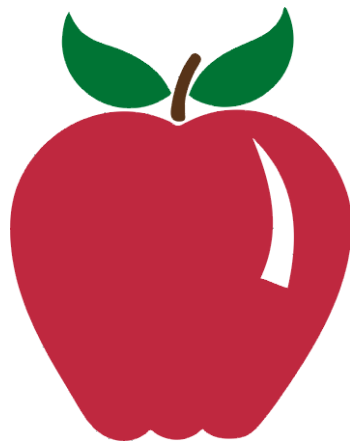


**The Spork in the Road: Student Perceptions of School Food at LAUSD**

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April 29, 2015



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### Acknowledgements

I would like to thank my advisor, Robert Gottlieb for his invaluable input and guidance; Elizabeth Medrano from the Healthy School Food Coalition for sharing her time and knowledge; David Binkle and Timikel Sharpe from the LAUSD Food Services Division for sharing their insight and information on LAUSD's food services; the LAUSD students who welcomed me into their schools, shared their experiences, and made my project possible; and my fellow Urban and Environmental Policy classmates at Occidental College for their support and humor.

## Introduction

School lunch is not what it used to be. When I spoke to a Food Service Manager (FSM) at a Los Angeles Unified School District (LAUSD) high school, he recalled school lunches a decade ago: he would go to Pizza Hut to pick up pizza, then bring it back and serve it by the slice. When he sliced up vegetables to put on top, he got in trouble for serving unapproved foods. Back then, they had vending machines selling soda pop and flavored milk; they gave kids cake, cookies, and slushies. The kids remember the “good ‘ol days” fondly: “They used to give us orange chicken, chalupas, chicken nuggets...” recalls one student. “It was so good,” says another. The students at another high school I visited remember school lunches similarly: “We would get lasagna, hot dogs, chocolate milk, taco triangles, meat...” Today, much has changed as the nutritional standards for school lunches have transformed nationally. The Healthy, Hunger-Free Kids Act (HHFKA) of 2010, championed by Michelle Obama, transformed school lunches by setting strict nutritional guidelines for all federally reimbursable school meals. The LAUSD revamped their menus alongside the new HHFKA standards, and either met or surpassed all nutritional requirements. Now, according to one high school student, “It’s like major healthy. There’s whole grain pasta. Salad everywhere. Fruit.” The lunch menu revolution has been met with praise from parents, school lunch reformers and child nutrition advocates alike; however, the students have had a somewhat different reaction to the healthy fare. Through focus groups with students at three high schools, I have sought to answer the question: What are the student responses to the new LAUSD lunch menu changes? And what steps can the

LAUSD Food Services Division take to increase student satisfaction with and consumption of healthy foods and reduce plate waste?

### Abstract

In an obesity prevention effort, and in accordance with the Healthy, Hunger-Free Kids Act of 2010, the LAUSD has made great strides to improve the nutritional quality of the National School Lunch Program (NSLP) by implementing some of the nation's strictest nutritional standards. While the LAUSD has won awards for its healthy menus, it has also run into issues regarding policy implementation, negative student reception, and anecdotal reports of large amounts of food waste.

To discover student reactions to the 2011 LAUSD menu changes, I conducted five focus groups at three different schools in the LAUSD. I engaged in conversations with 41 students regarding their responses to the new school menus. I found that overall, students were highly critical of the new menus, did not like the new healthy foods, and wanted the old menu items back. Students mainly complained that the food doesn't taste good (is dry, flavorless, unidentifiable and old), isn't fresh or prepared well (not enough time and effort goes into preparation), and lacks variety. A strong stigma against school food persists, and there is distrust between the student body and the cafeteria. I recommend that the LAUSD work to transition all schools to prepare food on-site when feasible, to have new schools be built with full kitchens, to continue to source local produce, to take steps to make cafeterias more transparent, and to work on improving communication between the cafeteria and student body.

### Statement of Purpose:

My objective is to provide recommendations to the LAUSD Food Services Division that will allow the 2011 menu changes to reach their full potential by maximizing their appeal to students. Through these recommendations, my ultimate goal is to increase students' enjoyment and consumption of the healthy lunch foods offered by the LAUSD, increase student participation in the NSLP, and reduce food waste in the schools—thereby improving student health and increasing the profitability of the NSLP in the LAUSD.

### Literature Review

#### **History of the National School Lunch Program**

The National School Lunch Program (NSLP) is a federally reimbursable school meal program that offers k-12 students free or low-cost meals, depending on eligibility. The NSLP was passed by Congress in 1946, and provided permanent aid to school lunch programs through funding by the US Department of Agriculture (USDA). School lunch programs had been operating throughout the nation for a few decades, but they operated on a year-to-year basis, and were not stable or consistently funded. The NSLP was formed largely due to the prevalence of malnourishment among America's youth. When more recruits during WWII were rejected from service due to malnourishment (as much as 40%) than any other health-related factor, the necessity for a childhood nutrition program became starkly evident. Thus, the NSLP was passed mainly as a national security measure to ensure the health of the nation's youth (Confessore, 2014). The NSLP also served

to utilize agricultural surpluses, and “encourage domestic consumption of nutritious agricultural commodities and other food,” (Gunderson, 1971).

To receive federal support, meals had to meet the minimum nutritional requirements put in place by the Food and Nutrition Board (FNB). The FNBs recommendations became the Recommended Dietary Allowances (RDAs), which would guide nutritional requirements for years to come. The constraints put in place by the nutritional requirements, and the influence of the USDA and commodity surpluses, made menu-planning difficult. Early meals were relatively balanced: they featured whole grains, proteins, fruits, vegetables, and high levels of fat to increase caloric content (Gunderson, 1971).

The NSLP expanded steadily between its inception in 1946 and the 1967/8 school year. Participation rose from 4.5 million to 18.9 million children, and Federal support rose from \$60 million to over \$160 million. However, while about 73% of children were enrolled in schools offering the program, only 37% of those students were participating. Of those who qualified for free or reduced-priced lunches, only 12% were participating. Non-participation had a variety of causes. Many low-income schools did not have the facilities to prepare school lunch, nor the funds to upgrade. Other schools resisted the program, clinging to the idea that schools were not responsible for feeding children, and that that was the job of the family. The Committee on School Lunch Participation, entitled *Their Daily Bread*, profiled this lack of participation in a 1968 report. The report drew interest from activists, who pushed the Secretary of Agriculture to form more clear guidelines for

free lunches by setting eligibility standards that reflected the federal poverty line (Gunderson, 1971).

In 1966 Congress passed The Child Nutrition Act, which made strides to expand the NSLP into low-income schools where the program was not yet in operation. The act put in place a pilot breakfast program, extended the special milk program, granted funds for nonfood assistance (labor and equipment), and authorized the Secretary of Agriculture to encourage the consumption of domestic agricultural products. The long-term impact of the Child Nutrition Act was that it transitioned the NSLP away from being an agricultural subsidy program and more towards being a poverty relief program. This in effect made the goal of the program less focused on providing nutritious meals to kids, and more towards providing as many meals to as many children as cheaply as possible. Processed foods began to be incorporated into the school lunch program; these engineered foods were made to “improve nutrition, reduce cost, offer greater convenience in meal preparation, improve acceptability, and improve stability,” and also to make school food more accessible to schools without proper kitchen facilities. The incorporation of processed foods opened the door for outside industry players to become vendors for the schools. Outside food companies could offer food at low cost to schools with tight budgets. Furthermore, the appeal of fast food to kids raised participation in many schools (Newport, 2011).

Along with becoming a venue for corporate food sales, schools started offering “competitive foods” in vending machines. Such foods were very loosely regulated, and legislation allowed “foods of minimum nutritional value,” to be sold



in schools, so long as the food provided 5% of any Recommended Dietary Allowance nutrient (Gunderson 1971). Food corporations could fortify their products with some vitamins and minerals, and introduce their junk food to the schools. As relationships with outside food vendors increased, the need for on-site kitchens declined. In the early 1970s, schools reverted away from individual kitchens and central kitchens were built instead. Now schools only needed the capacity to freeze and re-heat foods. Schools saw the American shift towards industrial farming, processed foods, and large corporations play out in their own cafeterias (Newport, p. 14, 2011).

In 1981, when President Regan took office, major budget cuts were made to the NSLP, and lax nutritional standards were passed. Ketchup counted as a vegetable, jam as a fruit, eggs in cake as protein, and cookies and chips as bread (Newport 15, 2011). Since then, USDA and the School Nutrition Association (SNA) have responded to pressure from school food advocates and taken many steps to improve the nutritional quality of the NSLP. In 1994, a mandate passed that school lunches had to be in accordance with the most updated Dietary Guidelines for Americans. The most recent reauthorization of the school meal standards—also NSLP's first revision in 15 years— came in 2010 with the passage of the Healthy, Hunger-Free Kids Act (Nixon, 2014; GAO, 2014). The act was shepherded by Michelle Obama as part of her Let's Move! initiative to combat childhood obesity. The act, which set ambitious nutritional standards for all federally reimbursable school meals, passed with strong bi-partisan support in Congress. Today, the NSLP serves 31.5 million American children annually, accounting for about 60% of

children enrolled in U.S. schools (GAO, 2014).

### **The Healthy, Hunger Free Kids Act of 2010**

The Healthy, Hunger Free Kids Act of 2010 is one of the most progressive and impactful changes to the NSLP. The act set maximum daily calorie requirements and regulations on salt and transfat levels for the first time ever (Nixon, 2014). Within a few years, FSMs are expected to switch all milk to low-fat, all grains to whole grains, and double the number of fruits and vegetables offered at lunch. The standards also require each student to take a fruit or vegetable serving.

The rigorous nutritional standards have garnered strong praise and criticism alike. An array of supporters, including parents, FSMs and nutrition advocates across the nation, has praised the standards as one of the most progressive obesity-prevention efforts of recent years. In the development of the motion, the rules received about 130,000 comments, most of them positive (Schwartz, Henderson, Read, Danna, Ickovics, 2015). On the other hand, FSMs and even the SNA have expressed frustration over the standards. Reports identified an increase in plate waste, difficulties in planning menus and managing food costs, and gaining student acceptance (GAO, 2014). Many districts didn't have the funds in their budget to procure fresher, healthier (and often, more expensive) foods, and had to cut portions. Nationally, there was student outcry that school meal costs went up, while portion sizes went down. For instance, at Wallace County High

School in Kansas, they filmed a 4 minute parody titled “We are Hungry” set to the tune of “We are Young;” it has 1.5 million views.

