

6

CREATING A MOBILE METHOD TO NOURISH CHILDREN IN THE UNITED STATES WITH THE “YUM-YUM BUS”

Rebecca A. Davis, A. Brooks Bowden, and Lisa Altmann

It is so rewarding to see the smiles on students' faces as they see the bus arrive. The [Rowan-Salisbury School Nutrition] staff have worked over time to build relationships with students so that they feel cared for and connected to the school system over the summer months. When you collaborate across departments to meet the nutritional needs as well as the educational needs of students, magic happens!

—Jason Gardner, assistant superintendent of curriculum and instruction, Rowan-Salisbury School District

ORIGINS OF THE YUM YUM BUS

During a typical school year, US school food programs provide important meals to students, helping to combat poverty and making it easier for families to meet their nutritional needs. During the summer, however, schools in most areas close, this source of nutrition dries up, and food insecurity among households with school-age children increases.¹ Some districts offer summer meal programs at sites such as schools or parks, but numerous barriers associated with these programs, including traveling to and from the site, make them insufficient for many families.² Federally funded summer meal programs only reach about 10 percent of the number of children served during the school year.³ One school district in the state of North Carolina addressed this challenge within its own community

by creating a summer meal program that brings the food directly to the children's homes.

The Rowan-Salisbury School (RSS) System's "Yum Yum Bus (YYB)" is the brainchild of a group of school nutrition workers who were granted autonomy and flexibility by district leadership to help address summer food insecurity, particularly among rural community members. Staff collectively set a goal to increase the number of meals served in the summer months by 10 percent but ended up far exceeding this goal, eventually increasing the number of meals served by over 50 percent. By adapting to the needs of the community and incorporating ideas of school food and transportation workers, this summer nutrition program efficiently repurposed resources and tailored services to improve access and uptake of summer meals, and in the process expanded stakeholder engagement. While the structure of this program was highly determined by the US federal summer meal program's rules and regulations, the basic design is relevant to rural and suburban communities both within the US and internationally in areas where school is closed for prolonged periods (e.g., summers or other extended school holidays).

BACKGROUND CONTEXT

As authors, we draw on a combination of practical experience with, and analysis of, school food programs. Altmann, the school nutrition services director for RSS and a cofounder of the YYB program, has worked in the district for twenty years and was previously the site-level kitchen manager. During the academic year, Altmann's work involves coordinating the logistics and operation of the YYB program, while in the summer she typically goes out on the bus herself to help serve food to students and families. Davis and Bowden are researchers who focus on school food programs. They have spent three years working closely with RSS. During that time, they collected data on the YYB program through site visits, document analysis, and interviews.⁴

Located about forty-five minutes northeast of Charlotte, North Carolina, RSS includes the small city of Salisbury and surrounding rural towns and communities. The district enrolls nearly twenty thousand students across K–12 grade levels in thirty-four schools, where 65 percent

of students are eligible for free and reduced-price meals and 15 percent come from a home where the primary spoken language is Spanish.⁵ To understand the lived experiences and needs of students living in poverty, the district synthesizes observations and information from a variety of sources, including families, school social workers, teachers, and bus drivers. Together, they make clear that many of the students in the district experience periods of deep poverty and housing insecurity. Some students' families do not have stable access to kitchen facilities. Some students live in inadequate housing, are hypermobile with frequent moves to different homes, or live with other families in overcrowded single homes or apartments. Some do not have consistent access to necessities such as laundry, phone or internet, or hygiene facilities.

When Dr. Lynn Moody became superintendent in 2013, she began to push for innovation across the district to better meet student needs. As part of those efforts, she gave the nutrition team a new level of autonomy to rethink school food and its role within the education system. The school nutrition department is housed in the district's main office and comprises employees who were promoted to their leadership roles from school kitchens throughout the district. They have developed three principles to guide their work: they seek to engage the communities of families that they serve and the community of employees on their teams; they are improvement-oriented and prioritize innovation; and they are focused on the well-being and humanity of the children and families in the district.

