot more salad than I used to and it’s the salad that gets me because I would prefer to eat salad if there were some different varieties offered, and there are, and the hummus that they make is also one of my personal favorites.”

– School Staff



Quotes from School Staff

“I see them working in the kitchen. They’re very careful how they prepare the meal and the hygiene is high and really important. Yeah. They do a great job.”

“They do a really good crispy, crispy kale with mashed potatoes, and now I’ve started making that at home because it’s so good the way they do it here.so now I’ve been experimenting with like, ‘How did they do that there?’... I’ll ask them how do they make it so nice and crispy.”

“I get the whole wheat pizza on Fridays. But the kids really, really like it. And how I know that the kids like it is....the friend doesn’t end up eating it [lunch] they’ll bring it to me. That’s how I know they like it. When kids want to share something with you it’s because they themselves really like it. That’s how I know.”

As the pilot progresses past the one year mark, a greater integration between CBOs and students who are eating school meals could be very important in reinforcing both the importance of eating school meals and healthy eating behaviors. Principals could serve to help define these roles as they are the ones who interact with CBOs that provide services to their school. By serving as a bridge between what's happening in the kitchen and cafeteria, with what's happening in the classroom, principals could further develop the community around school meals. For example, one CBO worked with one grade to create a recipe for salad dressing that the kitchen leadership team prepared and served on the salad bar for all students. The entrée salads have become more and more popular schoolwide since they were introduced so the salad dressing was a great way to support eating salad. Two school staff members noticed that students were taking the salads and adding more vegetables. "The salads are fabulous. I have students that will go up to the kitchen now and get the chicken salad and then they will come out and go to the salad bar and add a little more salad on their tray. And I'm like, wow, look at this." (School Staff) Another agreed that salads are becoming more familiar for students, "You don't have to prompt them to eat their salad. They just automatically eat it now." (School Staff)



Salad bar with the creamy pizzazz dressing created by first graders.



Promotion

Media announcements that OFNS partnered with Brigaid for NYC public schools to offer scratch cooked meals was originally planned to happen at the national and local levels, as well as intensely within the schools.

Promotion at the school level happened through Community Dinners, Parent Teacher Conferences, the NYC high school fair, and various other community

7.3: Return to Scratch Pilot Media Coverage

Outlet	Title and Link	Date
City Lab	Can This Chef Solve the Problem of School Lunch? https://www.citylab.com/life/2018/09/can-this-chef-solve-the-problem-of-school-lunch/568990	September 4th, 2018
New York Times	In the Bronx, an Elite Chef Is Trying to Engineer a Better School Lunch https://www.nytimes.com/2019/05/14/dining/brigaid-school-lunch-bronx.html	March 14th, 2019
CBS Sunday Morning	Let's redo lunch https://www.cbsnews.com/news/how-chef-dan-giusti-and-brigaid-are-remaking-school-lunches/	March 31st, 2019
WPIX11 News	Fuel Our Kids: Food truck dishing out free meals in the Bronx https://pix11.com/2019/08/15/fuel-our-kids-food-truck-dishing-out-free-meals-in-the-bronx/	August 15th, 2019
NBC4 NewYork	Changes to NYC Public Schools Menu https://www.nbcnewyork.com/on-air/as-seen-on/Changes-to-NYC-Public-School-Menus_New-York-559477102.html	September 5th, 2019
Today Show	Meet the chef making school lunches healthy and homemade https://www.today.com/video/meet-the-chef-making-school-lunches-healthy-and-homemade-68656197960	September 5th, 2019

events. In March of 2019 a New York Times article, see **7.3**, generated additional interest and excitement about the RSCP. It was unclear how aware the students and school community members were about this press as one teacher learned of the article from a colleague at a non-RSCP school and not community members at her school. In the summer of 2019, promotion included featuring hot scratch cooked food served from an OFNS food truck as part of the Free Summer Meals Program. This was the only truck offering hot scratch cooked meals to kids throughout the summer. This initiative was featured on WPIX11 News to introduce the new foods citywide and highlight the satisfaction of children enjoying the summer preview of the meals from the truck.

The high school fair that occurs twice a year in New York City to recruit rising high school students to the city public schools was a unique opportunity for promotion that one of the pilot schools engaged in. One of the teachers who volunteered at the fair shared that highlighting that their school offered scratch cooked meals was one of the talking points to get students interested in their school. They were able to portray their school to prospective students with a renewed sense of pride that was partially due to the RSCP.

The new foods were also promoted at a senior leadership retreat held during the summer of 2019 by the Chief Operations Officer. During this retreat, OFNS had the

opportunity to showcase some of the new lunch menu hot entrées and entrée salads that will be served citywide this fall that originated from the RSCP menu. Some of these new items were also served at a spring 2019 OFNS partners meeting. The partners meetings bring together CBO that provide cooking, gardening, or other nutrition education programming in schools.

Promotion beyond the aforementioned events did not occur at the level that was anticipated prior to the implementation of the RSCP. Ultimately, promotion at the school level was very dependent upon the climate and environment within the school and the acceptance of innovations by school leadership. The interaction between students and the RSCP outside of the lunch line really depended upon their understanding of the RSCP itself as well as the prioritization and emphasis placed on the pilot by the adults within the school, including principals, teachers, and school food staff.

The promotion of the RSCP could have been further strengthened by the integration of community organizations as nutrition education partners to engage students more deeply beyond their dining experience. One school staff member shared that they also can have a role in supporting school meals by connecting the cafeteria experience with the classroom curriculum, suggesting literacy lessons or inquiry based experiments as part of science education.

“Need to build food awareness and for students to understand what a food desert is and why there is limited food access in the community. The school could work with a group to create a three to four day lesson plan to introduce students to what is happening and why, and the importance of the change. This would get students excited because they would cognitively understand why the cafeteria is changing and why it is important. It is important that students learn how food relates to their community. A town hall with all students could also build awareness of the program. Bottom line, very important to connect the lunch room with the curriculum.”

– School Staff

As discussed, we currently live in a food environment where processed “fast foods” are ubiquitously available, inexpensive, and heavily advertised. Thus, while there are public health, community building, and cultural advantages to scratch-cooked meals, just putting a beautiful plate of scratch cooked food in front of students is not enough for students to enthusiastically take and eat the scratch cooked meals. One school staff member discussed strategies for how to get students to try food, “For me what works best is just going around tables asking, Oh let’s try this together. You know, because if they, if the whole table is trying it, they’re more willing to try it. Whereas if you tell one kid like, oh, let’s try this together, they’re more hesitant about it.”(School Staff)

One critical lesson learned from this pilot is that promoting scratch cooking to students fell short at the two pilot schools. At the first pilot school, that implemented the RSCP in September 2018, the original plan was for a media day which would produce several new stories in September 2018. This would have

raised awareness of the pilot, excitement about scratch cooking, and informed students that their school was the first to receive this scratch cook menu. In other words, the students would have become keenly aware that something special was happening in their school building. However, the Department of Education cancelled the media day hours before it was scheduled to happen. While this was understandable, as there was currently a lot of negative press about challenges with school bus service. There was a serious unintended consequence on students lack of understanding and excitement about the RSCP. When the media day was cancelled, OFNS, Brigaid, and school staff anticipated that it would be rescheduled soon, and thus it made sense to wait to begin an earnest promotional effort to students. Therefore, students were left to basically, figure out for themselves what had changed about the food. Since some students had many years of school meals, and school meals that mainly consisted of processed heat and serve entrées, it is easy to understand why the students were skeptical at such a drastic change in the food with no real explanation.