The Government Accountability Office (GAO) conducted a study in 2013 to address the state of the NSLP. For their study, the GAO surveyed child nutrition program directors nationally, and visited eight varying school districts. All eight school food authorities (SFAs) in the districts they visited reported food waste to be a challenge; six (SFAs) reported that they believed plate waste had increased because of the new standards. Their surveys showed that 48 states found plate waste to be one of their top challenges in implementing the new rules (GAO, 2014). Furthermore, they reported that participation in the NSLP declined by 3.7%, or by 1.2 million students between the 2010-11 and the 2012-13 school year. The report suggests that the decline in participation could be due to the new nutritional standards. However, a report by the Food Research and Action Center points out that since the beginning of the recession (the 2007-2008 school year), participation by free and reduced price lunch students has increased, while paid student participation has decreased. These numbers and the fact that the rates had begun to change years before the implementation of the new nutritional standards suggests that the new menus are not causing dramatic participation shifts (FRAC, 2015).

The HHFKA was initially supported by the School Nutrition Association (SNA), a powerful national organization that represents 55,000 school nutrition professionals. However, the SNA is now lobbying aggressively to loosen the standards. The SNA claims that the regulations were “overly prescriptive” and had

“unintended consequences,” that impeded “efforts to serve healthy, appealing meals to students,” according to a statement by Dr. Becky Domokos-Bays, VP-Elect of the SNA. The SNA also reported that challenges “ranged from declining student participation and revenues, increased costs and food waste and regulatory burdens that have hindered their efforts to serve healthier meals that appeal to students.” Already, the SNA has successfully pushed the USDA to relax limits on sodium, proteins and whole grains (Bottemiller Evich, 2014). Currently, the SNA is calling on Congress to waive schools that are operating at a loss from having to meet all the requirements. The SNA has legitimate concerns about the difficulties of implementing the standards, but these concerns not the only reasons for SNA’s sharp turnaround.

The SNA is a non-profit organization, and receives about half of its \$10 million operating budget from food industry members (Bottemiller Evich, 2014). These members are understandably worried about the consequences that the HHFKA might have on their profits. More apples, milk and carrots means less of the junk food they have been providing school districts for decades (Bittman, 2015). Some companies, worried about the future of their contracts, formed the “Coalition for Sustainable School Meals Program,” which argued to ease the standards, contending that food costs would rise, and students would be dissatisfied with the foods (Confessore, 2014). The HHFKA is up for revision in 2015, making it one of the hottest topics around.

### **LAUSD Background and Menu Changes**

The LAUSD began serving food to kids at school long before the National School Lunch Act was passed in the 1940s. Rudimentary programs surfaced in the early 1900s, and by 1921 the Board of Education was funding school lunch programs for nearly 3,000 students. Most of these students were in high school, since they frequently traveled further distances than their elementary counterparts, and therefore had less of an opportunity to go home for a meal during the day. By 1979, the district constructed the Newman Nutrition Center as a central kitchen to help the Board of Education meet its goal of serving lunch to all students; it prepared meals for 8,000 kids across 25 sites (Newport, 2011).

As in most school districts throughout the nation, junk food has been easy to come by in the LAUSD. Since the 1980s, the LAUSD has had restrictions in place to regulate the sale of competitive foods (e.g., soda, chips, and other typically unhealthy snacks that are sold in vending machines, student stores, etc.), however they have been inconsistently enforced. For example, vending machines were outlawed in elementary schools, but remained available in K-12 continuation schools. The district also formed contracts with outside food vendors, who could provide “fast food” items such as pizza and subs to the district at high quantities and low costs. In 2000-2001, the LAUSD spent as much of its budget on produce as it did on food from these outside vendors (\$4.8 million vs \$5.1 million) (Challenging the Soda Companies, 2002).

Discussions to address obesity in the LAUSD surfaced in 1999, when researchers from the University of California Los Angeles School of Public Health

conducted a study at 12 low-income schools across the district and found that nearly half of the students in such schools were obese or overweight. Shocked by the results (as national obesity trends had yet to surface), schools responded by partnering with UCLA and the Center for Food Justice (CFJ)—based at the Urban and Environmental Policy Institute (UEPI) at Occidental College—to place Farmers’ Market Salad Bars in some elementary schools (Challenging the Soda Companies, 2002). Researchers found that the salad bars increased fruit and vegetable consumption among the students.

The collaboration between the UEPI and LAUSD in 2000 was the first of many projects to come. In the following year, members of the two groups worked together to co-author pieces for the Los Angeles Times that brought to light the connections between food access and healthy students. Furthermore, the CFJ began holding discussions with community and parent advocates who sought to bring healthier fare to the schools. The Healthy School Food Coalition (HSFC), led by the UEPI and CFJ, was formed by a loose network of community activists who began advocating for changes in the district’s school food policies. In May of 2001, their efforts helped create a Child Nutrition Advisory Group (CNAC) to advise the Superintendent on school food policy.

The HSFC and California Food Policy Advocates (CFPA), under the banner of the Los Angeles School Nutrition Project (LASNP), and many other community activists, parents, teachers, LAUSD Food Service Personnel and past and current school board members including Marlene Canter, Steve Zimmer, and Monica Garcia (to name a few) have made many notable strides to improve the healthfulness of

school lunches (Sharp and Medrano, 2012). Board Policies include: The Healthy Beverage Resolution (2002) which banned the sale of sodas at school, the Obesity Prevention Motion (2003) and the Cafeteria Improvement Motion (2005) which worked to limit the accessibility of junk food at schools and increase the amount of fruit and vegetables served at lunch, the banning of flavored milk in 2011, the “Improving Food and Nutrition Policy” in 2012, and finally the “Good Food Purchasing Policy” in 2012 and 2014 to encourage sustainable procurement (Sharp and Medrano, 2014).

These policies have had resounding positive effects throughout the district. In 2009, the LAUSD started to eliminate items like canned and frozen fruits and vegetables, and started buying more local produce. In 2009, the district procured 9% of its produce from within a 200-mile radius, and in 2014 that number was up to 75% (Binkle, 2014; Center for Ecoliteracy, 2012). The district has removed a la carte items and fast food-type entrees (pizza, hot dogs, corn dogs) from the lunch lines, tripled their purchases of fresh produce between 2006 and 2010, switched to 100% whole grain bread and introduced 30 other menu items that list whole grains as the first ingredient, and increased participation rates in tandem with the availability of healthy foods. Perhaps most notably, LA County did not see a rise in obesity rates between 2011 and 2013, although obesity rates had previously been on the rise for decades in the county. While research has not been able to attribute this success to these changes, LAUSD’s nutritional initiative indicators suggest that the school food policies have had a positive impact (Sharp and Medrano, 2014). The LAUSD is also part of notable statewide pilot called “California Thursdays,” which

serves California food to 1 million California students across 15 districts (at least) once a week on Thursdays (Bonar, 2014). California Thursdays are good for the local economy, environment, and the kids, and is a remarkable accomplishment for the school food movement. The efforts and successes of the CFPA, HSFC, and CFJ demonstrate the necessity of organizing and collective community action to complement any comprehensive campaign.

When the Healthy, Hunger-Free Kids Act of 2010 was established, the LAUSD was ahead of the curve and implemented standards that were even more rigorous than the national standards. However, since the implementation of the new menus, the LASUD has grappled with issues of student dissatisfaction and food waste. Immediately after implementation of the new menus, negative media coverage brought LAUSD's menu changes to the public's attention. The LA Times reported that new menus are a "flop," "meals are being rejected en masse," and the "underground market [for junk food] is thriving." The same article also quotes a student saying the food is "nasty, rotty stuff," and portrays images of children tossing full, healthy meals straight into the trash (Watanabe, 2011). Another round of negative media attention emerged in the summer of 2014, putting LASUD back under the spotlight. An LA Times article cited that, based on a conservative 10% waste estimate (which food services deputy director David Binkle estimates to be more), the LAUSD loses \$18 million/annually, or \$100,000/day, in wasted food (Watanabe, 2014).

Food waste and student dissatisfaction were highlighted—and arguably heightened—after the menu changes, but are not new to the NSLP or the LAUSD.



For myriad reasons, it is difficult to provide nutritious and enjoyable food inexpensively to the students. One factor often cited is that lunchtime is too short. It is a law that the last student to receive food must have at least 20 minutes to eat; however, this is not always the case. It takes approximately 10 seconds to serve each child in the LAUSD so in a 2,000 person school, it is nearly impossible to serve every student during the allotted lunch time—let alone leave them with at least 20 minutes to eat. In 2012, it was reported that only 49% of elementary school students and 29% of high schools students have the required time to eat (Garcia and Zimmer, 2012). The obvious option would be to lengthen lunchtime, but the district has difficulty doing so because teachers don't want lunch to cut time out of their teaching. If the district were to re-negotiate school hours and make the day longer, they would also have to re-negotiate staff contracts through the teachers' union, which poses a whole new set of barriers (Alimurung, 2011). The need for speed (in the lunch-line) makes healthy options like salad bars difficult to manage (though not impossible). Having each child stop to choose and grab their own salad toppings is time-consuming, and children who pick up, then put food back down warrant sanitation concerns. As of 2011, only 35 out of 1,092 K-12 LAUSD schools had salad bars (Alimurung, 2011).

Competitive foods, sold in student stores, and contraband goods, traded or sold by students and teachers on campus, create competition for the NSLP. Selling outside food on campus is not allowed but students do so anyways. A study by Megan Bomba and Elizabeth Medrano found that in the LAUSD, of the students who don't eat school lunch, 30% get lunch from a student store (e.g., competitive foods),

29% bring lunch from home, and 37% skip lunch entirely. If students aren't able to get to the front of the lunch line with sufficient time to eat, it makes sense why students would opt to bring food from home, or purchase competitive foods. In the LAUSD, the sale of unhealthy competitive food has been restricted due to the Smart Snacks Initiative, which requires all competitive foods to abide by nutritional standards outlined in the LAUSD Food and Nutrition Policy Motion Implementation Plan. (Blueprint for Wellness, 2014)

Education is also a large barrier that prevents healthier options from being consumed. Students aren't informed of the nutritional content of lunch foods, making it difficult for them to decipher which options are healthiest and which should be avoided (Alimurung, 2011). Roughly 3/5 of students are not aware of what's on the menu until they are in line, which makes informed choices more difficult (Bomba, Medrano 2012). Children are much more inclined to eat foods they know—a reason why classics such as pizza and tater tots are big hits. Research shows that it takes children 10-50 exposures to a new food before they accept it. So when cafeterias try to offer new foods on the menu, students may view them with more distrust than enthusiasm. This is one of the reasons why 2011's menu re-vamp was met with outcry from the students. The new fare included sushi, quinoa, and jambalaya—foods that many students had not tried and were not used to eating at home (Alimurung, 2011).