To rise to their new challenge in 2013, they collaborated with other parts of the district. For example, they worked with the technology team to envision how the district's new 1:1 technology access program (e.g., one laptop for each student) would change the spaces students needed to work and relax within the school. Eventually, they converted typical self-contained cafeterias into flexible spaces throughout school buildings with café tables and space for outdoor meals. In an interview with the authors, Superintendent Moody recalled thinking that the school nutrition department would be the least likely to be able to innovate, given that their programs are substantially influenced by tight federal restrictions, but she was surprised to see how much they accomplished.

In 2018, the state granted the district "renewal status." This designation allows it to use state funding and develop the curriculum with more

flexibility and autonomy than other North Carolina districts, akin to how charter schools function in other parts of the US. For example, the district is not limited to teaching only courses listed in the state catalog. It offers a variety of courses and programs such as trauma-informed yoga programming for students and a substantial apprenticeship program for high schoolers. This flexibility has also allowed for innovative staffing practices, which helped to facilitate collaboration across departments, and provides autonomy to district-level leaders, including the school nutrition department.

DESIGNING THE YUM YUM BUS

RSS had an existing site-based summer meal program in partnership with community organizations, churches, affordable housing developments, and summer camps to offer US Department of Agriculture (USDA) reimbursable meals to children, sometimes with supplemental funding from outside sources.⁶ Food was prepared in school kitchens and delivered to these sites where a trained staff member—sometimes a volunteer and sometimes an employee of the hosting organization—supervised the distribution. At the time, federal school meal regulations included a “congregate feeding” requirement, which meant that students could not pick up the food to go or have it dropped off to them using standard vehicles. Instead, they had to consume meals under the supervision of an adult, at a site that featured shelter, trash facilities, hand sanitizer or hand washing facilities, and a place for the children to sit and eat.

Such site-based programs tend to best serve children who live close to meal sites, have access to transportation, or both. By contrast, RSS observed that students in households experiencing poverty, students living in more rural areas, students with transportation barriers, and students who did not attend camps or community center programs seemed less likely to participate in the summer meals program. Guided by their goals of improving student well-being and increasing innovation, the district leadership team identified lagging summer meal participation as a priority. In 2014, the RSS nutrition team responded by beginning to develop a mobile food program that would allow them to bring summer meals directly to the students who

could not otherwise access food served at existing meal sites. To comply with the USDA's "congregate feeding" regulations, they decided to design a cafeteria on wheels: the Yum Yum Bus.

The RSS team shared the concept plan for the YYB with staff of all ranks and solicited their input to ensure that the program was designed to meaningfully address the needs of both children in the district and school food staff. Staff buy-in for a mobile cafeteria was also critical because working conditions in the summer months are difficult in North Carolina, where temperatures regularly exceed 90 to 100 degrees Fahrenheit. To facilitate inter-department collaboration and encourage buy-in, district-level nutrition leaders worked alongside staff during the summer, a practice that they continue to this day.

The YYB program development was an interdepartmental effort. Principals shared their knowledge of neighborhoods in the district where the mobile cafeteria would be beneficial. The technicians who manage the district's bus fleet contributed design ideas and supported the logistics and outfitting of the bus program. School-level kitchen staff proposed a book distribution component and organized drives to collect books so that they could share them with the children along the routes once the program was launched. The curriculum department was also engaged to help with the literacy component of the program by seeking further donations of books and texts that were likely to engage students with a wide range of interests and at a variety of reading levels.

RSS applied for—and won—a grant to fund the retrofitting of a specially designed bus to serve as a meal site. The mobile cafeteria design involved a traditional yellow school bus, but the similarity stopped there. The transportation department⁷ contributed a retired school bus that would fit the bill and got to work. They began by removing the typical bus seats and installed cafeteria-style tables where the bus seats once were. In the back of the bus, food coolers and warmers were installed to keep the food at safe temperatures. Using elbow grease and readily available cafeteria furniture, the bus was transformed into a space for up to thirty students to eat lunch. To fund the program itself, RSS drew on both the federal dollars and community contributions that were already funding the site-based meal program.