Quotes from School Staff

“I do think that probably there should be more school-wide publicity about the program. I think there should be more motivation and encouragement to get the kids to do this. Maybe making the menu more visual. Maybe making it part of the health class. Maybe providing the students with some weekly menu of what the meals will be.”

“I think the rollout was not done properly. There should’ve been a big announcement and we all should’ve been talking about this. Right. But I’ll tell you what, our principal, he does push it. Like he’ll tell the kids, hey today’s chicken, make sure you go down there. You know, stuff like that.”

“There was definitely a lot of announcements about it in the beginning. We haven’t, honestly, we haven’t really talked about it too much since.”

“We make our regular PA announcements, you know, we’ll have the person that does that state what they’re serving for lunch, and encourage kids, hey, make sure you try it out, like that.”

The kitchen in the K–8 school had a few advantages that helped to increase promotion in their transition to the scratch cook menu. First, this building had one school with one principal who was enthusiastic about the pilot. Second, the school had some external food and nutrition education programming by a CBO that embraced the RSCP and worked to help build support. Additionally, since the students were younger, they had more direct interaction with the cafeteria supervisory staff during lunch. This staff was able to talk to the students directly and on a daily basis about the food.

Yet, still, even with all of these efforts, the surveys with 4th and 7th grade students, see 7.1 and 7.2, did not show wide student acceptance for scratch cooked meals. This punctuates the critical importance for ongoing discussions about, and building enthusiasm for the school meals.

Community Dinners

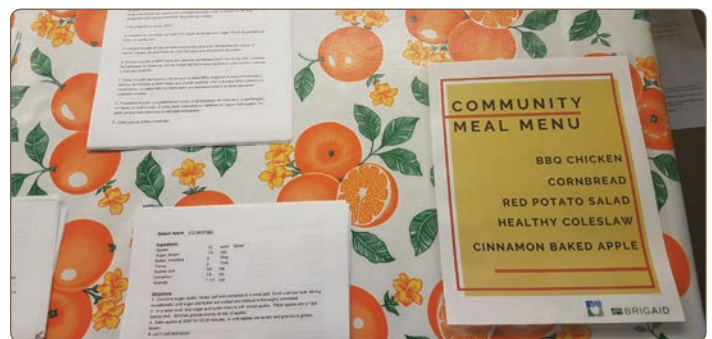
One of the most innovative aspects of the Brigaid model was the inclusion of Community Dinners. The Community Dinner is a meal prepared by a Brigaid chef one night every week in one New London school cafeteria that can be purchased for eating in the school cafeteria or taken home. Anyone is able to enter the school and purchase the meal for \$5.00, meaning that they do not have to be a member of any of the school communities. The meals have food cost parameters so that the \$5.00 covers the food, labor, and other costs of providing this additional service. These community dinners were meant to engage anyone within the surrounding community in the school environment by offering low-cost meals on a regular basis. The purpose of holding these Community Dinners, beyond developing an awareness of scratch cooked meals in schools, was to begin to shift perspectives on school meals from institutional, to wholesome and high quality.

The Community Dinners also offer the chef the flexibility to serve non-reimbursable meals, which challenges the Chefs to use ingredients in more creative way as these meals do not need to meet USDA NSLP guidelines. While these community meals proved to be very successful in New London, they were not executed in the RSCP beyond a singular Community Dinner that

was held during Parent Teacher Conferences. While the Community Dinner offered an opportunity for feedback from parents, it did not serve the role of a low-cost meals being regularly available in the community. It was a one time promotional meal that was free of cost to all attendees of the parent teacher conferences and paid for by OFNS. Grants are being sought to support more frequent free community meals as part of the Parent Teacher Conferences or other school programming. If OFNS chooses to implement the Brigaid weekly, low-cost model, they will need to address their policies for taking meals from the cafeteria which they currently do not allow. They would also need to address policies related to community functions at schools and security protocols and permits for extended hours.



Above is the cafeteria set up for the community dinner and below are menu and recipes, in English and Spanish.



One teacher conducted a few parent teacher conferences in the cafeteria during the Community Dinner, highlighting what is possible when school meals and the cafeteria are re-imagined as an important, meaningful, and nourishing part of the school day for children.

SFSM also highlighted the success of the community dinner and tastings hosted by RSCP kitchens where parents were able to taste the food their students were eating and engage in conversations about school meals.

“So I think it took us a while to get that [community dinners] up and running because of the logistics and again, our food is reimbursed, so if we don't serve children, we're not reimbursed for the food, so it's an extra cost to the city, so we needed to secure funds, we needed to get permission to do that, we need to get permits to do things at the school. It's a lot of red tape to get things to happen, but both of those were a real success for us.

- Chris Tricarico



Parents and students were able to provide feedback following these Community Dinners, which overall, highlighted their positive opinions of the menu changes. See 7.4.

During the interviews with teachers, principals, parents, and school food staff, many discussed how much students enjoyed the fresh food and really enjoy having access to fresh fruits and vegetables each day.

One parent shared that they asked the school food staff for the recipes, and were aware that other parents also asked for recipes and made the cornbread featured at the Community Dinner at home. She said, “[The cornbread] was good. So all the people, they said, ...I want to, I need to know how to make this because it's good.”



Chicken Cooking



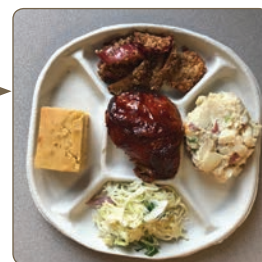
Temping Chicken



Adding Sauce



Chicken ready to serve



Community Dinner meal

Making the BBQ chicken served at the Community Dinner.

7.4: Community Dinner Satisfaction Survey

	Yes 😊	Maybe 😐	No 😞
How was the meal?#	89.4%	10.2%	<1%
How does this meal compare to other school meals you had before?#	81.6%	16.8%	1.7%
Should this meal be on the menu at all NYC schools?^	81.0%	16.9%	2.2%

The answers for this question were the smiley/neutral/frown faces

^ The answers were yes/maybe/no

Summary

The fourth element of systems change for the RSCP was addressing the perception of, and stigma around, school meals and gaining buy-in from the entire school community of students, staff, principals, and teachers for school meals. Encouraging school meal participation did not require changing DOE or OFNS *policies*, as the existing policies already allowed teachers and principals to purchase school meals. However, the schools established different processes for implementing these *policies*. In making the food appealing and available to the entire community, the RSCP also worked to make the cafeteria welcoming and implemented new *practices* around school dining, and collaborating with school partners. The community included all the *people* associated with the school including parents. *Promoting* the RSCP occurred throughout the RSCP schools as well as through local and national media.