And of course, money is an issue. The schools receive reimbursements for each meal they serve that meets NSLP requirements. The students receive either free, reduced price (\$0.40) or full price lunches (\$2.00-\$2.50) based on their

household size and income. Schools are reimbursed \$2.93 for free lunches, 2.53 for reduced-price lunches, and \$.28 for paid lunches (Parent/Student Handbook, 2015). The LAUSD is reimbursed \$2.49 per meal, but after subtracting labor, benefits, supplies, and operating expenses, the district has 77 cents per meal to work with. One reason LAUSD is left with so little to purchase foods is because they spend nearly twice as much on labor, in part due to the district's decision to pay part-time workers \$15/hr and increase their hours so they would qualify for additional benefits. At 77 cents a meal, it is difficult for anyone to prepare a meal that is fresh, healthy, and appetizing (Alimurung, 2011).

Today, LAUSD has the largest breakfast program and second largest lunch program in the country. The district serves 656,000 student meals across 709 cafeterias and 85 child care locations. The Newman Nutrition Center—the central kitchen where 180,000 LAUSD meals are prepared daily—furnishes meals to 255 schools (Parent/Student Handbook, 2014). Annually, the district serves 121 million meals (Alimurung, 2011). Some 80% of all LAUSD students qualify for free or reduced-priced meals and 72% come from predominantly low-income Latino households. Over a quarter of the students are overweight, but that percentage can be as high as 44% at some schools (Medrano and Reyes, p. 8, 2011).

### **Food Insecurity**

The prevalence of food insecurity<sup>1</sup> in Los Angeles accentuates the need for students to have access to healthy foods. Los Angeles County has the largest

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<sup>1</sup> A food insecure person lacks consistent access to enough nutritious foods to maintain a healthy lifestyle.

number of food insecure people and children in the nation, where 1,600,000 (or 1 in 6) adults and 620,000 (or 1 in 4) children are food insecure (Mind the Meal Gap, 2014). Because 75% of the students in the LAUSD come from homes with incomes below the national poverty line, for many students, school is the only place where they can rely on a healthy meal (Alimurung, 2011). Furthermore, students get up to 50% of their calories from school, thus the nutritional quality of school food makes a huge difference in the healthfulness of a child's diet (Cohen, J.F.W., Richardson, S., Austin, S.B., Economos, C.D., and Rimm, E.B., 2013). It has also been shown that students who participate in the NSLP are more likely to drink milk, eat at least one serving of fruits and vegetables every day, and are less likely to consume sugary drinks than non-participants (Haas et al., 2014). The importance of balanced school meals is especially imperative in districts such as the LAUSD that serve an at-risk population.

### **Obesity**

High childhood obesity rates in Los Angeles also highlight the importance of a nutritious NSLP. Childhood obesity has been widely recognized as one of the most pressing health concerns in recent decades. Since 1980, obesity rates have doubled among children ages 2-5, tripled among ages 6-11, and nearly quadrupled among ages 12-19 (Cohn et al., 2013). Obesity is linked to many negative health outcomes, such as high blood pressure, high cholesterol, Type 2 Diabetes, breathing problems, and cardiovascular disease (CDC, 2012). With increasing obesity rates, and with the high percentage of daily calories students consume at school, it is especially

important for school lunches to offer healthy options such as whole grains, fresh fruits and vegetables, and non-flavored milk (Gase et al, 2014).

While school lunch offerings have been made healthier, some students are unsatisfied with the new offerings and have been opting to buy competitive foods (snacks like chips and cookies), or bring less healthy food from home. An LA Times article reports that “at many campuses, an underground market for chips, candy, fast-food burgers and other taboo fare is thriving,” and quotes student Iraides Renteria saying “we’re eating more junk food now than last year,” (Watanabe, 2011). It would appear paradoxical if the healthier menus were in fact causing students to eat more high-calorie foods, but this could potentially be a reality if students are avoiding the healthy NSLP options, and choosing less healthy alternatives. In order to combat the rise of junk food alternatives, students need to be satisfied with NSLP offerings.

### **Food Waste**

Food waste is a major issue in the United States today: up to 40% of food produced in America is wasted, amounting to 70 billion pounds of edible food and costing \$165 billion (Feeding America, 2012; Gunders, 2012). Food waste has a detrimental effect on people and the environment. Getting food from farm to fork uses up 10% of the US energy budget, 50% of the land, and 80% of fresh water consumed in the US; organic matter that winds up in landfills contributes to 16% of the nation’s methane gas emissions (Gunders, 2012). Food is wasted at every step in the supply chain, and schools are no exception.

Plate waste studies have shown that large quantities of food are being thrown out in lunchrooms participating in the NSLP. Plate waste has long been an issue the NSLP has faced, and many researchers have tried to quantify it (GAO, 2014). In a 2002 Report to Congress (the most recent report to Congress on NSLP plate waste), Jean Buzby and Joanne Guthrie analyzed a national plate-waste study from 1991-92 and estimated that 12% of calories from food served in the NSLP goes uneaten, amounting to \$600 million dollars annually (Buzby and Guthrie, 2014). However, these numbers are highly outdated, and other studies show vastly higher numbers—demonstrating the need for new, accurate government data on this subject.

A 2003 study in Southern Illinois found 36-48% food waste; in Frankfurt, KY in 2005, 16-29% food waste; and in Montana in 2014, 45% food waste (Marcenelle and Byker, 2014). A study in the Boston School District found that 26.1% of its budget was being spent on wasted food: 18% of entrees, 45% of side dishes, 73% of vegetables, 46% of fruit and 65% of milk was thrown out. If applied nationally, these findings indicate that \$1,238,846,400 of the NSLP's budget is wasted annually on unconsumed foods (Cohen et al., 2013). Thus, although there are no definite numbers on food waste and food costs, studies consistently show that food waste is in fact a large issue.

Whether or not the new regulations have spurred an increase in food waste is under debate. Studies that follow food waste level before and after the HHFKA implementation are very limited, and study findings point in opposite directions. A recent report, released in May of 2015, studied consumption patterns before and

after the implementation of the HHFKA (2012, 2013, and 2014 respectively) at 12 schools in an urban school district. The study found that students responded positively to the new menus, selected more fruits than before, and consumed more of their vegetables and entrees than before (Schwartz et al., 2015). Another study conducted by a team at Harvard found that while food waste is excessive, it did not increase substantially after the new regulations were put in place, and that significantly more students selected and consumed fruits and vegetables post-implementation (Cohen, J.F.W., Richardson, S., Parker, E., Catalano, P.J., and Rimm, E.B., 2014). On the other hand, an anecdotal study by the GAO (as mentioned earlier in this report) found that the HHFKA led to an increase in waste. This could likely be due in part to the regulation that all students must take one fruit and one vegetable, whether they want to or not, in order to meet federal requirements. Whether or not food waste has increased or remained the same after the implementation of the new standards, plate waste is a critical issue to be addressed.

### **LAUSD-Specific Research**

Several research projects have sought to capture students' reactions to school food in the LAUSD. Here I will summarize four: one by the California Food Policy Advocates (CFPA) (2011), one by the Urban & Environmental Policy Institute (UEPI), one by UCLA (2014), and one by the LAUSD Parent Community Student Services Branch.

In 2009, Nicola Edwards and Matthew Sharp of the CFPA conducted a plate waste study to observe lunch services at LAUSD and outline the successes, challenges, and recommendations for the program. Between November 2008 and January 2009, lunchrooms in 9 schools in the LAUSD were observed. Observers focused on how much of what was being thrown out, and took notes on environmental factors and lunchtime behaviors. Researchers found that most students were eating most of their food. However, they noticed that meal service times were not long enough, and many children had less than twenty minutes to eat their food. They also found that very few schools had signage that advertised healthy options, or that posted the daily menu. Students expressed strongly ingrained, negative impressions of school lunches; phrases like “it’s awful,” “it’s like prison or county food,” “it’s gross,” “it’s burnt,” and “it’s frozen” were commonly heard. However, after further questioning, many students opened up and showed interest in the food options.

In the fall of 2011, Megan Bomba and Elizabeth Medrano of the Occidental College UEPI held focus groups with 133 students across 8 middle and high schools in the LAUSD to understand school food experiences throughout the district and to provide information at the beginning of the menu change. Through their discussions, or “food talks,” they found that students share a deep mistrust for school food and are put off by unattractive packaging and foods that look mass-produced or hastily prepared. Feedback indicated that consumption patterns are strongly correlated with visual attractiveness of the items; students expressed



strong interest in foods made from scratch<sup>2</sup> using fresh ingredients. The researchers hypothesize that issues over the new school menus stem less from the actual menu items, and more from confusion and skepticism. Students demonstrated that they mistrust unknown foods, and they were not familiar with the new items, with 59% of students stating they didn't know what was for lunch until they reached the front of the line.

In 2014, researchers from UCLA audited plate waste levels at four middle schools in the LAUSD. By analyzing the items left on the student's plates after lunch, they found that large amounts of food were being wasted. Among these schools, 31.5% of students did not select fruit, and 39% did not select a vegetable. Of those who did select fruits, 31.4% did not eat any of it, and 22.6% of those who selected vegetables did not eat any of it. Furthermore, 10.2% of fruit and 28.7% of vegetables were left over after service.

Surveys conducted by the Parent Community Student Services Branch (PCSSB) of LAUSD in 2013 surveyed 10 high schools to get student feedback about their eating patterns and interest in healthy foods. They found that nearly half of the students consumed vegetables zero days a week, about half consumed fruit one to two days a week, 3% consumed vegetables 4 days a week, and 5% consumed vegetables 5 days a week. However, 61% of the students reported that they believed eating healthy and nutritious foods is very important. Most students (64%) were not aware of the nutritional benefits of school meals.

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<sup>2</sup> Scratch cooking refers to food that is prepared by hand using fresh ingredients and avoids pre-cooked and pre-packaged foods that may contain unhealthy preservatives or additives.

Existing research on the LAUSD NSLP provides good information on students' consumption of and interest in healthy foods, but demonstrates the need for further research. Qualitative data from focus groups is limited, and no published research dives into the deeper reasons behind students' aversion towards the menu items. While Bomba and Medrano's research provided important qualitative feedback from the students, it focused mainly on the correlation between visual appeal and interest in the foods, and did not look at the students reactions to the LAUSD school food specifically, but to prepared foods in general. The PCSSB's research verifies that students are not eating sufficient amounts of fruits and vegetables, but does not answer the question why. My research looks deeply at an array of issues affecting selection and consumption patterns among students in the LAUSD to fill a gap in the research.

