INTRODUCTION

The United States Department of Agriculture (USDA) National School Lunch Program (NSLP) and School Breakfast Program (SBP) feed millions of students in the United States each year. These programs offer nutritious meals at a minimal cost to children who might otherwise go hungry or undernourished, however participation in the program drops significantly during the high school years.

While the direct, immediate impact of this drop is the lack of access to proper nutrition for students at the point of purchase, it also has the collateral effect of starving the School Food Authorities (SFAs) themselves because they are self-financing. The SFAs are losing an opportunity for important income to build a stronger, more attractive meal program because they are losing potential income from the program itself.

This paper attempts to identify the reasons for low student participation and to propose solutions to increase participation in high school meal programs. A variety of sources were considered including literature, research, surveys of student opinion, and anecdotal evidence from school nutrition professionals. Evidence from these sources was synthesized to identify effective strategies that SFAs can use to increase the success of school meal programs in their district.

BACKGROUND

Adolescent Nutrition Relevance and Trends

Adolescence is a critical stage for adequate nutrition because it is a period of significant growth and development as well as an important time to solidify good dietary habits. However, adolescent diets in the United States frequently fail to meet nutritional requirements and have been shown to be missing key nutrients for growth and good health such as vitamin A, fiber, iron and calcium (Demery-Luce & Motil, 2014).

Additionally, many adolescents are overweight and obese. In 2010-2011, 34.5% of children between the ages of 12 and 19 were overweight or obese. These high rates have stayed relatively steady since 2003/2004 (Ogden, Carroll, Kit, & Flegal, 2014). This is of concern because obese children are at risk for serious physical and psychosocial health problems that negatively affect their quality of life. These problems include pre-diabetes, sleep disorders and lowered self-esteem (CDC, 2014a). Moreover, obese children and adolescents are more likely to become overweight/obese adults. This causes potential for serious health problems later in life as adult obesity leads to significantly increased risk for serious illness such as cardiovascular disease, stroke and diabetes.

A variety of dietary habits such as low fruit and vegetable consumption, fast food intake and sporadic meal patterns likely contribute to the nutritional deficiencies and overweight/obesity seen in adolescents. Eating fruits and vegetables is known to promote a healthy weight and prevent chronic illness such as cardiovascular disease and certain types of cancer. Adolescents who do not consume the recommended amount are missing out on important nutrients for growth and good health such as fiber and essential vitamins and minerals. This increases the likelihood of developing disease later in life. In addition, fruits and vegetables are nutrient dense foods that support a healthy weight (USDA, 2010).
Fruit and vegetable consumption among teens in the United States is very low, when compared to the amounts recommended by the USDA in the Dietary Guidelines for Americans (USDA, 2010). The CDC’s Youth Risk Behavior Surveillance System (YRBSS) monitors and measures health risk behaviors in youth and young adults. According to the 2013 YRBSS survey, 36% of adolescents report eating fruits less than one time daily and 37.7% of adolescents report eating vegetables less than one time daily (CDC, 2013).

Children in the US eat more fast food as they transition to adolescence and young adulthood due to convenience and taste preference. Studies have shown that when adolescents eat fast food their intake of total energy, sugar, fat and saturated fat increase. Fast food consumption is also associated with lower fruit, vegetable, dairy and grain intake (Demory-Luce & Motil, 2014). These unhealthy dietary patterns can lead to increased adiposity and lower nutritional status (Niemeier, Raynor, Lloyd-Richardson, Rogers, & Wing, 2006).

Another unhealthy habit associated with adolescent eating is sporadic meal patterns. Teens tend to skip meals and snack frequently (Demory-Luce & Motil, 2014). In 2013, 13.7% of the high school students who completed the YRBSS had not eaten breakfast on any of the seven days prior to the survey (CDC, 2014b). Skipping breakfast is of concern because research has shown that children who eat breakfast are more likely to be a healthy weight than those who do not (FRAC, 2014). Additionally, those children who eat breakfast regularly are more likely to have overall better diet quality and consume less total fat (Niemeier et al., 2006). Children who eat breakfast also perform better at school. Eating breakfast has been shown to have a positive effect on standardized test scores, concentration and attendance (FRAC, 2014).

**Role of School Meals in Adolescent Nutrition**

The USDA school nutrition program offers an important opportunity to fill gaps in the diets of American children since so many students are served meals in schools every day. In 2013, 30.7 million children ate school lunch and 13.2 million children ate school breakfast (USDA, 2014). Breakfast and lunch are offered to students at low to no cost to provide the nutrition that many children are missing in their meals outside of the school day.