Key Findings

- *Involving school communities in promoting school meals was part of the model, but was not implemented consistently across all schools.* Informing the school community about their school meals is an important and ongoing process shared by OFNS and the school leadership for maintaining student participation. The Brigaid model stresses menu awareness and ongoing feedback for tailoring recipes to the school community. When OFNS leadership identified that school meal participation was declining, they worked with the school to post the breakfast and lunch menu throughout the schools and announce the menu as part of morning announcements.
- *Creating a physically attractive as well as a caring and calming cafeteria environment makes meals more enjoyable.* One of the sites added an additional eating space that was smaller and quieter to give an additional option for students and staff. Many teachers and students ate together in this space. The K–8 site used the cafeteria public announcement system to encourage students to try the meals and share their opinions with other students. Once in a while OFNS school-based staff came out of the kitchen and into the cafeteria to hear what students thought about the meals. These provide examples of meeting the need for an atmosphere where the school community enjoys eating together. Constant interaction between students, school lunch aides, principals, and chefs can foster this environment.
- *Encouraging teachers to buy school lunch creates school meal ambassadors.* Teachers participated in a luncheon a few days before school started to try some of the scratch cooked menu items. During the luncheon teachers learned how they could purchase school meals during the school year. Teachers also learned about the changes to the menus, about the ingredients being used, and had the opportunity to ask questions of OFNS and Brigaid leadership. Many teachers purchased school meals throughout the entire school year and encouraged students to eat school lunch.

- ***Respecting OFNS school-based staff integrates them into the school community.*** Having everyone in the school respect the work of OFNS school-based staff as culinary professionals can be achieved with ongoing communication that informs students and parents about how OFNS prepares food with care and expertise. While this did not happen consistently throughout the school year at the two pilot sites, some examples are teachers touring the kitchen, and OFNS staff coming into the cafeteria demonstrated the benefits of building this respect for OFNS school-based staff.
- ***Hosting parents for events when school meals are served makes them feel connected.*** At each pilot school there was at least one event for parents during parent-teacher conferences. At one site, parents were able to taste samples of some of the scratch cooked items. Most parents said they really liked the items, as collected by “dot voting” on a poster. At the other site, there was a Community Dinner in which parents and students received a full meal. Through a survey parents and students reported that they were highly satisfied with this meal, thought it was better than other school meals they had previously eaten, and overwhelmingly agreed that this meal should be on the menu for all NYC schools.
- ***Integrating school meals into educational experience builds excitement.*** Integrating school meals into the educational experience for students takes the commitment and coordination of all school and OFNS staff. This is important to build excitement about school meals. The Brigaid model encourages that the executive chef regularly interact with students and the school community to gather feedback on school meals. At one of the pilot sites, a small step was taken with a Community Based Organization (CBO) where the CBO staff member facilitated tastings of scratch cooked recipes in the cafeteria and in some of her educational sessions. The staff member also created a new salad dressing recipe with students that was introduced on the salad bar. Thirdly, the staff member translated the scratch cooked recipes served at the Community Dinner for parents to be able to make these recipes at home.

However, *Ingredients and Recipes for Scratch Cooking*, *A Kitchen for Scratch Cooking*, and *Cooking from Scratch* took precedent over *Feeding the Community* in this pilot. Only initial steps on integrating school meals with education were accomplished. Yet, the example above describing the relationship with a CBO shows the possibility and potential of this kind of integration.

VIII. Metrics

Introducing Metrics

With any new initiative there need to be metrics, or ways to measure if the initiative is meeting either preexisting benchmarks or newly developed benchmarks. Because of the extent of systems change, novelty, and small size of this pilot, determining the appropriate metrics was a challenge.

A standard metric in school meals is the student participation percentage, or the percentage of students that take meals. Student participation is important because school districts enrolled in the United States Department of Agriculture (USDA) national meal programs are reimbursed based on student participation (number of meals served). That reimbursement is OFNS's main revenue,

and needs to cover costs for that meal, including food and labor. The Office of Food and Nutrition Services (OFNS) accounts for school community participation in their meals program using approved accountability methods to count Breakfast, Lunch, Snack, Supper, and or Adult meals served. Accountability is the method to accurately document daily student program participation at the point of service using electronic terminals, rosters, or clickers. The meal participation is divided by the average daily attendance (ADA) for the school to yield the average daily participation percentage (PP). The breakfast and lunch participation percentages were initially presented as a key metric for the Return to Scratch Cooking Pilot (RSCP). **Student participation** in breakfast and lunch was expected to increase by 5%-7%.

To create the **Scratch Cooking Metrics Summary (Metrics Report)** took multiple automated and manual systems including: school attendance, food ordering, point of service, class rosters, and timekeeping. These systems are tracked, checked, reconciled, and analyzed on different schedules. The Metrics Report and explanatory notes (i.e., footnotes) went through several iterations. Additionally, because of the data processing timing, these Metrics Reports often took a few months to complete. While this is understandable, it created challenges for a pilot program that needed these Metrics Reports in order to make appropriate adjustments. As an example, the first version of the September 2018 Metrics Report became available for limited internal review in early November. The delay in finalizing the Metrics Report were caused by gathering information for this new report from multiple sources and verifying accuracy before circulating within OFNS.

The Metrics Report grew from one to three pages including a monthly summary, year-to-date summary, and year-to-date trend charts.

There were also metrics for **food costs**, **supply costs**, and **labor costs**. These vary by student participation, or the number of meals served. When more students take meals, costs increase and vice versa. Because there are certain fixed food, supply, and labor costs, increased student participation is more cost effective. This report presents data on percent increase or decrease for food, supply, and labor costs, as compared to the previous school year. These costs are reported per 100 meals. This accounts for the impact of fluctuating student participation on those costs. For this pilot, **food costs** were expected to decrease, **supply costs** were expected to be steady, and **labor costs** were expected to increase by 40%.

All four metrics discussed above were already tracked by OFNS. However, how they were tracked by the different departments (Human Resources, Finance, and Contract Management), and the way they needed to be tracked, managed, and presented changed for the RSCP. The Data Management department along with the RSCP team

created a one-page internal Scratch Cooking Metrics Summary (Metrics Report). The main metrics in this report, see **8.1**, reflect the expected changes for the RSCP and the actual outcomes using the year to date (YTD) metrics from June 2019.

Student Participation

Student participation is measured as a percentage, and calculated as the number of meals served divided by average daily student attendance. For this pilot, student participation declined when compared to the previous school year. While a 5% to 7% increase in student participation was expected, the data revealed about a 10% decrease across the two sites. Year-to-year student participation data may have unexplained variations as student participation data are collected in different ways across DOE schools.