### **Importance of the Research**

While the LAUSD has made huge strides in improving the nutritional quality of the meals it serves, these improvements will be limited if the foods are not being consumed as intended. With concerns of substantial food waste occurring throughout the district, it is pertinent to discover the reasons for these issues and to identify strategies for greater consumption of healthy menu options. Greater consumption will lead to less food waste, lower food costs, and more satisfied students who receive nutritional benefits, are healthier, and pay better attention in school. Studies have shown that students who eat healthier have higher test scores, more positive learning behaviors, better school attendance, and increased cognitive

performance. On the other hand, malnourished teens are more likely to get suspended from school, have a harder time interacting with their peers, and are more likely to see their grades suffer (Stone, Brown, Comnes and Koulias, 2010). The district has poured time and money into planning and implementing healthier menus for their students, and it is important that their efforts achieve their maximum potential.

The importance of this research extends beyond the LAUSD. As the second largest school district in the nation, the LAUSD is a leader and can have great influence across the country. The controversy surrounding the HHFKA, the SNA's pressure to weaken the standards, and the financial losses that schools are reporting are causing Congress to rethink the act. As Congress considers cutting back the standards and allowing certain schools to be waived from following the requirements, support for the HHFKA is timely and vital. My research will address students' opinions of school lunch in order to recommend improvements to increase consumption and decrease food waste.

### Methodology

To answer my research question, I gathered qualitative feedback on LAUSD lunches directly from the students. I conducted five focus groups lasting ~30 minutes with students across three different high schools. The schools are all large (roughly 2,000 students each) and located in three geographically distinct areas in the district. In sync with the rest of the LAUSD, all three had a majority Latino population. I spoke with 41 students in total. During these focus groups, I asked

questions regarding how the students perceive the new school menus, and what changes they would like to see made. Due to Human Subjects constraints, the names of the students and schools will remain anonymous.

I supplemented my focus groups with two sessions of participant observation, per school, in the cafeterias at lunchtime. By wandering the lunchroom, conversing with the nutrition directors and cafeteria staff, and hovering near the lunch line, I gleaned information about each school's lunch process and noticed how the students were interacting with the food. I used a Cafeteria Checklist to guide my research and take note of factors (environmental or otherwise) that may have contributed to consumption patterns.

## Findings

### **The Stories**

Here are the stories of the three cafeterias I visited, as they were told to me by students, school personnel, and cafeteria workers. The experiences at these three schools serve to paint a picture of some of the common themes, challenges, and successes that I found noteworthy.

#### **High School 1**

HS1 is a large high school in South LA. It has 1,900 students, and its student population is 6% Black and 94% Latino. Enough students at the school qualify for free and reduced priced meals that the entire student body is eligible to receive free lunch; however, only about 550 students eat the cafeteria food daily. Like other

schools in the LAUSD, they previously served chicken wings, nachos, and pizza. With the changes in nutritional guidelines, the school boasts much healthier fare. The children I spoke to said they missed the old school food, although the Food Service Director (FSM) believes the new food is helping the students try and appreciate healthy foods. About five months ago the cafeteria got a makeover. The cafeteria looks shiny and new, with healthy food signage, CafeLA advertisements, pictures of fresh fruits and vegetables. They also just got a salad bar, and according to the kids, the staff, and the fact that the salad bar regularly runs out, it's a hit. The FSM says that participation has been going up since the addition of the salad bar; the school's cooking teacher also noted that the lines have been longer. Besides being content with the salad bar, the kids I spoke with expressed a very strong dislike of school food.

## **High School 2**

HS2 is located in the northern-most boundary of the district. It has about 2,500 students: 11% Asian, 5% Filipino, 8% Black, 56% Latino, and 20% white. When the FSM first started at HS2 11 years ago, cafeteria workers were buying Pizza Hut, bringing it back to school, and serving it by the slice. The vending machines sold soda pop and kids were served cake, cookies, and slushies. Eventually the school evolved from their Pizza Hut days and began making almost all of their food from scratch (meaning they would prepare it in-house from fresh ingredients). However, when they started serving pre-prepared foods instead (around 2010), participation fell from 1,460 (including satellite schools they

provided food for) to 400 students a day. For two years, they only served pre-packaged foods, and the kids stayed away: “pre-made food ruined it for everybody. For a while they didn’t even come into the cafeteria,” the FSM told me. Now, they’re transitioning back to scratch, and prepare meals in-house about 4x/week. Sales are going back up, slowly but surely. The manager tells me the kids can absolutely tell when the food is fresh or not, and they react to that. However the students I talked to had no idea it was fresh—they thought it was pre-frozen. Either way, sales for healthy foods are going up. When they first started serving salads, they prepared about 50. Then they met increasing demand with 100. Now, they’re up to 300 salads daily, and they have a line just for salads. Kids agree, they love the salads.

### **High School 3**

HS3 is located on the West Side. It has a student population of 1,947 students: 20% Asian, 17% Black, 52% Hispanic and 8% White. Like HS2, they used to serve fast foods like Dominoes and Pizza Hut. The kids loved it. Before the menu changes, at least 900-1,000 students consumed food at the cafeteria daily; and on the best days—the days they sold Dominoes—nearly the whole school came to the cafeteria. After the menu changes, participation rates plummeted to around 450 kids daily, and numbers haven’t recovered since: “It’s like that in all the schools” says the FSM, referring to the decline in participation. He tells me the kids were angry about the changes. “It’s like you’re taking everything away that they like. And that bothered a lot of these kids,” says the FSM. He believes there’s nothing the

LAUSD can do to make these kids eat healthy foods. There are only a few foods that will get the kids back in the cafeteria: “They want the crap back.”

## Results

The following findings range from general themes I gathered at all sites, to experiences at particular schools. As every school in the district is unique, it is difficult to generalize for all schools. However, I assume that any conclusions I have reached at a particular school are not singular in their occurrence, but could be taking place at other schools as well. My findings are divided into three categories: “on the plate” factors (taste, freshness and variety), “off the plate” factors (competitive foods, lunch logistics, cafeteria environment, and food waste), and “talk of the school” findings (education, and communication and stigma/distrust).

### **On the Plate**

#### **Taste**

Kids described the food as “awful” “gross” and “nasty.” When prompted to explain their hesitation, kids said the food comes out frozen, burnt, dry, soggy, greasy, flavorless, ashy, weird, etc. For example, one student at HS3 described the chicken as “dry, a little weird, hard,” and another student described the vegetables as “so dry and nasty [...] it’s ashy.” The most common complaints were that the food is dry and not fresh. Dryness and freshness may be both linked to the process of reheating pre-prepared food—although it could not be determined whether students

at schools with off-site prep and on-site prep thought food was either more or less dry.

Schools lacking the cafeteria capacity to prepare food on-site receive daily shipments of pre-prepared food from the Newman Nutrition Center downtown (the LAUSD's central kitchen). At the school, the food is simply received and re-heated. The process of re-heating cooked food may cause dryness to occur (for example, as kids at HS1 believe the case to be with the enchiladas). However, it was not just the re-heated foods that were described as dry. There were many other "dry" foods, including the whole wheat bread used for sandwiches at HS2, and some salad bar items. Many students described the food as flavorless. Strict nutritional standards prevent FSMs from adding flavor to the food via salt and fat (butter, olive oil, etc.). Students said they wanted more flavorful fare (as one student put it: "they should try to make healthy food that actually tastes good"), and believed that more herbs and spices should be used to improve the flavor of certain items.

### **Freshness**

I found students to be very wary of whether their food was "fresh" or not—fresh meaning it's of high quality, not pre-packaged or re-heated, and that it's been prepared recently. Food from the LAUSD was perceived as not being fresh.

Students overwhelmingly expressed that they either won't try, or dislike, food that does not look fresh: this includes any pre-prepared or packaged foods. The students at HS2 said that whether or not they like the food "really depends on



whether it tastes fresh or not.” One student at HS2 put it directly when he said: “They sell grapes... but they’re packaged. I don’t trust that.” A student at HS3 noted that food “sealed with that plastic [...] looked really unappealing.” Another student said “if [the food] was served fresh it would taste so much better than if it were packaged.” Thus, even if the food is tasty and nutritious, any packaging or uncertainty over its origin makes it unappealing to kids. Some kids even thought the food was packaged, when in fact it was prepared on site. At HS2, the food is prepared on site, from scratch, about 4x a week. Ranch dressing, coleslaw for the pupusas, and salads are some of the freshly prepared items they serve. However, when I asked the kids at HS2 whether they thought the food was prepared from scratch, responses included: “nope,” “doesn’t look like it,” “I don’t know,” and “they’re all frozen.” They were all surprised to find out that most of the food is prepared on site.

Overwhelmingly, and somewhat to my surprise, the students almost unanimously liked salads. This finding complements the research done by UCLA in 2000 that measured the success of salad bars in schools, and found that overwhelmingly, students will choose fresh, tasty, healthy food when they have the option to do so (Gottlieb, 2000). HS1 has a salad bar, where students can make their own, and HS2 and HS3 served prepared salads. When I asked the students at HS2 what they liked, they all immediately raved about the salads; one student said salad is “the only actually good thing.” The manager also backs up the popularity of the salads, noting that he even has football players coming back at the end of lunch, scavenging for leftover salads. At HS3, I heard the same thing: when I asked them

what they liked to eat, I heard chimes of “the salads!” in response. Later, when I asked who “in general” liked the school food, only one girl raised her hand, and her friend said: “that’s because you eat the salads!” The same popularity of the salad bar existed at HS1 as well. The students had bad things to say about just about every food served in the cafeteria... but they all liked the salads. The FSM has noticed as well. She put a salad bar in just last semester, and says it’s a huge hit among the students.

Several reasons contribute to the popularity of the salad bar, but one of the main ones is that it looks fresh. Students at HS2 believed that the salads were made of fresh ingredients... “the veggies are fresh [...] that’s why we like them” one student said. Because they get the opportunity to make their *own* salad, they know it’s fresh... they see it get prepared. The salad bar eliminates a lot of the “unknown-origin” doubts that students have. Furthermore, the salad bar concept allows each student to individualize their meal—kids are very picky, and have varied preferences. Allowing students to customize their own salad allows for a level of individualization that is very appealing to the students. Also, for the students who are health-conscious, salads are an obvious win. Overall students did not seem to be very concerned over their health, except for at HS3, where every student claimed to care about their health. One student at HS3 said that everyone wants to eat healthy, and “that’s why everyone wants to run for the salad.”