School meals are now both more nutritious and accessible to students due to The Healthy, Hunger-Free Kids Act of 2010 (HHFKA). The HHFKA is the most recent child nutrition reauthorization bill and it made significant changes to the USDA school nutrition program. Two major goals of the legislation are to improve childhood nutrition by increasing the nutritional quality of foods served in schools and to broaden access to school meals for students from low-income households. In addition, the bill increased the reimbursement rate for school meals for the first time in 30 years so that school nutrition programs now have greater incentive and resources to provide healthy meals to their students (Let’s Move, 2010).

The nutritional changes for school meals reflect the 2010 Dietary Guidelines for Americans that are intended to promote a healthy weight and optimum health. The school meal guidelines set upper limits for total fat, saturated fat, sugar and sodium. Standards are also set for the types and amounts of specific food groups offered. For example, all grains served must be whole-grain rich and each child must take a fruit and/or vegetable to qualify as a reimbursable meal. Additionally, standards were
created for competitive foods, which are foods sold in school that are not part of school meal program. This is the first time that the USDA has been able to regulate all foods served school-wide during the school day (Let’s Move, 2010). Regulation of competitive foods aims to further improve the entire food environment at school.

The standards set by the HHFKA have great potential to increase the nutritional value of student meals to improve children’s overall health and decrease the potential for overweight/obesity. However, high school age children are 28% less likely than elementary school children to participate (Moore, Q., Husley, L., Ponza, 2009). There are several barriers that contribute to this decrease in participation. One challenge is increased competition emanating from outside of the school environment. Not only do teens have the option of bringing lunch from home, but often they are allowed to leave campus at lunch and choose to eat food from a fast-food restaurant or convenience store. Teens also report less satisfaction with school meals than younger children. Specifically, they have a poor perception of the taste and quality of school meals (Brown, Nancy E.; Hutchinson, Joe C.; Gilmore, 1998). In addition, the school cafeteria atmosphere, which may include long lines, crowded tables, and outdated equipment and design also contributes to low participation.

Since the introduction of the HHFKA, there has been a significant amount of negative media surrounding the schools meal program. Students, parents, schools, politicians and food industry representatives have complained about the strictness of the new guidelines. This negatively influences participation in the school meal program.

Increasing high school meal participation is a challenge that all SFAs face. The multitude of factors and stakeholders involved make this a complicated issue to tackle. However, due to the critical role that school meals can play in adolescent nutrition, it is important to identify practical strategies aimed at increasing high school participation in school meals. SFA’s function uniquely as they are responsible for generating their own income yet must follow the USDA school meal regulations as well as the rules of their specific school district. The major changes to the school nutrition program introduced in the HHFKA offer individual SFAs the opportunity to transform their programs to increase the quality and appeal of school meals in their district.

METHODS

A mix-methods approach that included both qualitative and quantitative data collection was utilized to create recommendations for strategies that SFAs can use to increase participation in the school meal program in high schools. The following are the methods that were used:

1. Student satisfaction surveys were administered in two public high school cafeterias in Durham, North Carolina. Jordan High School is located in southwest Durham and has 1774 students with 41.85% free and reduced lunch eligibility. Riverside High School is located in north Durham and has enrollment of 1824 students with 51.53% free and reduced eligibility. Surveys were completed with a convenience sample of 104 students in the two cafeterias during the lunch period. The intent of these surveys was to gather student opinion of the school meal experience to identify the most important areas for improvement.
2. School nutrition directors and administrators were interviewed in districts in North Carolina, Virginia, Maryland and California. SFAs with high participation and/or innovative strategies were chosen for interviews to determine the most effective approaches to increasing participation. The SFAs varied greatly in size, demographics and region which contributed to diversity in responses and solutions.

3. A focus group was held with high school cafeteria managers in Durham, NC to learn about their opinions of potential solutions for their schools. Since the managers run the day to day operations, they offer an important perspective of the practicality of implementing new strategies.

4. A literature review was conducted on strategies and best practices to increase meal participation in high schools. Sources included: peer reviewed journals, reports from school nutrition professional organizations, non-profit research and USDA analyses.

DATA COLLECTION RESULTS

1. Student Surveys

The student surveys contained questions about aspects of school lunch including frequency of consumption, opinion on quality, and reasons for choosing to purchase school lunch. The sample was comprised of a total of 104 students, 50 from Jordan High School and 54 from Riverside High Schools. Below is a summary of the results. Refer to Appendix A for the survey questions and Appendix B for complete results of the survey.

Frequency of school lunch consumption: More than half of students in the sample ate school lunch at least weekly. The largest percentage of students in the sample (35%) ate school lunch 1-3 times per week. Figure 1 shows the breakdown of lunch consumption.