8.1: Return to Scratch Cooking Pilot Metrics Overview

Metrics	Expected change with scratch cooking	Actual YTD Outcomes from June 2019	
		Site A	Site B
Breakfast Program Student Participation	Increase by 5 to 7%	Decrease 9.7%	Decrease 4.6%
Lunch Program Student Participation	Increase by 5 to 7%	Decrease 9.5%	Decrease 18.6%
Labor hours (per 100 meals*)	Increase by 40%	Increase 132.0%	Increase 61.4%
Labor costs (per 100 meals*)	Increase by 40%	Increase 145.8%	Increase 94.4%
Food cost (per 100 meals*)	Decrease	Increase 6%	Decrease 12.0%
Supply costs (per 100 meals*)	Steady	Increase 16.0%	Decrease 9.8%

* These are reported as percent increase or decrease per 100 meals to account for changes in student participation rates. OFNS calculated using a Meal/Equivalent calculation. M/E is the conversion of different meal services (i.e., breakfast, supper, and snacks) and non-program food sales to the equivalent of one federally reimbursable student lunch for comparison purposes." In NYC breakfast counts as 0.5 of a meal, snack as 0.3, and supper as 1.0; YTD: year-to-date

For example, at one of the pilot sites (Site A), the year before the pilot, breakfast for most students was sent upstairs to classrooms and the number of breakfasts were recorded by teachers. Whereas during the pilot year, more student had to come to the cafeteria to get breakfast and the number of breakfasts taken were counted by OFNS school-based staff. For this site, student participation decreased by 9.7% for breakfast when compared to the previous year.

At Site B, the year before the pilot the school lunch aides scanned student identification numbers (called OSIS number) from a class list to record lunch counts. During the pilot year, the process changed to a system where each student had a card with their OSIS number that was scanned or entered before proceeding through the lunch line. For this site, student participation decreased by 18.6% for lunch when compared to the previous year.

Food and Supply Costs

Over the 10 months of the pilot, **food costs** showed an increase of 6% at Site A. Site B served scratch cooked meals for five months. At Site B, food costs decreased by 12%. This decrease at Site B is probably due to what was learned at Site A. Additionally, food costs would be expected to decrease as scratch cooked ingredients are purchased at higher volumes.

Supply costs increased at Site A by 16% and decreased by almost 10% at Site B. Like food costs, the decrease in supply costs at Site B could be attributed to what was learned at Site A.

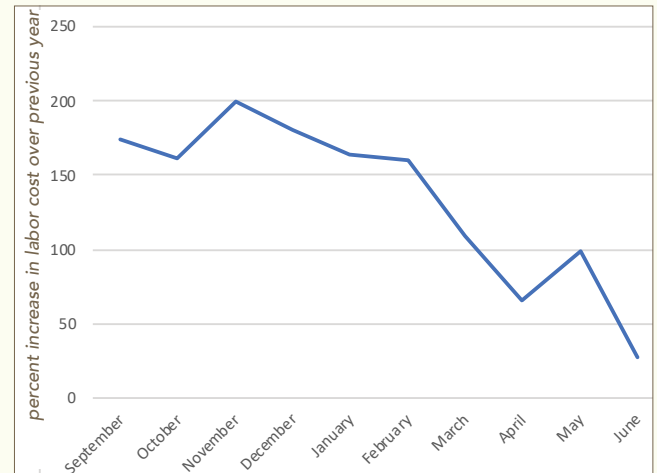
OFNS size gives it significant leveraging power for reducing costs when buying in volume, therefore as scratch cooking expands the costs would be expected to decrease.

Labor Costs

Labor costs were expected to increase by 40% over the previous year. For both sites, labor costs averaged 120% higher than the previous year. A closer look at the data over the 10 months of the pilot at Site A uncovered a downward trend. During the first three months of

scratch cooking (September to November), labor cost averaged 176% higher than the previous year. However, the last three months of the pilot (April to June), labor costs averaged 64% higher than the previous year. The final month (June), had labor costs 28% higher than the previous year. See **8.2**,

8.2: Site A Month-by-Month Labor Costs Per 100 M/E



Conclusion

Overall these metrics show the school community needs to work on increasing student participation. Additionally, these data show that food costs have the potential to further decrease (beyond the decreases shown at Site B) as OFNS continues to learn from scratch cooked recipes menu development. Scratch cooking requires more labor and is expected to increase labor costs. This increase can be minimized through initial and ongoing training of OFNS school-based staff. Finally, since food, supply, and labor costs are calculated accounting for student participation, if student participation increases these costs could be expected to be lower.

There are minimal staff levels for producing scratch cooked meals resulting in fixed labor expenses. There are also minimums for food orders and food inventory levels resulting in fixed food expenses. Careful attention to increasing student participation not only benefits students who eat the meals, but also feasibility of expansion.

IX. A Path to Expansion

Expanding Scratch Cooking

The third goal of this evaluation is, “based on lessons learned by this pilot, provide implementation guidance to facilitate expansion of scratch cooked food service across all New York City (NYC) schools.” When the Return to Scratch Cooking Pilot (RSCP) was first conceived, it was envisioned as a 20+ year plan to implement a full scratch cooked menu at Department of Education (DOE) schools. Yet, as described in **Chapter I: Introduction**, societal, policy, and advocacy trends accelerated the rate of expansion of scratch cooking.

The ultimate goal of the Office of Food and Nutrition Services (OFNS), to provide scratch cooked food service* for all students, in all schools, during the school year, as well as for summer meals, will take a multi-pronged approach, financial investment from government, and coordination and collaboration across many stakeholders. This chapter outlines this process.



* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

Also discussed in **Chapter I: Introduction**, the definition of scratch cooking for this report uses the definition of “scratch cooked food service”* from New York City local law 1676-2019 introduced on August 14, 2019. See **9.1** and **9.2** for background on how the pilot helped lead to expansion.

Four Phases of Expansion

To reach the ultimate goal of all meals served in NYC, there are four interrelated phases of expansion.

Phase 1 - Expansion within OFNS

Gain support and involvement in scratch cooking across all departments at OFNS and to DOE.

Phase 2 - Expand Full Scratch Cooked Menu to More Kitchens

Increase the number of kitchens on the full scratch cook menu and use these sites for key stakeholders to learn about, observe, and experience how scratch cooking could be sustained in NYC public school kitchens.

Phase 3 - Systematize Scratch Cooking

Create systems and infrastructures that “bake in” scratch cooking in NYCs schools future.

Phase 4 - Build Excitement and Acceptance for Scratch Cooked School Meals

Transition toward more students being served meals more often that fit the definition of scratch cooked food service.*

Photo on the left shows scratch cooked lunch served on the hot food truck during the summer of 2019.

9.1: Initiation of the Return to Scratch Cooking Pilot Starting Small

The Return to Scratch Cooking Pilot (RSCP) began with a few key members from OFNS visiting New London, CT in November 2016. From November 2016 to June 2017, conversations exploring bringing scratch cooking to NYC public schools continued among the initial key players, Eric Goldstein, Stephen O'Brien, and Chef Dan Giusti. As the decision was made for OFNS to partner with Brigaid, other department directors and staff were brought into the conversation and tasked with helping identify pilot schools and starting the executive chef recruiting and hiring process. The inclusion of OFNS leaders and staff grew over the following months of the pilot development phase. The RSCP became a standing agenda item during executive meetings progressing from the directors receiving updates, to providing advice on decisions, and then being central to pilot milestones and implementation.