6.1 School nutrition staff serving lunch to children on the YYB. Credit: Rowan-Salisbury Schools.

Regulations do not allow the school bus to run without a driver in the seat, yet the program design relied on the driver to help assist the food service worker in handling the food and connecting with students and families. This meant that the buses could not idle in park, running their built-in air conditioners. Given the high temperatures of North Carolina summers, it quickly became apparent that just opening the windows on a summer's day was insufficient, so an auxiliary air conditioner was installed along with a generator to power it. A staff member designed a mural for the buses, and a local business donated a colorful “wrap” or decal that covers the entire bus in cartoon pictures of foods, setting it apart from a typical yellow bus. In June 2015, the first “Yum Yum Bus” was ready and it began to deliver food to children across the district (figure 6.1).

On a typical summer day, the YYB begins by heading to a central school-based kitchen to pick up meals prepared by a team of food service workers. A food service worker from one of the local schools that serves children along the route joins the bus driver so that the children served

are likely to see a familiar food service worker from their school. This intentional staffing decision aims to strengthen the relationship between the schools and the children and families in the community and provides extended employment options to food service workers in the summer months when hours were previously limited.

The bus rolls every weekday during the summer on a predetermined route. Any child under eighteen is eligible to receive food from the YYB. Participating families do not need to demonstrate financial need or citizenship status to receive a meal. The structure of the rural areas in Rowan County partially facilitates the effectiveness of the YYB. There are a number of informal clusters of mobile homes and camps, allowing the bus to stop in a single location and reach many students. The routes include a mixture of larger groups of homes, smaller clusters, and the occasional single family.

The bus stays at each stop for twenty to thirty minutes. Children climb on to eat and converse with other children and the staff members; family members, who are also permitted on, join in the conversations as connections are forged and deepened. On the bus, the food service worker and the bus driver discuss the food with the children and the families to find out what they like and don't like. This informal process is occasionally supplemented with "tastings" where children can sample new options and provide feedback that is incorporated into subsequent menu planning. For example, when the program began, cold options such as sandwiches were frequently offered. However, it became clear from formal and informal feedback on the bus that there was a strong preference for warm foods. As a result, the menu was converted to mainly hot options. The menu on the YYB follows the same food quality goals used during the school year and prioritizes fresh fruit and vegetables, sourced locally when possible. The department prioritizes scratch cooking and baking, and even foods that in other cafeterias are often prepared in a heat-and-serve style, such as pizzas, soups, pastas, and meats, are often made from scratch. This is facilitated in part by a set of heat-sealing machines that allow food such as baked ziti to be safely packaged for transit. The coolers and heated containers on the bus maintain the food temperature of hot and cold items during the day.

When it is time to go, children are permitted to pick one fruit or grain to take off the bus for later. Children are also invited to pick a book from

a box that the curriculum department stocks to meet a range of student reading levels and interests. Access to books helps all children, but is especially important for housing-insecure families, who have shared with the district that they often cannot pack books when they need to move quickly or unexpectedly. Children are allowed to keep the books, but many families bring the books back when they are done with them so others can read them as well.

TAILORING IMPLEMENTATION AND CULTIVATING TRUST

During the first few weeks of the bus's operation, staff noted that some families, particularly in Spanish-speaking communities, were hesitant to participate. To better serve these constituents, RSS knew it needed to build trust with Spanish-speaking families. The team promoted Carolina Hernández, a native Spanish speaker, into a leadership role in the bus program. Hernández reached out to Spanish-speaking communities in person to describe the program. The nutrition department already employed multiple native Spanish speakers, and they promoted these staff members from within to ensure that a Spanish speaking staff member was on the bus every day. As the program expanded to multiple buses, this practice continued. These intentional considerations led to greater participation rates among Hispanic/Latin American communities. After addressing these issues, the program was able to reach two hundred children a day across different communities throughout the district.