Figure 1
**Meal Quality:** Students were asked to rate the quality of lunches served at their school on a five point scale (1 being worst and 5 being best) for several criteria. All categories received a below satisfactory rating. The categories and ratings are shown in Figure 2.

**Figure 2**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
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<tbody>
<tr>
<td>Variety</td>
<td>2.0</td>
</tr>
<tr>
<td>Number of Choices</td>
<td>2.2</td>
</tr>
<tr>
<td>Taste</td>
<td>2.4</td>
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<tr>
<td>Presentation</td>
<td>2.5</td>
</tr>
<tr>
<td>Temperature</td>
<td>2.8</td>
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<tr>
<td>Price</td>
<td>2.9</td>
</tr>
</tbody>
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**Reasons for choosing school lunch:** Students who ate school lunch frequently (≥ 3 times per week) were asked to choose their reasons for doing so from a list of standard responses or fill in their own response. Students who ate school lunch infrequently (≤ 2 times per week) were asked to share their reasons for not eating school lunches. Figure 3 presents the results of reasons for choosing to eat or not eat school lunch. As shown, convenience and taste were important predictors of whether students chose to purchase lunch.

**Figure 3**

<table>
<thead>
<tr>
<th>Top Reasons for Eating School Lunch</th>
<th>Top Reasons for Not Eating School Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>(among students eating lunch ≥3x/week)</td>
<td>(among students eating lunch ≤2x/week)</td>
</tr>
<tr>
<td>“It’s convenient” (26%)</td>
<td>“I don’t like how it tastes” (24%)</td>
</tr>
<tr>
<td>“Parents tell me to” (15%)</td>
<td>“Not enough choices” (17%)</td>
</tr>
<tr>
<td>“Low cost” (14%)</td>
<td>“Prefer bringing food from home” (14%)</td>
</tr>
</tbody>
</table>

2. **SFA Interviews**

Nine SFA directors or dietitians were interviewed from NC, MD, VA and CA. The interview questions focused on identifying practices that each district used to increase participation in their school meal program. The following are the common themes that arose in the interviews. Refer to Appendix C for a detailed summary of the interview results.

- Taste Testing: Taste testing is the most popular strategy for increasing participation. All nine districts used taste testing to either promote new products, familiarize students
with foods or have students choose new products for the district. The schools chosen for taste tests varied. One director said she would always choose schools which represented the two different major district demographics. Another director said that he depended on enthusiastic cafeteria managers to conduct the taste tests. As an alternative to traditional taste testing, two counties held annual student food shows. At these shows, vendors would come with new products and students would sample and rate them. Student opinion played a major role in whether the district chose to purchase and serve the product.

- Advertising and Branding: Advertising and branding are important for promotion of the school meal program. Four districts used some sort of advertising while two used branding. Flyers, raffles, websites and social media were the most popular advertising methods. Two districts branded their products by naming them and taking photos to put on promotional materials such as flyers and websites.

- Menu Innovation: Six school districts adopted menu innovation strategies which include menu themes and food court concepts: School districts attempt to mimic fast food chains, because that is the type of food students want to eat most. For example, at one school district in MD, the county tried a made-to-order burrito and nacho concept similar to Chipotle. The SFA dietitian said the pilot was so popular that they would expand it to more schools the following year. Similarly, a school district in CA has an outdoor barbeque at every high school and the director said this is their most popular concept.

- Menu Committees: School districts use menu committees to generate feedback from the cafeteria staff. Menu committees are voluntary, so generally enthusiastic managers with new ideas take part in the process. One district had a variety of committees such as menu planning, recipe development and special events. This way each manager could choose a committee of interest.

- To-go Lunches: Three counties offered either reimbursable vending machines or grab-and-go kiosks. These attracted students who wanted to leave campus or avoid the cafeteria. They could still purchase an entire reimbursable meal without having to wait in lines or eat in the cafeteria. This increased participation in a demographic that usually avoids school meals.

3. Focus Group

A focus group was conducted with six cafeteria managers from public high schools in Durham, NC. Common strategies from the SFA interviews were discussed and there was an opportunity for managers to share their opinions on adopting the practices at their schools. Here is a summary of the discussion:

- Taste Tests: Managers thought that taste tests would be helpful in their schools. Handing out samples in the serving line is a realistic solution when additional staff are unavailable for taste tests in the lunch room. One manager shared that the most
successful taste test at her school was when she handed out samples to both parents and students during an open house. One common concern for this strategy was lack of time.

- Advertising: Managers thought that digital signage would be successful with high school students, would help to bring more kids into the cafeteria and make waiting in line more entertaining. The managers also requested signage in different languages for students who were still learning English. They said that this would be especially helpful for the international students who were not familiar with the food items.