This phase was marked by the hiring of chefs, procuring items from the Brigaid ingredients list, ordering smallwares, securing the pilot schools and principal participation, OFNS visiting Brigaid in New London, the staff from the pilot schools learning about the pilot program, and preparing the kitchens for the new menu service. These early implementation activities represented investments in time and resources to meet the goal of starting scratch cooking at the start of the school year. Learning from the Brigaid operations and staff in New London provided OFNS team with a tangible experience of the scratch cooking concept and answered many of their questions. Likewise, the pilot staff orientation answered questions and fostered excitement for the new menu. OFNS staff's knowledge, skills and teamwork was what made implementing scratch cooking on the first day of school possible. Their capacity to accomplish this on a tight timeline is an indicator of the real possibility to expand cooking from scratch to all NYC school students.

Phase 1 - Expansion Within OFNS

Scratch cooking started as a vision of a few in OFNS upper administration. To expand scratch cooking, to reach the goal of all meals meeting the definition of scratch cooked food service, necessitates all OFNS departments and all employees at all levels to be involved in, excited about, and committed to scratch cooking. The following key milestones demonstrate how what was learned in this pilot can pave the way for all students to eat scratch cooked meals.

Achievements

- **More OFNS departments engaged in scratch cooking including Menu Management, Supply Chain Management, Training and Staff development.** The following examples show increased engagement across several OFNS departments:
 - **Menu Management:** During the pilot year, the Menu Management team worked alongside the Brigaid team to blend OFNS and Brigaid scratch cooked recipes. As of

August 2019, 21 new scratch cooked recipes have been added to OFNS recipe database. These are: 8 vegetable recipes; 5 hot entrée recipes; 2 grain recipes; 3 entrée salad recipes; and 3 sauce recipes. These have been developed to consider the standard equipment and staff skills in OFNS kitchens.

- **Supply Chain Management:** During the pilot year Supply Chain Management worked alongside Menu Management to procure clean ingredients, such as pre-cooked, bone-in antibiotic-free chicken. This product makes it possible for some of the popular recipes served during the scratch cook pilot (e.g., Peach BBQ and Jerk chicken) to be served in OFNS kitchens as this pre-cooked product has fewer food safety concerns than raw chicken.
- **Training and Staff Development:** During the pilot year, Brigaid worked with OFNS Training and Food Safety departments to develop the executive chef training program and to standardize the food safety operating procedures necessary for working with raw proteins.

* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

- **Brigaid role evolved from working primarily with Stephen O'Brien to working directly with several OFNS departments.** Throughout the implementation process Chef Giusti and Chef Kindt started working directly with OFNS directors. The direct access and interaction fostered relationships and lead to collaboration with the School Construction Authority (SCA), and OFNS Menu Management, Food Safety, and Training teams.
- **Food safety regulations and fire safety codes were achieved in the two pilot kitchens.** Chef Kindt worked with OFNS to implement and maintain high standards of food safety, which built upon the food safety training employees previously received. The on-the-job training reinforced best safety practices.
- **Positive feedback from students, teachers, and principals about meals inspired further expansion.** Through the interaction on the serving line and in the cafeteria, the RSCP implementation team gathered feedback from teachers, principals, and students which helped the chefs learn more about student favorite meals and palates.
- **This pilot provided the experience necessary to continue to expand scratch cooking.** Scratch cooked meals were served for the entire school year at one kitchen and five months at a second kitchen. OFNS and Brigaid learned about working with co-located schools, expanding the number of serving lines, as well as many other lessons for how to implement scratch cooking in NYC schools.



Display of entrée salad with hard boiled egg as non-dairy protein for Meatless Monday. An option that can be used across many menus.

Phase 2 - Expand Full Scratch Cooked Menu to More Kitchens

OFNS plans to and should continue to have more kitchens participate in the full scratch cooked menu. This will allow OFNS to continue learning about implementing scratch cooking in NYC kitchens as well as establishing demonstration and training sites for scratch cooking.

Achievement

- **Committed to implementing full scratch cooked menu in two new kitchens for the 2019–20 school year.** OFNS has initiated the process of identifying two new kitchens in the Bronx for implementing the full scratch cooked menu.

Recommendations

- **Continue expansion of full scratch cooking to new kitchens every school year.** Chef Dan Giusti and Stephen O'Brien identified 11 criteria for selecting kitchens to implement the full scratch cooked menu. The criteria include nine pertaining to kitchen infrastructure and two pertaining to school demographics and lunch participation:
 - 1) Certified & inspected fire suppression system,
 - 2) Large size walk-in refrigerator,
 - 3) Large walk-in freezer,
 - 4) Adequate refrigerators (6 single door or equivalent),
 - 5) Adequate freezers (4 single door or equivalent),
 - 6) At least 2 two well sinks and 1 three well sink,
 - 7) Had a dishwasher in the past,
 - 8) At least 8 work tables in the kitchen,
 - 9) Tilting skillet or kettle,
 - 10) A poverty rate above 75%, and
 - 11) Lunch participation above 75%.
- **Transition from executive chefs to culinary managers for future kitchens on the full scratch cooked menu.** During the pilot, the executive chefs were necessary to provide the culinary presence (e.g., skills, training, and detailed attention to implementing new recipes) for high quality meals. However, adding the executive

9.2: Return to Scratch Cooking Pilot Roll-Out

The first day of scratch cooking in NYC public schools was August 30, 2018 when teachers at the first site attended a teacher luncheon and met the team that would implement scratch cooking at their school. This was also a critical expansion turning point as the teacher support of the new school meals translated into teachers encouraging students to participate in the meals program. It was also the first time that kitchen staff followed a timed production schedule in the reorganized kitchen with new recipes. However, the first “real” day of scratch cooking was September 5, 2018, the first day of school, with scratch cooked meals for breakfast served from two lines, and lunch served from three lines in two cafeterias. OFNS and DOE executives visited and ate school lunch the first day of school. OFNS leaders, community members and media visited throughout the year, noting the kitchen reorganization, observing lunch production, talking with the staff, and eating a school meal.

Implementing scratch cooking on the first day of school allowed the team, and all of OFNS, to learn extensively about the alignment and integration of numerous **policies** and **practices** impacting meal service in NYC public schools. The implementation at the second site reflected initial lessons learned and continued influencing the strategy for how scratch cooked recipes could be produced in schools, the roles of the kitchen leadership team, and the integration of the cafeteria with the school for encouraging student and staff participation in school meals.