While the LAUSD is working to offer as much fresh food and food prepared from scratch as it can, there are many barriers that stand in the way, including: space, equipment, facilities, cost, time, and staffing. To begin, the lack of adequate

on-site kitchens makes it difficult for FSMs to prepare fresh food on-site. Many of the school kitchens were never meant to serve the number of students they are now required to, and many kitchens are not full-service. In the late 1970s, the LAUSD began preparing meals in a central processing center, The Newman Nutritional Center. This practice intended to save the district money by eliminating the need to furnish individual school kitchens and hire full-time cafeteria staff. Part-time cafeteria staff could simply receive pre-packaged food and re-heat it. Today, there are 549 fully-functional kitchens in the LAUSD that prepare food on site; there are 224 sites that receive packaged meals from the Newman Nutritional Center and re-heat it in an oven before serving (Sharpe, 2015).

Constructing and/or remodeling kitchens is not cheap: it's estimated that the cost of construction is ~\$300 per square foot to remodel a pre-existing kitchen. For kitchens built from the ground up, it costs ~\$425 per square foot. The base size for a kitchen that serves 200-1,000 students is at least 1,000 square feet, and increases by one square foot per additional meal served. Therefore, remodeling a kitchen for a 2,000-person school would cost around \$600,000. However, there may also be additional hidden costs, such as building permits and sewer hookups that could increase costs by 20-40%. Furthermore, cooking with fresh ingredients requires double the amount of space; 50% of the space is required for preparation, and 50% for storage. Another factor to consider is that fresh versus processed foods will require about five times as many truck deliveries, so schools must anticipate greater truck traffic for procurement (Stone et al., p. 37, 2010).

Because kitchen skills and nutrition education levels may vary significantly among staff members, professional development training would be necessary to get the staff up to speed and ready to excel at scratch cooking. Food Service finance specialist J.P. Dozier reports that 80% or more of kitchen staff will be able to make the transition to a more demanding preparation (Rethinking School Lunch, p. 49, 2010). Professional development will help the kitchen staff to increase efficiency, allow the staff to recognize their talents and utilize their creativity, will empower the staff to be more proud of their cooking, and will teach the staff to encourage healthier eating behaviors. Learning to cook together can also improve relationships among cafeteria staff, and thus make the cafeteria a happier, more welcoming, and community-oriented space (Stone et al., 2010).

A few other barriers the LAUSD faces is time and staffing. There is a lot more time involved in making food from scratch, and for large schools (especially high schools), it is a serious time commitment to prepare food for 1,000+ students. Furthermore, to counteract that additional time, the LAUSD would have to hire more cafeteria staff, which is a strain on finances. There are also financial constraints to buying fresh foods. While purchasing fresh fruits and vegetables may pay off in the long run due to increased student participation, the upfront cost of fresh foods is higher than prepared foods.

### **Variety**

Approximately 1 in 4 students said “more variety” as their main recommendation to the LAUSD FSM—many more also wanted more variety but

didn't choose it as their first recommendation. As one FSM told me, "an apple a day keeps the doctor away... but an apple a day gets you bored." He tells me they used to have fifteen options; now they have two. Another manager remembers the times when they had five to six different entrées, now they're down to one or two. The students agree: lack of variety was a common concern. At HS2, they said burgers and salads are served (among other options) every single day for lunch. One student said: "I'm tired of the same food being repeated, some more often than others. In the end you're just stuck getting the same thing." At HS1, it was daily burgers and potato wedges they were fed up with, though their FSM told me she serves burgers and wedges because they are in high daily demand. According to the kids, they like the burgers, just not every day. Students at HS3 also expressed frustration over the lack of variety, especially relating to drink options. At their school, milk is the only drink served, and it gets repetitive. Especially for students who have lactose intolerances (as some said they did), it's disappointing to have milk as the only option. Milk is a USDA requirement, so it must be present—but juice, they say, would be a welcome addition. At all schools, the students said they wished water were readily available; when I asked them about the drinking fountains (which they all had in or near the cafeteria), they said that the water tasted bad.

Every year, an LAUSD menu committee develops a new menu schedule that lasts through the school year. All items must be taste tested and approved by students before they are included (Blueprint for Wellness, 2014) However, the degree to which new menu items are incorporated is restricted for a variety of

reasons. The continual improvement of the menu requires extensive taste testing, student feedback, pilot programs, student buy-in and cafeteria staff trainings which require a substantial amounts of labor and capital. Keeping menus relatively consistent is easier for planning and logistics, and more cost-effective (in the short run, at least). The LAUSD also cites food costs as a barrier to offering more variety. For example, the LAUSD would like to offer a greater variety of fresh fruits and vegetables. The LAUSD regularly offers apples, bananas and oranges, but if they wanted to offer strawberries, for example, the cost is \$1.27 per half cup serving... a cost that is far more than the budget allows for.

The LAUSD is also limited by federal meal regulations: there are only two fruits (apples and pears) that meet the 1 cup of fruit requirement for lunch. Students are much more likely to eat one fruit instead of two, so these regulations limit their options. Furthermore, since menus are the same across all sites, food that is prepared by prep sites must also be able to be prepared at the Newman Nutritional Center (NNC). Due to manufacturing constraints, not all meals that are made at prep sites can be made in the NNC, and vice versa (Sharpe, 2015) Although difficult to achieve, increasing variety should be a top priority for the Food Services Division. Increased variety has been shown to increase consumption: in one example, a recent study showed that student selection of fruit increased by 9% for each additional variety of fruit a cafeteria offered (Schwartz et al., 2015). This suggests that fruit selection could increase with more variety offered.

## Off the Plate

### **Competitive Foods**

In each of the schools, I noted the sale of competitive foods (foods that are sold in competition to the NSLP lunch, like food from vending machines or the student stores) on campus. Competitive foods are a hot issue. For one, they essentially compete with school food, drawing money away from the cafeteria. On the other hand, they are a major source of funds for campus clubs, and groups like the student government. In most high schools, the student government runs a campus store with snack food, school paraphernalia, etc., and uses the profits to fund their activities.

In 2014, the Smart Snacks in Schools Initiative was passed, requiring all competitive foods to comply with federal nutrition guidelines. Students have expressed concern that the Smart Snacks Initiative is lowering their profits, thereby giving them less funds to work with. However, I found that in each school, the sale of competitive foods did not meet Smart Snack Initiative standards. At HS1, students were selling baked goods on the quad during lunch, at HS2, students were selling brownies during lunch, and at HS3, the student store was selling ice cream bars. None of these practices are in line with the Smart Snacks Initiative. When I asked students in the school leadership classes about this apparent discrepancy, nobody seemed too concerned. Either they were unsure about the new rules, taking their time to transition to healthier fare, or simply chose not to follow the standards (because doing so would reduce profits to the groups on campus who receive their funding from such sales—student government, for example).

However, besides the aforementioned practices, competitive foods are significantly healthier than they used to be: most snacks are low-calorie, and the chips (Cheetos included) are baked.

All three schools had nearby off-campus food sources. HS1 had a convenience store with chips, candy, and soda right across the street. Students from HS2 reported that the Burger King, McDonald's, and Carl's Junior were favorite spots for kids to visit after school. One student said that the healthy menu changes were so unpopular that they were pushing students to skip eating at lunch and head for the fast food right after school. HS3 had an "open campus" policy that allowed students to leave campus during lunch. This freedom gives students more incentive to opt out of school lunch and instead access off-campus dining options (which are typically less healthy than the meals the NSLP provides).

### **Lunch Logistics and Cafeteria Environment**

Students' experiences with lunch lines and their opinions of the length of the lunch period were common themes. In HS1 and HS2 they believed lunch was too short. HS2 had the shortest lunch period (30 minutes); lines are long, chaotic, and kids further back don't know whether or not they'll run out before they get to the front of the line. HS1 had the longest lunch period—45 minutes. Still, kids complained that the line "takes forever," and that they're running out of food because there are so many people in line. The students at HS3 believed they had enough time for lunch (35 minutes) because they understood that if they got more time to eat, they would probably get out of class later. Students at HS3 also noted



chaos in the lunch line. They said that nobody was managing the line, and that the “line” formed more of a “clump” of people trying to get into the door of the cafeteria, with people pushing and shoving. These schools each have a student body of around 2,000 students. Although less than half of the student body gets lunch daily at school, lines are, understandably, very long and hectic. LAUSD recommends that the last child in the lunch line should have at least 20 minutes to eat; unfortunately, this is not what I found, and not what most students reported. By timing the lunch line, I found that the last students in line had 10-15 minutes to eat.

Cafeteria experiences varied by school. I was particularly impressed by the layout and decoration of HS1, which it had just been remodeled. There were signs hanging around the eatery with appealing pictures of bananas and blueberries to advertise the healthy menu options. The apples and milks were both organized in attractive displays, and there were fruit and carrot packs right by the check-out (a well-known location for impulse buys). Furthermore, the line was well managed and relatively tranquil. HS2 and HS3 were a little less modern, though they still impressed me with their healthy food signage. Both cafeterias were more hectic than HS1, with students bumping into each other in line, buzzing around the food like bees, and leaving trays on tables. While each cafeteria differed in its “feel” and “experience,” I got the impression that students care much more about what’s on their plate than what’s around it, so the cafeteria environment is more of a bonus than a game-changer.

## Food Waste

I was relatively surprised to find how much the students notice and are concerned about food waste. I conducted no formal audit of food waste. However, by scanning the lunchroom after lunch—looking at trays left on the tables and in the trash bins—I would estimate that 30-40% of food on the students' trays got thrown away. This is an exorbitant amount of food, and the students noticed it as a major problem. They say that people get the food because they have to take at least three items, even if they don't want the three items. Then, if they try the food and they don't like it, they will just throw it away. Students (particularly the athletes) complained that portions were getting smaller, and that they want more food. Also, they complained that if you were last in line, or got to lunch late, the "good stuff" (at HS3, this would be the salads) would run out. This contradiction between either having too much food, or not enough demonstrates the differences in student's consumption levels, and thus the difficulties FSMs may face in trying to minimize waste while ensuring that food won't run out.

Of the three schools, only HS2 had a donation system in place. They have a relationship worked out with a local receiving agency, where several times a week the agency picks up unused raw and prepared food, then distributes it to those in need through a local church. The FSM estimates that there is only about 5-7% food waste in his cafeteria. Neither HS1 nor HS3 have a donation system in place. The manager at HS1 expressed hesitation to donate unused meals due to fear that they would be held responsible if any food went bad before reaching a recipient on the other end. However, neither the school nor the LAUSD would be held responsible

for this, as the ability for LAUSD schools to donate unused food is made possible by the Good Samaritan Act, which legally protects “good samaritans” who donate food to those in need. The hesitation that the FSM felt in setting up a donation system shows that there could be more education for managers on the donation policy.