- Branding: The managers did not think creating a new brand for the district would be effective. Instead, they thought that it would be best to purchase boxes/stickers from food vendors to put on the food items to make food appear as a commercial brand. However, some were concerned about the extra cost and labor involved in preparing the packaging such as constructing pizza boxes or placing stickers on foil.

- Menu Innovation: Managers reported that Durham students enjoyed the salad bars that were previously in each school and that students ate more vegetables when salad bars were present. However, the school board removed the salad bars due to perceived sanitation concerns. The managers also thought that a special occasion or weekly cafeteria theme would be more successful than daily themed lines, because it would change up the monotony. Another suggestion was to offer fewer entree choices on a daily basis which would lessen boredom by extending the menu rotation cycle.

- Menu committees: The managers did not think this strategy would be helpful to their district. They felt that their input was already being considered at their monthly manager meetings.

4. Literature Review

The literature review revealed several factors that predicted student participation in the NSLP and SBP. An analysis by the USDA demonstrated that school type (elementary, middle, or high) was the single most important factor determining participation in school meals. Participation drops significantly as students get older with the largest decline occurring in high school. The analysis also found that student attitude toward school meals was an important predictor of participation. Student attitude had a significantly higher correlation with school meal participation in high school than in the younger grades (Moore, Q., Husley, L., Ponza, 2009)

A survey of high school students administered by the National Food Service Management Institute (NFSMI) found that the two areas that most greatly affected participation are food quality (appearance, taste, food choices, and overall quality) and food access (serving portions and time period) (NFSMI, n.d.). Other authors have found similar results. A study of high school students throughout the country indicated that variety was the largest predictor of satisfaction with school meals (Meyer, M.K., Conklin, 1998). In addition, a study in Cincinnati, Ohio concluded that variety
and quality were the most important factors predicting high school meal participation in their district (Marple, Carol A. Spillman, 1995).

Several studies analyzed high school student's attitude toward school meals. A study of 11\textsuperscript{th} graders in public schools in Minnesota and Iowa reported that most students were dissatisfied with several parts of school lunch, including: food quality/appearance, menu variety and choices, dining room environment, food service personnel, and service time (Brown, N.E., Hutchinson, J.C., Gilmore, S.A., 1998). Focus groups of 9\textsuperscript{th}-12\textsuperscript{th} grade students revealed that the top three reasons low-participating students did not eat school meals were lack of choices, taste and appearance (NFSMI, n.d.). The high school study in Cincinnati found that food quality and variety received poor average ratings (Marple, Carol A. Spillman, 1995).

In addition to school type and student attitude, administrative factors can have a significant impact on student participation. One such issue is with free and reduced cost meals. The administrative complications involved with enrollment for this program cause problems for school districts and families that can result in lowered participation (Moore, Q., Husley, L., Ponza, 2009). The enrollment process is often difficult or discouraging for families. An analysis in Vermont revealed that difficulty completing forms and perceived stigma were two common reasons that families failed to accurately complete the paperwork (Freeman, Macias, Narayan, Ng, & Yang, 2012).

The enrollment process is also difficult for school districts. If the district does not have a reliable method to identify eligible students, they may miss these students during the enrollment process. When eligible students fail to be certified they are significantly less likely to participate in the school meal program (Moore, Q., Husley, L., Ponza, 2009).

Losing participation in the free and reduced meal student demographic is particularly detrimental for SFA's because these meals offer guaranteed reimbursement from the USDA. SFAs are reimbursed $1.32 for reduced meals and $1.62 for free meals (Alaska and Hawaii receive larger reimbursement rates). This is much higher than the reimbursement rate of 28 cents for full-pay students (Federal Register, n.d.).

The literature revealed several successful practices SFA's have used to increase school meal participation. Eliminating a-la-carte items from the cafeteria has been shown to increase participation for reimbursable meals. A-la-carte items are typically sold to increase revenue and provide additional options to students. However, it has been shown that students often purchase a-la-carte items instead of a reimbursable meal which causes a decrease in NSLP participation (Freeman et al., 2012). Numerous districts across the country have shown success by eliminating a-la-carte items. A report by the USDA found that eliminating a-la-carte sales was responsible for the largest increase in reimbursable meal sales of all strategies that they examined in the Linking Education, Activity, and Food (LEAF) project (Ralston & Buzby, 2008). In a pilot study in San Francisco, participation increased significantly when a-la-carte items were removed from school meals, especially among students who qualify for free or reduced meals. The study's authors hypothesized that reduced stigma in the lunch line could be a potential explanation, because a-la-carte items are not covered on the subsidized meals (Bhatia, Jones, & Reicker, 2011).
Another option to increase participation is to offer universal free meals to all students. The two most common forms of this strategy are the Community Eligibility Option and Universal Breakfast. These programs also reduce administrative burden on both school districts and families. Community Eligibility is a program where free breakfast and lunch are provided to all students in schools or districts in which 40% or more of the students have direct certification for free meals. The first three states that piloted this program saw average participation increases of 25% at breakfast and 13% at lunch (No Kid Hungry, n.d.). Universal Breakfast is a similar option in which schools can choose to provide only free breakfast to all students. This has been shown to significantly increase participation in the school breakfast program. Again, this is especially successful in the free and reduced population (Food Research and Action Center, n.d.).