This phase also saw growing communication of the RSCP throughout OFNS at a March 2019 1Kitchen Meeting with OFNS executives, regional directors, district supervisors, and school food service managers. The RSCP was also on the agenda of OFNS Partners Meetings with community based organizations (CBOs) that implement food and nutrition education programming in NYC public schools. At the school level this phase was marked with feedback from principals, teachers, and parents about the food that influenced recipe testing and recipe collaboration between OFNS and Brigaid. There was also a focus on key implementation tasks and understanding OFNS ordering and accountability systems.

chef to the kitchen leadership team is not feasible or practical for expansion. What could fit into the OFNS structure is to have current “school food service managers” (SFSM) train to become “culinary managers” that could provide the culinary presence needed for scratch cooking.

- ***Utilize the kitchens on the full scratch cooked menu as culinary training sites for all OFNS school-based staff.*** Having kitchens implementing the full scratch cooked menu provides demonstration sites for training culinary managers, cooks, and school lunch helpers on recipes and food safety practices.
- ***Explore other innovative models, such as a network of central kitchens, for providing scratch cooked food service to schools that have no kitchens or very small kitchens.*** This may be a more cost-effective way to serve full scratch cooked meals to more students.

Phase 3 - Systematize Scratch Cooking

The demand for scratch cooking to expand to other schools and boroughs grew throughout the 2018–19 school year because community members visited the sites and experienced scratch cooked meals in NYC public schools. In order to meet this demand, the OFNS and Brigaid partnership took initial steps to provide some scratch cooked recipes citywide. It is notable that one year after the initial scratch cooked pilot in two kitchens, eight menus, that serve 75% of OFNS school codes — these codes count schools and also include programs that are within schools — have some scratch cooked items. For September 2019 there were five days on which all eight menus served similar scratch cooked entrées. There needs to be a steady increase of more days with scratch cooked items and for this to be expanded to all OFNS menus.



Entrée salad with chicken.

Achieving the goal of all students receiving scratch cooked meals will take a multi-pronged approach with collaboration and coordination among government, DOE, and community stakeholders. This collaborative approach involves deep systems change to the four elements of the RSCP. Therefore recommendations are provided here for the first three elements of systems change for the RSCP (*Ingredients and Recipes for Scratch Cooking*, *A Kitchen for Scratch Cooking*, and *Cooking from Scratch*). Recommendations for the fourth element (*Feeding the Community*) are provided in Phase 4.

Achievements

- **Scratch cooked items were offered on eight OFNS menus with five common menu days in September 2019.** This is the initiation of expansion of scratch cooked food service to reach more students more often.
 - **Menus with at least some days of scratch cooked food service.** The eight menus are: 1) Scratch Cooking PreK-8; 2) Scratch Cooking High School; 3) Traditional PreK-8; 4) Traditional Middle and Junior High School; 5) Traditional High School; 6) Alternative PreK-8; 7) Alternative High School; and 8) the Bronx Plan Menu.
 - **Scratch cooked meals reaching more students.** These eight menus represent 75% of OFNS school codes.
 - **September dates and items served.** The Scratch Cooking menu has full scratch cooking every day. The other menus have some scratch cooked food service, in which they have the same item as on the Scratch Cooking menu. The first date for the eight menus to serve the same meal was the first day of school (9/5) when Peach BBQ Chicken was served. The other shared dates are 9/12 serving Chicken Dumplings with Vegetable Fried Rice, 9/18 serving Chicken Quesadilla, 9/23 serving Stuffed Shells, and 9/24 serving Peach BBQ chicken. (Note, an exception is that the Bronx Plan lunch menu did not have the shared item on 9/12)
 - **October dates and items served.** The October 2019 menus introduced Stewed Chicken Thighs as another shared scratch cooked recipe that was served across five of these eight menus on 10/8 or 10/9.

Recommendations

Ingredients and Recipes for Scratch Cooking

- **Continue to develop scratch cooked recipes that can be implemented in all DOE kitchens.** As discussed in Phase 1, 21 recipes were developed. Continue to develop these recipes and create a plan for how these new recipes will be incorporated into all OFNS menus.
- **Leverage DOE's immense buying power to obtain competitive prices for whole food ingredients that can be the basis of scratch cooking.** As discussed in Phase 1, the continued procurement of “clean” products like the pre-cooked, antibiotic-free chicken allow for chicken recipes that were favorites during the RSCP to be expanded citywide. OFNS needs to determine what other products facilitate more menu items meeting the definition of scratch cooked food service,* and work to obtain contracts with competitive prices for these ingredients. Working with the Good Food Purchasing Program (GFFP) may identify resources and strategies towards purchasing more “clean” products.
- **Track performance of new menu items using food production records.** Ideally OFNS should pilot the tracking of menu item popularity during Phase 3 to identify the best system for collecting accurate data. The Food Production Records are preprinted so the data for them exists in electronic format. Therefore, tracking could mean switching to an electronic format that the cook in charge enters daily and prints for the manager to review and initial, or tracking could mean the SFSM enters the data after reviewing and initialing. The pilot would not necessarily be for determining meal popularity because tracking without first working with schools to inform and promote school meals could result in misleading data.
- **Increase procurement contracts that are directly with individual producers versus contracts with distributors that work with a catalog of producers.** The citywide menus

days have the same items but the scratch cook kitchens will follow a different recipe. For example, the scratch cooking schools will make cornbread from scratch, but citywide the kitchens will serve a packaged honey cornbread. OFNS should identify a provider who will produce their cornbread recipe using basic ingredients so that all students have access to the same recipes.

- **Increase Procurement of Locally Produced Ingredients:** While local ingredients were not the focus of this small pilot, as more and more ingredients are needed for scratch cooking across most of NYC schools, there is an opportunity to increase ingredients from local farms, particularly New York State (NYS) farms as there is a NYS incentive for procuring 30% from NYS farmers. See <https://www.governor.ny.gov/news/governor-cuomo-announces-record-15-million-available-support-growth-farm-school-programs-across>

A Kitchen for Scratch Cooking

- **Invest in kitchen infrastructure.** To continue to increase kitchens on the Scratch Cooking Menu, work with the School Construction Authority and DOE Services to upgrade kitchen infrastructure to support scratch cooked food service. All new school construction and major renovations of schools should include creating a kitchen that could implement the Scratch Cooking menu.
- **Ensure all kitchens have basic equipment for scratch cooked food service.** OFNS needs to create a list of large equipment such as steam kettles and mixers, as well as small equipment like immersion blenders and food processors and smallwares such as pans and serving utensils that are essential for scratch cooked food service with a budget and plan for how to equip all kitchens across OFNS for scratch cooked food service.
- **Assess and upgrade the kitchens with the most limited infrastructure.** OFNS has several school buildings without kitchens that receive food from satellite kitchens. These buildings need to be assessed to determine if kitchens should be built. Additionally, there are kitchens currently on the

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Hot Express and Cold Express menus. Many of these kitchens are on these menus because they lack the infrastructure, not because of choice. These kitchens need to be prioritized for upgrades so that they will be able to serve a menu with scratch cooked food service. This is essential for food equity.