At HS2, they are not currently donating, but they have in the past, and they are now looking to form a partnership with a new receiving agency. According to the FSM, all the directors know about the donation program and discuss it among themselves. However, he reports that most managers do not set up a donation program because it’s too complicated to coordinate. The logistics make it burdensome for the cafeteria, since someone has to package and prepare the food to be picked up, it has to be stored at a specific temperature, and then someone has to be present when the receiving agency arrives to collect it. Overall, it seems that coordinating the program is an arduous additional step that most cafeterias will avoid, because they already have enough on their plates.

### Talk of the School

#### **Education**

One of the main reasons why students aren’t fully consuming and enjoying the healthier meals is because they do not particularly care for being healthy. Of the five focus groups I held, there was one focus group where students unanimously said they cared about being healthy. For the other four, students unanimously said they didn’t care about being healthy. In general, it is difficult for kids to understand the importance of eating healthy foods, because they don’t fully understand, or

realize, the connection between food and health. Right now they don't seem too worried about their health; the attitude is that they don't need to worry about healthy eating now, because they're still young, but they know that eventually they will probably have to.

California Law requires all students to learn about nutrition in K-12 health classes. However, a study by the U.S. Department of Education found that the average elementary school teacher taught only 13 hours of nutrition education per year—far less than the 50 hours of nutrition education recommended in order to bring about behavioral change (Stone et al., p. 22, 2010). The LAUSD has a few nutrition education programs in place: one is the Nutrition Education Obesity Prevention (NEOP) program, operated by the Network for a Healthy California, which aims to increase fruit and vegetable consumption and reduce obesity among low-income populations through in-classroom tastings and samplings, school health fairs, student-led nutrition groups and more. However, the budget for this program was recently cut, and NEOP went from operating at 250 schools to operating at 41 (What's New, 2014). This 2014-2015 school year, LAUSD began a Fresh Fruit and Vegetable Program, which serves kids healthy snacks and nutrition education once a week. The FFVP operates at 12 schools. The LASUD has also published a Blueprint for Wellness, which will move forward to become a full wellness plan for the district. The Blueprint outlines the district's health and wellness efforts—including its efforts to reduce competitive food sales, increase meal access to students, and surpass national nutrition standards—and suggests ways in which students can live healthier lifestyles.

Nutrition education in the LAUSD is especially important due to the number of children who come from low-income households. In the LAUSD, 72% of students come from low-income households and may not have access to healthy foods: stores located in low-income neighborhoods in Los Angeles are less likely to stock healthy food than in higher-income neighborhoods (Medrano and Reyes, p. 8, 2011; Inagami et al., 2006). In Los Angeles, areas of low-poverty have 2.3 times more supermarkets per household than in areas of high-poverty, and studies report that increased access to grocery stores is positively correlated with healthier diets (Shaffer, 2002; Treuhaft and Karpyn, 2010). Thus, for many LAUSD students, access to healthy foods is limited, and students may not be accustomed to eating healthy food at home. Instead, many have developed palates for processed, fatty foods (from eating food from convenience stores and fast food restaurants, which are prevalent in low-income areas of Los Angeles), instead of developing palates for fresh, healthy foods.

Not having grown up with nutritious fare around them, these kids may not have learned healthy eating habits at home. The large number of students I saw walking around school eating Doritos and candy, and who showed no desire to eat a healthy diet, endorses my belief that students have not been adequately educated—at home or in class—about healthy lifestyles. Although all three schools I visited had some sort of nutrition education—whether it was a school garden, food science class, or cooking class—from talking with the students, it appears that these classes are not sufficient, and that there is a need for more nutrition education opportunities.

## Communication

It's not hard to imagine that at high schools with 2,000+ kids, information can be difficult to disperse, and misunderstandings can arise. For this reason, there is a lack of cohesion and flow of communication between the cafeteria and the student body. For example, the students at HS1 all qualify for free lunches. Each student may receive a free lunch by entering their PIN number on a device when they get to the front of the line. When I asked the kids why they still didn't want to get school lunch, even if it's 100% free to them, they rejected the "free" notion. Some of them didn't think lunch was free; others said they needed to swipe a card, which they didn't have. Others said if you didn't remember your PIN, you couldn't get lunch. While the latter may be true, the uncertainty surrounding the actual fees and processes surrounding meal purchases was clear. It should be noted that this uncertainty was only noted among 9<sup>th</sup> graders (first-years), who are particularly new to the school's processes. Confusion surrounding checkout procedures may be a deterring factor for some students.

The LAUSD NSLP has a lot to be proud of—but I have found that students are not aware of many of the school food achievements. For example, the LAUSD now procures 75% of its produce from sources within 200 miles of downtown Los Angeles (Binkle, 2014). This is a huge feat, and since the students I spoke with all agreed that they had a strong desire to know where their food comes from, I'm sure that their enjoyment with the food would increase if they were aware of the LAUSD's local procurement policies. At HS2, the students also didn't know that most of their food is prepared from scratch. They believed it got shipped in frozen.

This lack of communication prevents the students from fully appreciating fresh meals when they are offered.

The LAUSD currently markets their food options to improve student participation via the “I’m In” campaign. The campaign brings awareness to the menus through the advertisements and signage, newspaper coverage, demonstrations, presentations, and meetings. However, Bomba and Medrano’s 2012 study found that merely 19% of students had seen the logo, and only a single of those students could identify that it related to school food. While promotion and marketing efforts have been made, it appears they are not having their desired result.

Lastly, there is a lack of communication surrounding the menu schedule. Menus are available online on the CafeLA website, students and parents can opt in to receive weekly menu announcements via email, and menus are posted in small print (on printer paper) on the doors of the cafeteria. However, only about five students in total reported that they were made aware of the menu beforehand, either because they’d seen it posted in the cafeteria, or because they are familiar with the CafeLA website.

For many reasons, students would like to know what the menu is beforehand. To start, many students complained that they sometimes couldn’t identify the food. Students at HS2 and HS3 said they sometimes couldn’t identify the meat; they called it “mystery meat.” If kids don’t know what they are being served, they will certainly be hesitant to eat it. For example, at HS3 a girl spoke in disgust about the “fried carrots” they were serving to make up for potato wedges. Other students

disrupted her train of thought, shouting out that the carrots were in fact yams... “no, it’s a sweet potato!” shouted another. One student summarized the moral of the story, saying, “Let’s have food we can distinguish... and not think it’s carrots.” Students would also like to know what the menu is ahead of time so they can anticipate whether to bring food from home or bring lunch money to school.

### **Stigma/Distrust**

Tall tales and “horror stories” of school lunch still exist at high schools, whether recent or passed down from class to class. One girl in HS2 told me she found a piece of plastic in her salad once. Kids at HS1 claimed they’d gotten sick from the food before. At HS3, one girl said, “you always find weird things... like a ball of slime or a wrapper or something.” I can’t say whether these stories are true or not, but it does point to the pervasive stigma that surrounds school lunch. School lunches have been the butt of jokes for as long as anyone can remember, and not much has changed. During my focus groups, my opening question to get students talking is “do you like the food that you eat at school?” (with the exception of one group of kids) an immediate chorus of: “no” “no” “no” and “it tastes like cardboard” rings out through the room. It is *the* thing to say. Later, people will admit that there are some foods they like; but at least in the beginning, it seems as though all students have to immediately prove that they’re against the school food. It’s something they can all bond over. I believe that the kids’ perception of school food is heavily influenced by their peers, and their desire to agree with the prevailing viewpoint makes them want to dislike the food.



The connection between school food stigma and decreased participation has long been acknowledged, and various surveys have reported that the stigmatization of the NSLP has led to a decrease in participation (Mirtcheva and Powell, 2009). A 1994 report by the USDA to Congress found that perceived stigma is a major factor in the decision for students to participate in the NSLP, and that school stigma is stronger among high school students than their younger peers. The study found that an association with free or reduced priced meals was seen as embarrassing and uncool: “I don’t like anyone to know that I have free lunch. It’s something you don’t want to reflect on your image” and “only poor people eat inside the cafeteria because they can’t afford to eat outside. Kids with money don’t eat the school lunch,” were what some students in the study said. Furthermore, 20% of parents reported that perceived stigma was their main deterrent from participating (Glantz, et al., 1994). A 1995 study by Marples and Spillman found that 18.5% of high school students reported they would eat school lunch more frequently if their friends did as well. My own experience at the schools aligns with this research. The FSM at HS3 said that kids are hesitant to be associated with the school food because, historically, the NSLP has been consumed primarily by students who qualify for low and reduced priced lunches, and so it is considered “welfare food.” This aversion that the kids have to “welfare food” has been the case ever since he started working at the school 20 years ago.

In addition to the association between school food and “welfare food,” I believe his universal distrust of the school food stems from the lack of communication and lack of trust between the student body and the cafeteria. Kids

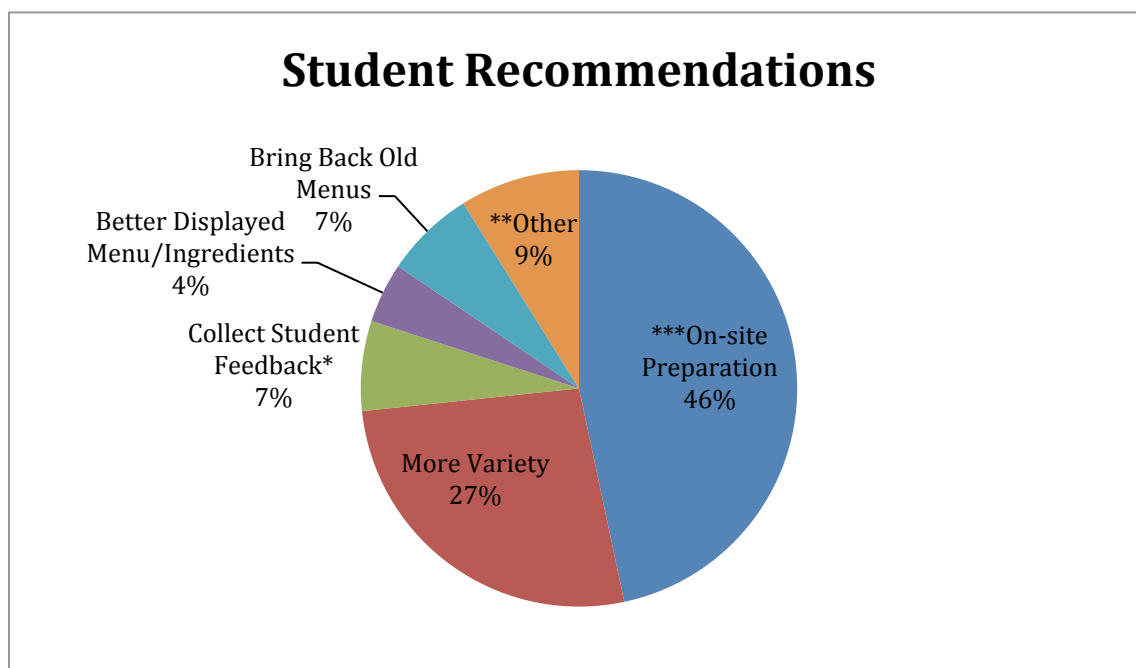
claim to get “mystery meat” and “slime” because they don’t know what it actually is. They say the food is frozen and reheated, even when it’s made from scratch, because they don’t know that. They say the fruit is dry and gross, all the while they don’t know it’s procured from local farms. The basic point I gleaned is that the kids don’t know *who* makes their food (students, with the exception of some school leaders, do not appear to have any relationship with the cafeteria workers), *where* their food is made, and *what* their food is made of. Without these critical pieces of information, it is difficult for the students to trust their food and its source.