EFFECTIVE STRATEGIES

Several strategies consistently emerged as successful approaches to market school meals programs and increase student participation. All of the strategies are organized by the traditional marketing principles of the four P’s - Promotion, Product, Place and Price:

- Promotion encompasses the methods and approaches used to sell market products or services.
- Product includes the actual item or service offered to the customer, including the customer experience
- Place describes the location in which the item is sold as well as the method of distribution.
- Price includes the monetary and social cost and perceived value of an item or service to the customer.

Approaches to implementing each marketing principle for a successful school meal program are discussed in detail below.

Promotion Strategies

In school meals, the marketing principle of promotion includes both branding and advertising. For an SFA brand to be built, an administration must create an identity for their specific school meal program.

Branding is used by all companies to gain attention and create positive recognition from their customers. School meal programs face competition from fast food restaurants and meals brought from home. There is also commonly a negative perception of school meals. For these reasons, it is especially important to create a brand image that appeals to adolescents. Branding can be tailored to fit the capacity of the SFA and may include branding food items or meals as well as developing a brand for the school meals program.

Create brands for food items or meals. Naming and identifying unique meal items is one strategy that can be used for branding. This is similar to how chain restaurants promote their products. Names like “Fiesta Burrito” or “Tangy Chicken Sandwich” may catch a student’s eye more than just a plain “burrito” or “chicken patty”. One SFA in California names their products and advertises around campus with flyers
that include professional photos of the items (Refer to Appendix C for an example of this advertisement). This has been a successful strategy for brand recognition in their district.

**Develop a brand for the school meals program.** Another option is to focus on creating and promoting a brand for the SFA. Creating the brand can be as simple as using the name and designing a logo. The name and logo can be included on items such as food boxes, foil wrappers, and bottles of water. This gives the impression that meals are similar to food from a restaurant instead of traditional school cafeteria food. As an alternative, some districts choose to create a brand from using commercial packaging purchased from food vendors and relying on the marketing of that packaging by the vendors.

Advertising is important to promote the SFA brand. Advertising can take place in locations throughout the school, on the SFA website, or through special promotions.

**Utilize existing promotional outlets.** There are many existing advertising locations within schools. This is a smart and inexpensive way to advertise. Advertising on the morning announcements is an effective approach because the whole school is already listening. A student can recite the daily menu during announcements as a reminder of what’s for lunch. Also, bulletin boards and/or digital signage are used in many schools. This is a great place for SFA’s to highlight menus, new items and special promotions. The managers in the focus group agreed that digital signage would be especially useful in their schools.

**Take advantage of the SFA Website.** The SFA website is a popular advertising option for school meal programs. Most SFA’s have an existing website through their school district. Updated monthly menus are important to include as they are a useful way to involve parents in school lunch decisions.

The Durham high school student surveys indicated that parents play a significant role in the student’s decision to purchase school meals. Further, a school district in NC shared that the SFA website is the most trafficked site on the school district’s system due to the regularly updated menus. While some districts simply upload copies of their menus, several SFA directors use school menu software such as NutriSlice. These applications have the capacity to include photographs, nutrition facts and allergen information for each food item.

Nutrition newsletters are another common choice to include on SFA websites. “Teen Food and Fitness” and “SuperKids Nutrition” are two popular customizable newsletters that can be used to further engage parents and students (Refer to Appendix D for example newsletters).

**Create Special Promotions.** This is an additional method SFAs can use to advertise their school meal program while drawing in new participants. Ideas for promotions include raffles, poster contests and recipe competitions. One school district in NC used monthly raffles to incentivize students to participate. Each student who chose a school meal was entered to win prizes such as movie tickets, gift cards or even an iPod. The prizes were purchased with existing credit earned from school meal vendors. Programs like CoolSchools from Kellogg’s award points to SFA’s for every product purchased and the points can be redeemed for prizes.