- **Create kitchen hubs that can scratch cook complete meals or prepare parts of meals such as baked goods, pizza dough and sauces made from vegetable-based ingredients.** This may be a practical and cost-effective way to expand scratch cooking that would take initial capital investment and support from City Council that would have long-lasting positive impacts on NYC school students. NYC could explore other cities that have used hubs effectively for increasing scratch cooking in schools.

Cooking from Scratch

- **Hire and train culinary managers from the pool of current school food service managers that would oversee one or two kitchens instead of the current model of overseeing up to five kitchens.** Phase 2 of implementation taught the scratch cooking team that training SFSM managers to be culinary managers, focused on producing high quality meals, with fewer assigned schools would reduce transition of responsibilities among the kitchen leadership team. OFNS should follow through on creating this new position and on reducing the number of schools assigned to SFSM. Reducing the number of schools would facilitate working with principals by increasing the SFSM ability to attend school leadership meetings and .
- **Implement more culinary-based training for new OFNS school-based staff and for ongoing professional development for current staff.** As OFNS expands the number of scratched cooked recipes, should also expand training for OFNS school-based staff to build excitement and confidence for these recipes. A natural partner for this training is Wellness in the Schools (WITS) that has been providing Cook Camps for OFNS employees for several years.



Preparation of entrée salads

Phase 4 - Build Excitement and Acceptance for Scratch Cooked School Meals

RSCP started one year after OFNS transitioned to universal free lunch. Universal free lunch has the potential to reduce the stigma associated with school lunch to create wider acceptance of school meals as a normal part of the school day. Thus, the time was right to work toward other innovative school meal changes such as scratch cooking. However, the recipes served during this pilot introduced new and often unfamiliar foods to students. The metrics data showed a drop in student participation during this pilot. The qualitative analysis revealed that there was limited communication to the school community about the radical change happening in the kitchens; media attention about this pilot was limited and late in the school year; and there were limited opportunities to collect feedback from students about the recipes. Direct and consistent attention to building students' acceptance of, and excitement about, scratch cooked food is essential for scratch cooking to be successful.

Recommendations

Feeding the Community

- **Provide resources to principals that would enable them to expand time students have to eat.** Create a guide for principals with methods that have successfully expanded the amount of time students have to eat, especially for elementary school students. See **9.3 #3a**.
- **Create enjoyable eating experiences for the school community.** Produce a guide* for best practices for creating an enjoyable eating experience where students engage with each other and others in the school community. See **9.3 #3b**.
- **Provide funding and resources to improve the physical cafeteria space.** OFNS has worked with City Council over the last several years to secure funding to enhance the serving line and cafeteria at middle and high schools. These physical changes have had positive impacts on student participation and attitudes.
- **Promote use of OFNS school food app for providing information and obtaining feedback.** OFNS has a school food app that provides access to menus in multiple languages, allows for submitting a review, and provided a map of 2019 Summer Meals locations. The app has the capability to be used for providing information to promote transparency and gather more feedback from students and parents. OFNS should add questions to the app that allows them to collect specific feedback about the school meal experience. The use of the app should also be promoted to students and parents as a primary source of information and means for providing feedback.
- **Continue the OFNS Partners Meetings, initiated on February 1, 2019.** OFNS invited several CBOs that provide school meals related programming or advocacy to become partners in jointly addressing the communication, menu development, and policies of NYC school meals. Each of the three issues are investigated by subcommittees with an OFNS liaison. OFNS hosted three meetings during the 2018–19 school year and have five meetings scheduled for 2019–20.
- **Work with schools to promote school meals and provide food and nutrition education connected to school meals and curricular standards.** The New York City Council's FY 2020 budget includes funding for the Food-Ed Hub, the first such initiative in the country, to fill an identified gap in New York City's education landscape. The Hub will foster collaboration and coordination among school-based food and nutrition education organizations to align resources, increase efficiency, avoid duplication of effort, and identify best practices that can be brought to scale. The Hub will also help to coordinate food and nutrition education in schools so it is connected to school meals and connected to curricular standards across academic subjects such as literacy, math science, social studies, art, and health. See **9.3**.

Evaluation

- **Conduct outcome study on consumption of school meals.** An outcome study that captures the meal components on students' trays and the amount of those components students ate would inform what students are actually eating. This data could be used to further refine menus and food ordering, to inform food and nutrition education programming, and potentially increase meal participation, as well as increase consumption and reduce waste.
- **Evaluate the effects of the RSCP and school partnerships on attitudes toward school meals.** Participants interviewed for this study shared their perceptions and attitudes on the school meals, but the interviewees were a fraction of the school staff population. A larger study should be conducted to include perceptions and attitudes of all members of the school community; principals, teachers, staff, students, and parents.
- **Conduct outcome study on how scratch cooking impacts kitchen and plate waste.** Measuring the sources of food waste and strategies for reducing food waste and packaging continues to be a priority for OFNS leadership. Studying meal production, service, and dining would be a first step toward understanding and reducing waste.

* Chris Tricarico a new principals guide in September 2019 to facilitate conversations between school food service managers and principals.

9.3: Promoting Scratch Cooking—Serving Line to Food and Nutrition Education

Promotional activities can build enthusiasm for scratch cooked meals and increase the likelihood that students will take and eat these meals. These activities are appropriate for all schools, especially as OFNS moves toward expansion of more meals meeting the definition of scratch cooked food service.*

1. Promotion on the serving line

- a. Have conversations between school lunch helpers and the students while they are on the lunch line that describe the food and how it was prepared.
- b. Set up the serving area so students are able to see all options as they enter the line. This will allow students to know the range of options so they make the best choice for them and will also allow the line to move more quickly.
- c. Post menus (as large as possible) in areas where students wait on line. This will allow students to know what is being served as they wait. For younger students, have those monitoring the line building excitement about what is being served while they wait.
- d. Provide students the opportunity to customize their tray with the meal components (assuring reimbursable meal) that they want.
- e. Be sure everyone understands offer versus serve. There are five meal components: vegetable, fruit, protein, grain, and milk. Students need at least three of the five with one being a fruit or vegetable to have a reimbursable meal. Students do not need all five meal components for the meal to be reimbursable.

2. Promotion and discussions with students while they eat

- a. Try to have teachers, staff or other adults eating in the cafeteria with students to be role models for consumption.
- b. Be sure lunch aids know about what is being served so they can talk about the meal with the students and encourage students to eat the food.
- c. Have lunch aids talk about what students like and don't like and how students think the meals could be adapted, such as adding different spices or sauces, to increase likability.
- d. Encourage students to take and eat from the salad bar and allow students to go back up for seconds from the salad bar.
- e. Take around items from the salad bar, or pre-made salad for seated students to taste or add to their tray as part of their meal.

Continued -->

* The definition for scratch cooking used as a reference in this report is not the OFNS definition. As the pilot evolves the OFNS definition is evolving with it.