While the YYB is a school meal program by name, its effect goes far beyond simply providing nutrition. By design, the program aims to provide students from low-income households with consistent and dependable access not just to food but also to educators during the summer. In an interview with the authors, Superintendent Moody explained that many teachers in the district do not fully understand generational poverty and thus impose cultural norms in their classrooms that leave children of poverty disconnected. While the district works on reforming in-classroom practices to be more inclusive, the YYB literally and figuratively meets the families where they are. The bus drivers and the food workers that staff the bus serve as representatives of the school system and are specifically trained not to judge students but instead to offer consistent warmth and

connection with families that may be disenfranchised or otherwise alienated from the system. Altmann and the rest of the leadership team identify staff members that are particularly strong at building relationships with students and prioritize their involvement on the bus team and provide opportunities for newer employees to work with these employees so that they can observe their practices. Altmann notes that over time this process of encouraging staff to go beyond simply serving students food to having meaningful conversations with the children and families leads to a high level of excitement among the children when the bus arrives each day. Superintendent Moody recalled a time when she rode the bus and offered to help a young child open her milk. The child rejected the offer of help and took it instead to the driver who opened the milk and explained that they have a routine: every day, he said, “she counts on me.”

While the YYB program was motivated by the goal to increase summer meal participation by 10 percent, participation in the first year increased by over 50 percent, increasing from 68,030 summer meals in 2014 to 102,329 in 2015. The first YYB was replicated in 2018, using a similar combination of community contributions, federal reimbursements, and district resources. The second bus purchase was financed by a donation from a private citizen. The expansion of the program allowed more neighborhoods to be served, and by 2019, the bus program was serving 145 stops a day, five days a week during the summer.

IN-DISTRICT SUPPORT

A main reason for the success of the YYB program has been the priority placed on earning the support from hourly staff by engaging them in decision-making and creating a culture where feedback and ideas are encouraged. The directors and supervisors work to create a culture where all staff can develop new ideas and identify areas for growth. For example, staff members frequently develop new recipes, while a team of staff works to develop new methods for efficiently transporting warm food, and all relay feedback from their direct observations of the program and children’s and families’ reactions to it.

Staff are promoted from within the organization, and there is a substantial effort to train kitchen workers on the job and to pay for certification

courses and off-site training so that they can be promoted to managers and leaders. All current school- and district-level school nutrition managers were promoted directly from kitchen staff. Further, the YYB program allows hourly school workers, such as bus drivers, kitchen staff, and teacher's assistants, the opportunity to expand their employment beyond the school year to work in the summer weeks for at least thirty hours a week. While the school nutrition leadership does not have the ability to make compensation decisions, they advocate for higher wages for these workers, who are typically the lowest paid in the district and/or who have ten-month contracts and do not typically have access to summer employment through their district jobs. The support of the transportation department is integral to the program. The staff at the transportation department built and now maintain the buses and work closely with the nutrition department to dream up new ideas and find innovative ways to purchase or acquire resources at low cost. For example, the transportation employees scoured classified ads for vehicles, generators, and air conditioners to find affordable options. During the academic year, the bus drivers identify neighborhoods that may be experiencing hardship and would benefit from summer nutrition delivery. They do this via their observations when driving, along with their conversations with children and families. Occasionally when typical staff are out, mechanics from the transportation department step in to drive the buses.