**Publicize National School Breakfast Week (NSBW) and National School Lunch Week (NSLW):** These week-long events in March and October, respectively, offer unique opportunities for both branding and
advertising. The School Nutrition Association (SNA) - a national, nonprofit professional organization representing school nutrition professionals across the country- sponsors these promotions. The SNA website offers free material for both events that can be used on flyers, websites or social media for promotion. This would be a good place to start for SFA’s that are new to promotion since the materials are already created and ready to use. There are also presentations to get cafeteria staff and school administration on board.

In addition, these events offer opportunities to create new products or highlight popular items. For instance, a school district in Florida used NSBW as a chance to promote their products. They featured one item each day and gave out free stickers with each purchase. The staff shared that breakfast sales soared that week and stayed elevated in the following months due to the extra promotion.

**Product Strategies**

The product concept for school meals refers to both the actual food product sold as well as customer (student) perception of the product. Building a positive product image is a particular challenge for SFAs due to the common negative perception of school food quality. SFAs are charged with flipping that perception to create an improved image of school meals in the minds of parents and students.

As discussed in the literature review, product quality and variety are the two most important aspects that affect participation in high school meal programs and are the focus of the product strategies. Effective ways to build positive product image are discussed below.

*Gather student opinion through taste testing.* All school districts in the interview sample stated that they use taste testing to obtain student feedback on current school lunch items or potential new products. It is also a way to engage with students and let them know that their opinions are considered.

Taste tests can be conducted in a variety of settings or methods. One popular choice is to set up a table in the dining area to distribute samples during a school meal period. As an alternative, taste testing can also take place in the classroom and become a part of a science or health curriculum. Another option is for school districts to organize an annual food show for students where school food vendors sample new products. Two SFAs in the interview sample hold these annually as a way to generate district-wide student feedback and determine new menu items. These shows take significantly more time and effort than traditional taste tests, but are successful in generating a large amount of feedback from students in each school in the district.

Student surveys should always be used with taste testing to assess student opinion of the items. Surveys can be either verbal or written and the length and content should be designed to meet the needs of the school or district. Ratings of taste, texture, smell, and appearance are common measures to include on taste test surveys.

*Use innovative menu themes and/or food court concepts:* Changing perception of school meals often means veering from the traditional school food menu. SFA directors agreed that students are looking for food that reminds them of the restaurant, fast food and convenience food items eaten outside of the cafeteria. Categorizing the school menu into creative food themes was one successful strategy. Menu
themes are more appealing to students than a traditional school menu. Examples of menu theme categories are: “Crust and Stuff” (pizza); “Fresh Express” (salads and wraps); and “Orient Express” (Asian foods). While this is a simple change, menu theming grabs students’ attention and bridges the gap between restaurant and school cafeteria.

The second option is to organize school meal products in the cafeteria to resemble a mall food court. Some schools do this through cafeteria renovations, but others simply designate a different theme to each cafeteria line. This also creates the impression of increased variety of food items.

Changing or adding products is not required to implement a food court concept. One school district in MD piloted a made-to-order burrito concept last school year that was very successful. The district dietitian shared that sales increased dramatically even though they did not actually change their food product, but instead altered the presentation method. They modeled the project like the popular fast food restaurant Chipotle. This demonstrates that changing the perception of the product can be just as effective as the changing the product itself.

Place Strategies

For school meals, place encompasses the physical location, appearance and atmosphere of the cafeteria/dining room and other locations where meals could be sold. Options for altering the space or location of school cafeterias are limited as many SFA administrators often do not have control over cafeteria location or layout. Despite these limitations, there are still ways to increase the appeal of the dining “place”.

Improve dining area atmosphere. A study of 11th graders in Minnesota and Iowa schools revealed that dining room environment is a major predictor of participation (Brown, Nancy E.; Hutchinson, Joe C.; Gilmore, 1998). Students want to eat lunch in an attractive and welcoming space.

Renovating or overhauling an outdated dining area is often unrealistic due to budget restrictions and/or lack of buy-in from school administration. An SFA director in NC resolved this problem by making smaller changes. The room was repainted and decorated with wall art and signs. Digital signage was also introduced in the cafeteria lines. The oldest and most rundown cafeteria was refreshed first since it was most in need of improvement. The district plans to continue to update one cafeteria at a time over the next few years.

Alternative meal locations. Some students are not likely to go into the cafeteria no matter how beautiful or modern it looks. The appeal of leaving campus during the school day is hard to compete with. In addition, the cafeteria managers in Durham shared that some principals encourage students to leave campus for lunch to reduce crowding in the cafeteria.