Throughout my research, I’ve realized (not surprisingly) that there is a strong divide between the student body and the cafeteria. It seems as though the student body resents the cafeteria, instead of being grateful for it as a convenient, inexpensive source of nourishment. Many of the students had the impression that cafeterias weren’t trying very hard, or that they didn’t really care if the students enjoyed the food or not. This, of course, is contrary to reality—but the students may not realize that. The strained relationship between the student body and the cafeteria seems to have grown tenser since the 2011 menu changes. The FSM at HS3 says this is because the LAUSD (and USDA, for that matter) is “taking away everything that they like. And that bothered a lot of these kids.” Some items the kids used to like included the pizza, chicken nuggets, and chalupas, so when the things they liked got taken away, and replaced with foods that had, comparatively, less flavor (or less addictive ingredients, such as fat, salt and sugar) they were legitimately angry about it. Thus, the vocalized animosity the kids express towards

the school cafeteria is how they express their dissatisfaction with the menu changes.

This stigma reminds us that, while the kids had a lot of bad things to say about the food, their perceptions are not necessarily grounded in true experience. For instance, one boy said everything was dry... including the milk. Also, at HS1, the student who spoke the loudest and had the poorest perception of school meals had (according to her) never been inside the cafeteria. These comments gave me reason to discredit some of the other opinions that were being shared—as I'm sure the milk isn't actually dry, and clearly, one would need to visit the cafeteria to have a valid opinion of it. Thus, it is difficult to weed out what the kids *know* with what the kids *assume*, or have heard. These comments highlight the fact that the stigma against school lunch is still in full swing.

### Recommendations



**Figure 1:**

“If you could make one recommendation to the LAUSD to improve lunch at your school, what would it be?”

\*Collect Student Feedback: Includes the answers “have a suggestion box” and “pass out cafeteria surveys to the students.”

\*\*Other: Includes the answers “bigger portions” “less expensive” “lunch line control” and “have a donation system.”

\*\*\* On-site Preparation: Includes the answers “put more time and effort into preparing the food” “make the food fresher” “cook it better” “have it not be frozen” and “make the food from scratch”

**Fresh, From-Scratch Cooking**

The greatest recommendation that I can make is for the LAUSD to transition to on-site meal preparation at as many schools as possible. The vast majority of students indicated that they disliked packaged foods, and that they want more time and effort put into preparing their food, they want it to be fresher, not prepackaged, and better prepared. I believe the only way to achieve all of these things is to revert to on-site preparation at every cafeteria. Kids will be much more enticed to eat the food if it's prepared from scratch on-site (and if they are well-informed of this change). If cafeteria workers are trained to prepare the food on-site, it will taste fresher and be more appealing to the kids; they will eat more of it and waste less. Reverting to on-site preparation will not be an easy feat, but I believe the benefits of fresher food, increased participation, increased satisfaction, and a more engaged and empowered cafeteria staff will be worth the effort.

While it will initially be more expensive to revert to on-site preparation, due to equipment, building, remodeling and training costs, in the long run, fresh prep meals can be financially viable, and even more profitable. According to Mark

Zammit, vice president for Corporate Sustainability Initiatives and Culinary at the Compass Group explains that “the cost of fresh food varies according to location and season, but savings could be as much as 50%. With fresh food, you’re not paying the processor’s labor costs, and you’re saving on shipping and packaging,” (Stone et al., 2010). Additionally, Steve Marshall, president of The Marshall Associates, Inc food service consulting firm says that the payoff between fresh-prep foods and processed foods is that labor and equipment costs may go up with on-site prep, but schools will save money by purchasing less-expensive local ingredients, with lower transportation costs and lower expenditure on packaging (Marshall & Stone, 2015).

Districts can also save money by increasing NSLP participation and improving school attendance. Although fresh, high quality produce can be more expensive, because it is more enticing to the students it can increase participation and be equally or more profitable. Scott Soiseth, the director of Child Nutrition Services at the Turlock Unified School District says that while the district’s transition to fresh, local procurement has cost them about 30% more, “participation and revenue will far outweigh the cost” (Holland, 2014). When five districts in Ventura County worked together to increase the quality of their school meals, the average daily participation doubled (Stone, 2014). Furthermore, the LAUSD was able to improve meal quality by purchasing 75% locally sourced produce, while keeping food costs constant (Binkle, 2014; Center for Ecoliteracy, 2012). By continuing to source fresh, local produce, and incorporating it into

scratch cooking, students will be more satisfied with the food and participation will likely go up.

Having healthier students has been shown to bring more money into the schools, since most schools receive funding based on classroom attendance. A study by The Finance Project found that severely overweight students miss one day of class a month, costing the district between \$9-\$20 per absence. When these statistics were applied to the LAUSD, they found that the district could be losing up to \$15 million annually from the absenteeism of unhealthy overweight students (Action for Healthy Kids, p. 6, 2004).

In addition to having tastier, fresher food, having cafeterias prepare meals in-house will teach students about the importance of scratch cooking. Children should not be taught that food is supposed to come frozen and packaged, and that the microwave is the only appliance that matters in a kitchen. Instead, cafeterias should be leading by example, and showing kids the value of cooking. Jamie Smith, the Santa Cruz City Schools Food Services Director, summarized the importance of scratch cooking when he said (in an interview about his schools transitioning to scratch cooking):

“The cooks have more pride in the food they prepare. They are able to talk to the kids about what they made today and where it came from. There’s just a lot more respect in the lunch line, and the kids are healthier because they are eating simple, whole foods with scratch cooking. It’s the way food was meant to be consumed.”

Although the Santa Cruz City Schools are quite different from the LAUSD schools, in some respect, LAUSD's schools may well see similar benefits.

### **Options and Variety**

I recommend that the LAUSD work to include a greater variety of rotating menu items, and offer more menu options at lunch. Currently, LAUSD menus are the same across all schools (although differentiated by grade level), and rotate between dishes. Burgers, pasta, Chinese chicken salad, sweet taters, chicken salad pita, and the bean and cheese pupusas, for example, rotate through about every two weeks. Students are offered three different entrees each day (usually a salad, sandwich, and hot entrée option). However, kids get tired quickly with the same, rotating, set of meal options, and would like a greater variety of options from day to day and week to week. The LAUSD can do this by continuing to test foods and rotate new items into the menus.

I highly recommend the implementation of menu options that allow for individualization. It's no secret that kids are picky; instead of preparing meals where "one taste fits all," schools should do their best to offer various options so that kids can customize their meals. Studies have shown that when students are allowed to select their entrées, or are given the option to customize their own through salad bar or family-style type options, they waste less and make healthier choices (Stone, 2010). I recommend that each school have a salad bar. Not only were salads the most popular new menu item among kids, but they are also the healthiest option, and best way to get kids to eat and enjoy their vegetables. By

offering a variety of toppings, students make a meal that is more fit to their palate and thus they are more likely to eat. Additionally, salad bars allow students to customize the size of their meal. With some students complaining about food waste, and others complaining that not enough food is offered (primarily athletes), customizable portion sizes would reduce waste by giving kids the power to choose their appropriate amount of food.

### **Communication**

At the schools I visited, I found a strong disconnect between the student body and the cafeteria. The lack of communication between the two sides leads to a lack of trust, and reinforces the negative stigmas attached to school food. Both on a school-wide and district-wide level, every effort should be made to make their cafeterias as transparent as possible in order to build trust and reliance between the cafeteria and the student body.

To start, cafeterias need to advertise their menu schedules much more heavily. Cafeterias have their menus printed on the doors of the cafeterias, but very few students said they knew the menus were posted. Only a few students noted that they received email notifications about the upcoming menus. The students requested that it be printed larger, and displayed more thoroughly through the cafeteria: it could be announced in the morning, when Breakfast in the Classroom is delivered; it could be announced during the daily announcements; it could also be posted inside the classrooms. These are all quick and easy fixes that would help students identify the food, and plan their selections before getting in line—which



would make the line go faster and help them to make more well thought out, less spur-of-the-moment, decisions.

Nutritious information should also be listed visibly. First, this would help students with allergies to better identify which foods to eat, and which to avoid. Furthermore, it would provide the students with the information to make more informed decisions about their health. Looking for nutritional information is an excellent practice that students should be familiar with, inside and outside of school. Since cafeterias are required to follow strict nutritional standards, they should already have access to nutritional information, so it should not be overly difficult to do display this information to the students.

Students want to know that their opinions are being heard and their preferences are being taken into consideration. I believe it would be very beneficial for schools to seek out their students' feedback to prepare foods that better suit students' preferences, and also to demonstrate to the students that the cafeteria is invested in them, and wants to make them happy. There are a number of ways to achieve this. Schools could conduct taste tests during lunch or in the classroom to try out new recipes or get feedback on current dishes. Schools could pass out short surveys for students to complete, or make available a comment box for students to voice their opinions. These options would commence a dialogue that would build satisfaction and trust between the cafeteria and the students.