This foundational support from district employees working in the garages, in the kitchens, and on the buses is supplemented with "top-down" buy-in from district leaders. Every principal and member of the district leadership has ridden a YYB. School leaders commented that riding along on the bus helped them better understand the true extent of the need in their communities. Additionally, after riding alongside the bus driver and food service workers, the school leaders often develop a new level of appreciation and awareness about the importance of the work done by these teams. Kelly Withers, a current associate superintendent and prior school principal in the RSS district, shared via email: "Riding the Yum Yum Bus as a principal was one of the most moving experiences of my career. The dedication of our school food service staff to meeting the needs of all children in our community inspired me to open discussions in our school about how we could help and contribute

to giving back through our programs in the schools. The bus is seen as a source of sustenance but most importantly it is a source of hope and partnership between our schools and our families.”

Additional partnerships such as one with the curricular department to promote literacy via book distribution further cement the program as an essential part of the school system. This interconnectedness and support from school leaders makes future operation and expansion of the program possible.

COMMUNITY PARTNERSHIPS

Partnerships both within the school district and within the larger community are essential to the YYB program. Outside of the summer months, the buses are used for special events. For example, the buses have been set up at community centers during WIC⁸ enrollment and immunization drives so that when families come to get services, their children can get a meal and a book. The buses also go out during the holidays with bags of food donated by a local grocery store along with donated gifts for the children.

The meals are funded by the USDA summer meals program; only individuals eighteen and under can take food. While children are permitted to take fruit or a grain home with them, USDA rules state that perishable food must be discarded at the end of the meal. This policy has led to food waste and has the potential to erode trust with communities where food can be scarce, putting school food workers in a difficult position. They work to mitigate this tension by making sure the permissible take-home foods are available and clearly offered.

To help expand food access for the whole family, the program also partners with Bread Riot, a local nonprofit. Bread Riot seeks to mitigate food insecurity and food waste simultaneously by using grant funding to buy surplus produce that is leftover after local farmers markets as well as directly from farmers. This produce is packed onto a truck that follows the buses. Several times a week during the summer, families, including both children and adults, can select produce from the truck to take home, free of charge.

The YYB also occasionally travels to fundraising events. The local Realtor’s Association holds an annual golf tournament to support the YYB program and is supporting current efforts to outfit the buses with Wi-Fi.

Participation in such events helps to raise awareness among multiply privileged communities of the need within their changing communities.

COVID-19 AND BEYOND

The COVID-19 pandemic led RSS to shut down on Friday, March 13, 2020. The nutrition and transportation departments sprang into action immediately. The USDA waived several requirements, including the congregate feeding requirement, so that any vehicle—not just a cafeteria-style bus—could participate in the COVID emergency feeding program. Yet RSS staff attribute their own rapid response to the pandemic to the important lessons learned from five years of operating the YYB program. On Tuesday, March 17, after just a single school day of downtime, they began dispatching regular yellow school buses, now stocked with packs of meals for students and families, on their normal routes. Teachers, bus drivers, custodians, and school food workers rallied to staff the bus for food distribution. In conversations with teachers who joined the ranks, Altmann heard repeatedly that they had a new level of appreciation for the important jobs that school food workers do.

In the early days of the pandemic, food shortages and last-minute changes in delivery schedules made menu planning particularly challenging, but staff were able to adapt the menu and offer nutrition continuity despite the disruptions. One team took charge of recipe modifications to adjust meals for portion size and reheating. Another team worked on efficient packaging solutions. A third, bilingual, team worked to create “at-a-glance” sheets that families could refer to for nutrition information, allergens, and reheating instructions. Lastly, the school nutrition leadership team sewed masks for staff who participated in the distribution efforts.

In the fall of 2020, schools partially reopened, and six grab-and-go meal site hubs were created where families could go pick up bundles of meals for days when their children were in virtual school. With the typical school operations still substantially curtailed, the bus drivers’ hours were cut, jeopardizing their access to benefits. The nutrition department quickly found work for transportation staff packaging and serving food so that those employees’ benefits were protected. As a result, any school

transportation or nutrition staff member who wanted to retain their regular hours could do so.