Providing alternative meal locations is an option for students who do not want to eat in the cafeteria or choose to leave campus during lunch. Vending machines and grab and go kiosks are the two most popular options for providing reimbursable meals outside of the cafeteria.
Several school food vendors offer vending machines that have the capacity to deliver entire reimbursable school meals. These machines offer the opportunity for students to eat outside of the cafeteria and also cut down on cafeteria lines and reduce the amount of staff needed during meal periods. Vending machines are loaded daily by school nutrition staff and programmed to require that students choose the correct number and combination of meal components to qualify as a reimbursable meal. The machines are temperature controlled to allow for hot and cold items to be served. One SFA in FL shared that they piloted the machines at four schools during the 2013-2014 school year. The machines increased participation in the school meal program, especially among students who did not frequently eat in the cafeteria. Due to their success, the district added the machines to six additional schools the next year.

Grab and go kiosks are the second option. These kiosks are more flexible than the vending machines because they allow for larger items and easier restocking during the lunch period. One former SFA director shared that these kiosks were an extremely successful part of their program. Sandwiches, whole fruit, milk cartons and packaged salads or yogurt parfaits are all easy items to sell at a kiosk. This method is especially useful to increase participation at breakfast as students can buy their meal on their way to class without the need to arrive early.

**Price Strategies**

The concept of price in school meals encompasses both the monetary and social costs for the student. High school students have other options besides the school cafeteria and price is a consideration when choosing where to eat lunch. However, there is often little that an SFA can do to decrease cost to students since items are often priced just high enough to cover expenses. Still, there are several strategies that school districts can implement to reduce costs for students. Removing a-la-carte items is one option that has proven successful for many SFAs. Also, eligible school districts can choose to run universal meal programs that provide free meals to all students regardless of economic status.

**Removing a-la-carte items:** SFA's often use a-la-carte items in an effort to increase revenue. As mentioned in the results section, several studies have shown that removing a-la-carte items can increase participation in the school meal program because students will substitute reimbursable meals for the a-la-carte items. The total cost for students will also be reduced since complete meals are less expensive than purchasing items individually. In addition, there is decreased stigma for free and reduced price eligible students who were not able to purchase the a-la-carte items. This increases sales from this population since it is now less obvious that they are receiving the subsidized meals.

This strategy is especially relevant now due to the introduction of Smart Snacks guidelines in the 2014-2015 school year. Smart Snacks imposes stringent restrictions on the nutritional value of all items that are not part of the reimbursable meal. Many a-la-carte and snack items no longer meet the criteria to be sold outside of the school meal. Several of the school districts interviewed shared that they chose to eliminate these extra items and focus their marketing and quality improvement efforts completely on reimbursable meals.

**Consider social costs:** There are often significant social costs for students choosing to eat school meals. As mentioned when discussing place, many students do not want to eat school lunch in the cafeteria due
to peer pressures. It is important for the SFA to increase the social acceptability of eating school meals. Strategies highlighted throughout the discussion of each marketing principle will help to minimize the social cost for students.

As mentioned in the background section, universal meal programs such as Universal Breakfast and the Community Eligibility Option have been extremely successful strategies that increase participation in the majority of schools in which they have been implemented. (No Kid Hungry, n.d.) Participation has the largest increase in the free and reduced population due to reduced stigma and elimination of paperwork for families. This is especially beneficial to schools, because they receive substantial reimbursement from the USDA for these meals.

**Universal Breakfast** This is an option in which SFAs or individual schools can offer breakfast to all students at no cost. While there is no formal USDA reimbursement program for Universal Breakfast, SFAs have the option of creating their own district program or participating in the USDA Provision 2 program. The Provision 2 program reduces the administrative requirements for schools providing universal free meals. In addition, state funding is available in nine states (including North Carolina) for implementation of Universal Breakfast programs in their school districts (“FRAC - School Breakfast,” n.d.).

**Community Eligibility Option** This USDA program offers reimbursement for SFAs that provide free breakfast and lunch to all students. There are strict guidelines as to who is eligible. Schools, groups of schools or entire districts in which at least 40% of students qualify for free lunch through direct certification are qualified to apply for this program. The percentage of students is then multiplied by a factor of 1.6 to determine their reimbursement rate eligibility. For example, if 60% of students were directly certified, the district would receive a 96% reimbursement for student meals. Community Eligibility was piloted in several states over three years and due to its success was expanded to all states for the 2014-2015 school year.

Any type of universal meal program is most advantageous in school districts with a large percentage of children eligible for free and reduced lunch. However, in other districts it may not be beneficial to do so. The No Kid Hungry organization designed a calculator program to help SFAs determine if it is the right decision for them. The calculator takes about 30 minutes for SFA administrators to complete and asks for information about demographics and participation in the school or district (No Kid Hungry, 2014).