9.3: Promoting Scratch Cooking—Serving Line to Food and Nutrition Education (continued)

3. Cafeteria set up and atmosphere *How to accomplish this depends on the culture of the school and also the cafeteria set up. Consider the suggestions below and decide what will work for your school.*

- a. Maximize eating time.
 - i. Make all periods in which students have lunch a few minutes longer and the other periods of the day a few minutes shorter to allow students more time for lunch.
 - ii. Send students to the lunch line as soon as they enter the cafeteria so that valuable lunch minutes are not spent sitting and waiting to get on line.
 - iii. Encourage all teachers to bring their students to lunch on time to be sure they have the full lunch period to eat.
- b. Create a calm atmosphere that is conducive to eating.
 - i. Have a quiet time (no talking or low voices) during at least the first few minutes of lunch, or once all students are seated with a tray, to have everyone focus on eating.
 - ii. Play low music in the cafeteria and encourage students to keep the volume at a level which they can still hear the music.
 - iii. If possible get circular tables, and no matter what kind of tables, try to create a space where there are a variety of social arrangements. Putting some tables close, and then having some space between clusters of tables may help to accomplish this.
 - iv. For older students, if the cafeteria is crowded, try to set up other places, quieter places, in which students can go and eat.
 - v. If possible add sound absorbing tiles or other items that absorb sound to make the cafeteria seem quieter.

Continued -->

9.3: Promoting Scratch Cooking—Serving Line to Food and Nutrition Education (continued)

4. Promote school meals throughout the school and school day

- a. Have white boards with school meal menus in prominent places within the school, such as where students enter the school.
- b. Read the menu and talk about the food being served on morning announcements.
- c. Highlight the menu and talk about the food on newsletters or other items that go home to families.
- d. Talk about lunch as an important part of the school day to get nourished, be ready to learn, and improve mood.
- e. Build respect and pride for those who work in the cafeteria.
 - i. Introduce school food staff at town halls or other schoolwide meetings.
 - ii. Post photos of school food staff with their names and captions about them in the cafeteria.
 - iii. Thank the school food staff for the good job they do to nourish students.
 - iv. For older students and parents, create a school food digital presence (e.g., blog or instagram) with information on meals maintained by the school community.
- f. Talk with OFNS about hiring the school food staff to cater school events instead of getting food from outside sources.

5. Conduct educational activities that teach about food and nutrition and are connected to school lunch

- a. If you have a school garden, try to have items from the garden served at school meals. If do not have a school garden, highlight the fruits and vegetables grown at local farms or available at the farmers market.
- b. Conduct cooking lessons with students. Ask OFNS staff if they can share recipes from school meal items so that students can cook and eat those items in the classroom to build excitement for when they are served at school lunch.

Continued -->

9.3: Promoting Scratch Cooking—Serving Line to Food and Nutrition Education (continued)

5. Conduct educational activities that teach about food and nutrition and are connected to school lunch (continued)

- c. Have teachers talk about school meals during food and nutrition education across the academic subjects.
 - i. Literacy - teachers can use books about food to build literacy skills because food is relatable from a young age. Books can increase motivation, and make healthy eating seem more normative.
 - ii. Math - teachers can help students to create a “restaurant” - students can learn how to plan a budget and work with money and decimals. Students can also learn how to plan recipes and work with fractions.
 - iii. Science - teachers can incorporate food and nutrition education broadly across the sciences. Nutritional science, the study of nutrients in food, how the body uses nutrients, and the relationship between diet, health, and disease, can stand on its own or the basics can be incorporated into biology or physiology. Teachers of earth science can take time to focus on agriculture, how food is grown and plant gardens with their students.
 - iv. Social studies - food is entirely a social study. A school lunch meal can pertain to periods of time in history or cultures. Teachers can intertwine the lunch served in the cafeteria to the food eaten, crops grown, animals raised, during certain periods of time and places. Teachers can also ask students to share the foods eaten, crops grown, or animals raised by their family now or ancestors.
 - v. Art - teachers can design a variety of projects for their students surrounding food. Various art techniques can be used to paint, draw or portray food. Teachers can ask students to create art work to be displayed in the cafeteria and around the school that inspire students to eat school meals. Art contests can also be used as motivation to create motivational pieces for fellow students.
 - vi. Health - teachers can make a big impact on students eating habits. Health teachers can focus on how food affects mental health including mood, attention, and academic performance, in teaching the mind/body/food connection. Teachers can stress the importance of regularly eating healthy, balanced meals, like the meals provided by the school, and moderation of “whoa” foods that are high in fat and added sugars. Teaching basic meal preparation and cooking can also have a lasting impact on students’ health.
- d. Find outside organizations that may want to work in your school to conduct food and nutrition education. See this online searchable database of programs:
<https://www.tc.columbia.edu/tisch/nepnyc/>

X. Conclusion

OFNS serves about 900,000 meals a day to students in the largest school district in the U.S. Many students eat multiple meals at school making potential positive impacts of scratch cooking on students' diets, health, academic achievement, and sense of community enormous. This pilot showed the feasibility of implementing a full scratch cooked menu in two NYC school kitchens serving five schools. This pilot also showed that introducing more scratch cooked recipes citywide is possible. OFNS already works with many partners, and

by working in partnership with CBOs can strengthen food and nutrition education that connects school meals to curriculum and builds excitement for eating new foods. To reach OFNS's goal of all students having scratch cooked meals, both during the school year and summer will take collaboration and coordination with government, DOE, advocates, parents, partner organizations, and students. NYC is already seen as a national model for innovation in school meals and can now be seen as a model for scratch cooking.

A CITY COUNCIL AGENDA • *Growing Food Equity*

- Scratch-Cooked Menus in Schools:**
 The City should study and create an implementation plan to ensure that every school child has access to scratch-cooked, healthy, delicious, and culturally-appropriate menu items. This requires funding capital upgrades in school kitchens and increasing the SchoolFood budget to purchase fresh foods.

August 1, 2019

Cory Johnson, City Council Speaker Report



The New York City Council

City Hall
New York, NY 10007

Legislation Text

File #: Int 1676-2019, Version: *

Int. No. 1676

By Council Members Rosenthal, Kallos, Ayala, Grodenchik, Gibson and Lander

A Local Law in relation to requiring the department of education to report on implementing scratch-cooked school food service

Be it enacted by the Council as follows:

Section 1. Scratch-Cooked School Food Service. a. Definitions. For purposes of this section, the following terms have the following meanings:

Department. The term "department" means the department of education.

Scratch-cooked food service. The term "scratch-cooked food service" means food service that prioritizes the preparation of meals or snacks on a daily basis at or near the site of consumption with ingredients in their most basic form.

b. No later than 180 days after the effective date of this local law, the department shall submit to the speaker of the council a report regarding its efforts to implement scratch-cooked food service in all schools in the city school district of the city of New York. Such report shall:

1. Describe the department's efforts, including, but not necessarily limited to, those made in partnership with any external provider, to implement scratch-cooked food service in schools, including a list of the schools in which such efforts have been made, a list of any such external providers, and an assessment of the effect of such efforts on participation in, and satisfaction with, school food services and waste of school-provided food;

2. Describe the department's efforts to accommodate the special dietary needs of participants of scratch-cooked food service, including the department's consideration of the cultural customs of food service participants in meal planning;

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