The staff knew transportation would be a barrier to participation in the meal hubs, just as it is for families in the summer, so the district also dispatched the YYB to deliver bundles including five breakfasts, lunches, and suppers to several thousand students per week. Each meal was packaged and included directions for reheating in both Spanish and English. As of 2021, the district planned to keep a virtual school option available past the end of the COVID-19 pandemic. Under this scenario, the RSS nutrition team planned to maintain some version of this meal delivery program to serve students who were not attending school in person and who would not have access to school meals as a result.

Even before COVID-19, work had begun in partnership with the local Association of Realtors to outfit the buses with wireless internet so they could serve as access points for communities with limited broadband access. The idea was that the bus could go out several times a week during the school year with snacks and with a certified teacher or teacher's assistant who could help with homework or other academic support. Once the social distancing requirements of COVID-19 eased, the program planned to allow students back on the YYB to access these Wi-Fi connections and to connect with a teacher or teacher's aide for support with virtual learning.

The YYB team continuously seeks ways to better reach underserved community members, including working with community and church leaders to identify future areas of improvement. The primary barrier to expansion and further program improvement is funding; despite the grant funding and the creative program design, it will take more funding to expand the program. While the program's day-to-day operations are sustainable using USDA reimbursements, the startup costs, including the purchase and retrofitting of the bus, require extra funds. Additional barriers include finding and identifying areas, getting opt in from neighborhoods, overcoming issues of stigma and pride, and navigating areas that may be unsafe for employees to visit.

Yet staff are proud that the YYB seems to have passed the test that COVID-19 has presented. It was unclear if the community-based nature of the program could endure with limited direct contact between students,

families, and school staff in the mobile dining rooms. However, it seems that these connections are enduring, and families remained excited to see the buses even though the program was altered to keep all participants safe (e.g., meal drop-off only). By knowing where the communities were that were most likely to experience food insecurity, and having pre-established connections pre-pandemic, the district was able to continue to provide high-quality nutrition throughout the closures.

INGREDIENTS TO BUILD THE YUM YUM BUS

The process of creating the YYB depended on the organization of a set of complex resources to build and run the program. In table 6.1, we document and quantify these “ingredients” in the hope that it will enable other organizations to develop similar programs in their own contexts.⁹ The purpose of this method is to capture all ingredients used in providing educational programming—whether reallocated from other sources, donated, or otherwise procured—so that the costs reflect the true economic value of the approach, regardless of how various components were financed.

We matched US average market prices to estimate the value of these ingredients using constant 2019 US dollars to estimate an approximate price per meal served.¹⁰ This matching process was based on qualitative data descriptions and observations. We find that the cost per delivered meal was about seven dollars, including the cost of food. This estimate includes all costs to various funders, including community partners, donors, and the federal government, and does not reflect district expenditures.

Our findings indicate that the YYB, an intensive approach that is tailored to the needs of the community, is nevertheless achievable. Two concepts, economies of scale and cost sharing, help to make this program financially feasible. First, economies of scale, or the ability to save money by serving a larger number of people, allow for greater efficiency. By offering an expansive summer meal program, both via the existing sites and the YYB, the district stretches scarce funding further. This leveraging of economies of scale manifests as benefits to the program and the community, for example by being able to hire employees full time or to save on high-quality locally sourced foods by ordering in bulk. Should the district

Table 6.1 Mobile cafeteria ingredients list

Ingredient	Description	Quantity
Personnel¹¹		
Food service workers	Prepare and serve food	540 hours
Food service worker training	Food safety training	2 courses
Bus driver	Drives the bus and helps serve	225 hours
Central office admin	Responsible for the majority of the program's functionality, along with the nutrition supervisor	50 hours
District nutrition supervisor	Responsible for the majority of the program's functionality, along with the nutrition supervisor	30 hours
District nutrition director	Oversees all nutrition programs, assists with bus program	16 hours
Facilities		
Converted school bus	Converted retired school bus with mural	1 unit
Bus mileage	Mileage for meal delivery	1,440 miles
Bus maintenance	Routine maintenance	3 months
Food coolers	Keeps food and milk cold	4 units
Ice packs	Freezable ice packs	12 units
Food warmers	Keeps food warm	2 units
Heat packs	Keeps hot food warm	4 units
Generator	Runs A/C after parking	1 unit
A/C units	Keeps the bus cool while students eat	2 units
Tables with seats	Cafeteria-style tables with attached seats	4 units
Materials		
Food	Federally reimbursable summer meals	5,000 units
Books	Available for students to take home	35 books
Uniforms	Worn by drivers and food service workers	6 units