Students in the leadership class, or other interested students, could start a "cafeteria committee," where they could meet regularly with the FSM to discuss issues that are being brought up by the students, to learn about some of the

challenges and successes that the lunch program is having, and to build relationships between the two sides. I believe that the better the kids know the people who make their food, the more they will trust them, and therefore the more they will trust the food they make. A committee of this sort should also exist on a district-wide level, with students from across the district representing their schools. In the last few years, the district has made efforts to create a Teen Nutrition Team, which would consist of mostly high school students and some middle school students. The idea was that once a month the teens would get together with FSMs and other food service personnel to have taste tests, nutrition lessons and discuss successes and barriers to the LAUSD NSLP. However, due to budget cuts, this program did not get off the ground. Forming committees on a district and/or school level would build a deeper sense of understanding between both sides, and would help eradicate the school food stigma. I believe that a lack of communication and trust between the student body and the cafeteria propels the persistent school food stigma, and that in order to reduce that stigma, there must be transparency and relationship-building efforts on both sides.

The LAUSD has made incredible strides to prepare fresh, local produce for their students—but the kids are generally unaware of these efforts. Whenever possible, the cafeteria should provide students with information on *who* made their food, *what* it's made of, and *where* it's made/procured. If the food is prepared on-site from scratch, they should say so! There are various ways this could be communicated. For example, during the daily announcements it could be announced that cafeteria food was made from scratch that morning, or it could be

indicated on the menu calendars. Another way would be to post flyers in the cafeteria saying “(insert menu item)—made fresh this morning by (insert name of cafeteria worker),” or something of that nature. This way, the menus seem more personal and intentional, which the kids will like. The district should also advertise successes such as the 2014 Good Food Procurement Policy and California Thursdays. Other districts have found success by promoting their notable accomplishments. For example, in California’s Turlock Unified School District, school lunch participation increased by 300% after the district launched a campaign to advertise its fresh produce (Stone, 2014).

### **Food Waste**

Food Waste is a large issue at the schools I visited. Students said that they were throwing out the food because they didn’t think it was good. However, many of the foods they were throwing out were sealed or unused items that could be salvaged and reused instead. Schools could reduce their waste by leaving out donation bins next to the trash bins, where students could drop off uneaten whole or packaged foods—such as apples, bananas, milk and packaged carrots. This salvaged food could be used the following day (which would reduce food costs), or could be donated to local receiving agencies.

Schools should be encouraged to establish donation relationships with receiving agencies. From what I gleaned from the three schools I visited, most schools aren’t participating in the donation program, and this is primarily because it is too much of a hassle to coordinate. However, I do not have a lot of information

on this topic, and I recommend that further research be done to determine why schools aren't donating leftover food, and to make recommendations for how to increase donation participation rates.

## **Education**

While it is true that education starts at the home, the next best option is school. It is the school's responsibility to provide the best possible quality food and nutrition education to students whenever possible. Researcher Delbert Dayton, who was quoted in Gunderson's 1971 NSLP Report, summarized the importance of nutrition education when he said:

"It has long been known that if a food supplement is to be successful in nourishing a malnourished population, it must be acceptable to the people for whom it is intended. Changing food fads and habits even in malnourished populations is extremely difficult. Therefore, nutrition education is of the utmost importance to any nutrition program whether in the United States or in other countries."

Delbert H. Dayton, *Early Malnutrition and Human Development, Children*, November-December 1969.

This statement is as true today as it was 46 years ago, and emphasizes the need for continuous nutrition education in the LAUSD. Nutrition education programs are necessary in order for kids to connect the dots between food, their health, and the environment. Students are more likely to make healthy eating decisions if they understand how their food choices affect their personal health and environmental well-being.

Education in the lunchroom should not be separate from education in the classroom, and the district should work with teachers to find ways to incorporate

nutrition education into the classroom in applicable and interdisciplinary ways. Currently, the district is working to revise its wellness policy—a policy that outlines the district’s health and wellness goals. This wellness policy, along with the new menu changes, could serve as excellent segues to bring nutrition education into the classroom and make nutrition education highly relevant. Board members Steve Zimmer and Monica Garcia resolve in their 2012 Improving Food and Nutrition Policy that the district should “develop a plan to incorporate nutrition education into the curriculum and link what is taught in the classroom with what is being served in the cafeteria.” This way, the students will experience an integrated curriculum that connects the dots between the various facets of their education, making a more lasting impact.

Today, the LAUSD has more school gardens than ever before—up to 450 in one report by LA Times journalist Teresa Watanabe—as the district and other organizations increasingly recognize the importance of garden education (Watanabe, 2011). However, more school gardens are necessary to help connect students with the source of their food. Especially in areas where fresh produce is hard to come by, students should get to see where their food comes from. Steve Zimmer recognized the importance of school gardens in his Expand Sustainable School Yards and Environmental Initiatives and Curriculum resolution: “School gardens are powerful instructional tools for teaching hands-on science, mathematics, social science, language arts, and visual and performing arts and also provide opportunities for family and community involvement in schools.” The district has shown support for the creation of school gardens, and I encourage them

to keep up this support and encourage the expansion of school garden programs whenever possible.

### **Limitations and Recommendations for Further Research**

My study looks into the perceptions of school food at three high schools in the LAUSD. Three schools is a relatively small number compared to the 1,000+ schools in the LAUSD, and therefore my findings are limited. Every school in the LAUSD is unique in some way: some may be experiencing very different reactions to the menu changes, and some may be better able to cope with the transitions than others. Conducting research at more schools would yield a more comprehensive and accurate representation of the status of school food perceptions in the district. Furthermore, my study did not include any elementary or middle schools. For further research, I recommend that focus groups be held with students at elementary and middle schools, so that specific recommendations can be made for students of different age groups, at different levels of schools. I also recommend that research be done to study the difference in perceptions between large and small schools, and schools in low and high-income neighborhoods to see whether such factors influence perceptions.

My findings were limited by the difficulty of obtaining up-to date, accurate information regarding food services in the LAUSD. Facts such as participation rates, procurement statistics, motions, menus, costs, and prices are all changing rapidly in response to all the new policy changes. Some data as recent as 2014 may already be outdated, so trying to stay on top of new information was difficult. Since the

information is rapidly changing, I recommend that research on this topic continue so that it can stay up to date with the most recent developments.

### Conclusion

I have made many recommendations for the LAUSD for how they can improve school food on their part, but more than anything, I think it needs time. Of course, the menu changes aren't popular now. Kids understandably aren't thrilled to make the move from pizza to low-calorie whole-wheat sandwiches. But within the next decade, students entering high school will have been eating healthy food at school all along. Their palates will be more adjusted to healthy flavors, and their bodies will be more inclined to crave nutritious foods. They will not be daydreaming about the chalupas and chicken wings that were once served. During one of the focus groups I mentioned the 2002 Healthy Beverage Resolution, which eliminated soda pop at schools; "They sold soda?!" one girl exclaimed, clearly jealous of her predecessors. While I'm sure there was bitter resistance from the students when sodas were first taken out of the schools, now kids don't even know what they're missing. I believe this is the same thing that is going to happen with the new menus. Junk food for school lunch is now, thankfully, a thing of the past—but it's going to take some time before the kids accept healthy food as its replacement.

No matter what the kids say, I am still unconvinced that school food is nasty. I've eaten multiple meals at every school, and thought they were actually very tasty (chicken pita pockets at HS2 were definitely a winner). It is difficult for me to

understand the children's complaints, because I simply don't see the food as "gross." Everything I've seen and tried has been healthy and tasty. I think the root of the issue has to do with what the kids are eating at home. For the many low-income students in the LAUSD, access to fresh fruits and vegetables is limited. If students are not eating healthy foods outside of class, their palates will not be used to the "bland" flavors of carrots and apples, compared to pizza and burgers. If kids' palates crave hot Cheetos and not carrots, then of course they will be unsatisfied with the healthy fare being served at lunch. So I believe that most of the problems that we are seeing in the cafeteria are rooted in the larger societal and overall food system issues. The kids' aversion to healthy food is, more than anything, a reflection of the troubling state of American food culture today. Although the district does not have say over what the kids eat at home, where they access their food outside of school, and what kinds of food products prevail in their neighborhoods, schools provide an unparalleled opportunity to shape the health habits of our nation's youth.

The LAUSD is a national leader in school food, and it should stay that way. Huge strides have been made in the last decade to improve the quality and healthiness of the school fare, and I am confident that the upcoming decade shows even more promise. LAUSD is at a fork in the road (or, I should say, a spork), but I believe that there is a clear direction forward: reverting back to scratch cooking, procuring more locally sourced foods, and being completely transparent with the students about where the food comes from and how it's prepared. I am confident that in time, the efforts of Michelle Obama and the federal government, the LAUSD



Food Services Division, parent and community advocates, and all others involved in the passing and implementation of the Healthy, Hunger Free Kids Act of 2010, and subsequent menu changes, will prove—dare I say—fruitful.

### **Appendix 1: Student Focus Group Questions**

Who eats breakfast here at school?  
Who eats lunch here at school?  
How often do you eat school lunch?  
Do you like the food you eat at school?  
What do you like and what do you not like?  
Does it taste good? Healthful? Fresh? Fill you up? Include enough variety?  
What do your friends think of the food?  
Do you know what the menu will be ahead of time? If so, how do you find out?  
Do you know what the nutritional content of the food is? How could you find out?  
Would you like to know the nutritional content of the food? (calories, fats, sodium levels)  
How long is the lunch period? Do you have enough time to eat your meal?  
Do you have a salad bar? If so, do you like it?  
Do you want to eat healthy food? Why or why not?  
Are breakfast and lunch important to you? Why or why not?  
Do you eat food besides cafeteria food within the school grounds (vending machine, student store, bring food from home, etc.)?  
Do you go off-campus to get food during the school day? If so, where? How does it compare?  
Since you have been in school, have you noticed any changes in the lunch program?  
What kinds of changes?  
What changes have you liked? What changes have you not liked?  
What are some changes that you would like to see happen to the lunch menus in the future?

These questions will form an unstructured interview that will prompt an open discussion.

## Appendix 2: Participant Observation Cafeteria Checklist

**School:**

**Date:**

School factors	Notes
School garden	
Nutrition education program	

Cafeteria	Notes
Timing of lunch	
Length of lunch	
Student/cafeteria worker interactions	
Line (supervised? length?)	
Lunchroom characteristics (noise, cleanliness)	
Seating capacity	
Lunchroom layout	
Presence of staff/faculty (eating in cafeteria?)	
Open/closed campus	
Donation/compost system	

Food	Notes	68
Menu		
Menu signage		
Posted nutritional information		
Meal prices		
Fruit quality		
Food Display (prominent fruits & veggies? Clearly visible packaging?)		
Self-serve (salad bars, buffets)		
Food prepared on/off site		
Food procurement		
A la carte items		
Availability of competitive foods		
Proximity to commercial food sources		

Student commentary/perceived student reactions:

What's in the trash:

Additional Notes:

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