Note: The above list represents a single bus, serving 110 children for forty-five days.

have chosen to run a smaller-scale program, they may not have been able to leverage resources to the same degree and would likely have served fewer children yet at a higher per-participant cost. That is not to say that economies of scale are not available to smaller agencies or school systems; the unique needs and circumstances of a given community will dictate the best mode of operation.

Second, by leveraging multiple funding opportunities, the costs of the program are shared across groups, making the program more feasible and affordable for each group. In this case, the bulk of the program is funded by federal funds that are widely available to schools across the US. Additional funds from grants, donations, and partnerships with local nonprofits further help share the burden, leaving the school district with relatively low costs to support the administration of the program and the routine bus maintenance. In the case of the YYB, the original startup costs were covered mainly from community contributions and grants, while day-to-day operation of the program is largely sustained by USDA reimbursements with district funds supporting a modest share of the administrative and organizational overhead.

CONCLUSION

US school food systems are substantially restricted by strict federal rules and regulations, making innovation difficult but not impossible. Changes or a relaxation of federal summer meal regulations might allow the YYB program to be more flexibly or efficiently run. Yet even within existing constraints, the program has been remarkably successful. That success comes, in part, because the school nutrition department, as well as school food and transportation workers, have been empowered to innovate. It also reflects the fact that the YYB program is inherently community based. Without connections within the school nutrition department, within the school district, and in the greater community, the program would be unlikely to thrive as well as it has. Community outreach was integral to the program's success and engagement of the Spanish-speaking community was essential. Once established, the program began to also play a community-building role by serving as a positive bridge between the school system and families and between the end of one school year and the start of the next. Today,

the YVB program continues to build awareness among community members, educators, and leaders outside of the school nutrition community of both the deep need within their communities and the efforts of school food workers.

NOTES

1. Mark Nord and Kathleen Romig, "Hunger in the Summer: Seasonal Food Insecurity and the National School Lunch and Summer Food Service Programs," *Journal of Children and Poverty* 12, no. 2 (2007): 141–158, <https://doi.org/10.1080/10796120600879582>.
2. Kim Caldwell et al., "Summer Meals Transportation Barriers and Solutions: Opportunities and Practices for Promising Partnerships and Recommendations for Stakeholders," No Kid Hungry Share Our Strength Center for Best Practices, 2015, https://www.worldhunger.org/wp-content/uploads/2016/04/summer_meals_study.docx; Kathryn Hill, "Summer Meals for NYC Students: Understanding the Perspectives and Experiences of Families. Equity, Access & Diversity," Research Alliance for New York City Schools, 2021, <https://steinhardt.nyu.edu/sites/default/files/2021-05/Summer%20Meals%20for%20NYC%20Students%20in%20Layout%205.7.21%20FINAL.pdf>.
3. United States Department of Agriculture, "Summer Food Service Program," last modified December 22, 2022, <https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/summer-food-service-program.aspx>.
4. The resource use analysis presented in this chapter was originally conducted as a part of a cost analysis to document the costs borne at the grassroots school and district levels to combat food insecurity in North Carolina and was used in a report to the court on the Leandro Case, a long-running constitutional lawsuit asserting the right of North Carolina students to a "sound basic education." A. Brooks Bowden and Rebecca A. Davis, "Addressing Leandro: Supporting Student Learning by Mitigating Student Hunger," *Center for Benefit-Cost Studies of Education* 3 (2019): 22, <https://repository.upenn.edu/cbcse/3/>. WestEd Learning Policy Institute, and Friday Institute for Education Innovation at North Carolina State University, *Sound Basic Education for All: An Action Plan for North Carolina* (San Francisco, CA: WestEd, 2019).
5. Institute of Education Sciences, "Education Demographic and Geographic Estimates. ACS-ED District Demographic Dashboard 2017–21: Rowan-Salisbury Schools North Carolina" (United States National Center for Education Statistics, Washington, DC, n.d.), accessed September 8, 2023, <https://nces.ed.gov/Programs/Edge/ACSDashboard/3704050>.
6. Both the Yum Yum Bus and the site-based meal programs described in this chapter use funding from the USDA. To receive summer funding, districts work with the state to apply to serve summer meals based on demonstrated poverty rates and school meal programming during the academic year. The federal policy requires a sheltered and supervised meal site and allows all children who come to get a meal. Funding for the program is then reimbursed based on participation.

7. The district owns its bus fleet and directly employs the staff members that drive and maintain the buses.
8. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age 5 who are at nutritional risk. USDA, "Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)," (Washington, DC, July 31, 2023), accessed November 27, 2023, <https://www.fns.usda.gov/wic>.
9. Henry M. Levin et al., *Economic Evaluation in Education: Cost-Effectiveness and Benefit-Cost Analysis* (Los Angeles: SAGE Publications, 2018). For a full analysis, see: Bowden and Davis, "Addressing Leandro."
10. United States Department of Labor. "U.S. Bureau of Labor Statistics," 2019, <https://www.bls.gov/>.
11. These prices were retrieved from representative sources, such as national restaurant and food services supply stores, the Bureau of Labor Statistics, and school transportation management sources; for a complete list, see Bowden and Davis, "Addressing Leandro," 22.

This is a section of [doi:10.7551/mitpress/15426.001.0001](https://doi.org/10.7551/mitpress/15426.001.0001)

Transforming School Food Politics around the World

Edited by: Jennifer E. Gaddis, Sarah A. Robert

Citation:

Transforming School Food Politics around the World

Edited by: Jennifer E. Gaddis, Sarah A. Robert

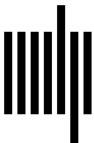
DOI: 10.7551/mitpress/15426.001.0001

ISBN (electronic): 9780262378802

Publisher: The MIT Press

Published: 2024

The open access edition of this book was made possible by generous funding and support from MIT Press Direct to Open



The MIT Press

© 2024 Massachusetts Institute of Technology

This work is subject to a Creative Commons CC-BY-NC-ND license.

This license applies only to the work in full and not to any components included with permission. Subject to such license, all rights are reserved. No part of this book may be used to train artificial intelligence systems without permission in writing from the MIT Press.



The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif and Stone Sans by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data

Names: Gaddis, Jennifer E., 1985– editor. | Robert, Sarah A., editor.

Title: Transforming school food politics around the world / edited by Jennifer E.

Gaddis and Sarah A. Robert ; foreword by Silvia Federici.

Description: Cambridge, Massachusetts : The MIT Press, 2024. | Series: Food, health, and the environment | Includes bibliographical references and index.

Identifiers: LCCN 2023034503 (print) | LCCN 2023034504 (ebook) |

ISBN 9780262548113 (paperback) | ISBN 9780262378819 (epub) |

ISBN 9780262378802 (pdf)

Subjects: LCSH: School children—Food—Government policy—Case studies. |

School children—Nutrition—Government policy—Case studies.

Classification: LCC LB3475 .T73 2024 (print) | LCC LB3475 (ebook) |

DDC 371.7/16—dc23/eng/20230920

LC record available at <https://lcn.loc.gov/2023034503>

LC ebook record available at <https://lcn.loc.gov/2023034504>