**CONCLUSION**

The strategies presented in this paper offer practical ways to increase participation in and effectiveness of school meal programs. Through the four principles of marketing, SFA’s can elevate their programs to be more successful and popular. Promotion should be used to create a unique and positive image through advertising and branding. Product can be improved by taste testing and adapting items to be both nutritious and appealing to students. Place must be considered through improving the dining environment and offering alternative locations for students to purchase and eat meals. Financial and social costs can be minimized through universal meal programs and increasing acceptability of eating school meals.
School meals represent an important opportunity for improved health and dietary habits of American adolescents. Although students and parents often have a poor perception of the quality and nutrition of school meals, SFA's throughout the country are implementing innovative strategies to flip that perception.

This is an exciting time for school meals, as the HHFKA offers guidelines to improve the nutritional content of school meals and make them more accessible to students. As the school meal product is transitioning, it offers a unique opportunity to recreate the identity of school meals.

Going forward, it is important for SFA's throughout the country to share ideas and successes with each other. As the product itself is transitioning, so too are the approaches to increasing participation in the school meal program. Without creative and coordinated efforts, SFA's stand to lose participation and therefore risk loss of income and the ability to sustain their programs. With such efforts, SFAs can improve the quality and appeal of school meals to guarantee a future of successful programs that provide nutritious food to more students.
References


Appendix A

Durham Public Schools
School Lunch Survey

We appreciate you taking the time to complete the survey. We'll use your feedback to help improve school lunch! Please be honest and as specific as possible.

School ________________________________

1. What grade are you in? (please circle one)
   9   10   11   12

2. What is your gender? __________

3. Either at home or school, how often do you eat vegetables or fruits?
   ______ Daily
   ______ 1-4 times per week
   ______ Rarely

4. On average, how often do you eat school lunch?
   ______ times per week
   ______ times per month
   ______ other, how often?
   ______ never

   If never, when was the last time you ate school lunch? __________

   Next, answer either question #5 OR #6 based on your answer to #4

5. If you eat lunch 2 or fewer times per week, what are your top 3 reasons for not eating school lunch?
   ______ Too expensive
   ______ I don't like how it tastes
   ______ They don't serve my favorite foods
   ______ Not enough choices
   ______ My friends do not eat in the school cafeteria
   ______ Prefer fast foods
   ______ Prefer bringing lunch from home
   ______ Line too long
   ______ Other (explain reason) ________________________________________
6. If you eat lunch 3 or more times per week, what are your top 3 reasons for eating school lunch?

- Low cost
- It tastes good
- It's nutritious
- Good variety and selection
- It's convenient
- My parents tell me I have to
- My friends eat school lunch
- Other (explain) ____________________________

7. Please rate the following in regard to meals served at your school:

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste of meals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variety of Food Choices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Food Choices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Please name your **favorite** foods items (entrée or side item) served at school lunch:

9. Please name your **least favorite** food items (entrée or side item) served at school lunch:

10. Please list any new items you would like to see offered at lunch:

11. Please share any additional comments regarding school lunch (please be as specific as possible):
High School Student Survey Results
Durham Public Schools
May 2014

Student Information:

<table>
<thead>
<tr>
<th>School</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan</td>
<td>54</td>
</tr>
<tr>
<td>Riverside</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
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</tbody>
</table>

Grade

- 9th
- 10th
- 11th
- 12th

Sex

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>No Answer</th>
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</thead>
<tbody>
<tr>
<td>52</td>
<td>51</td>
<td>1</td>
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</tr>
</tbody>
</table>

Frequency of School Lunch Consumption

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less than once a month</th>
<th>1-3 times per month</th>
<th>1-3 times per week</th>
<th>4-5 times per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>2</td>
<td>9</td>
<td>33</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

Themes

- Lowest Ratings: Food taste, food presentation and food variety
- Favorite and least favorite foods are similar. Pizza, chicken nuggets, nachos and burgers are in the top 10 for both.
- Pizza, chicken and burgers were also the top requests for new menu options.
- Convenience is top reason for eating school lunch
- Taste preference is top reason students do not choose school lunch

Top 5 Reasons for Eating School Lunch (among students eating lunch ≥ 3 times per week)

- "It's convenient"
- "Parents tell me to"
- "Low cost"
- "I'm hungry"
- "Friends eat school lunch"

Top 5 Reasons for Not Eating School Lunch (among students eating lunch ≤ 2 times per week)

- "I don't like how it tastes"
- "Not enough choices"
- "Prefer bringing lunch from home"
- "Line is too long"
- "They don't serve my favorite foods"
High School Student Survey Results
Durham Public Schools
May 2014

Student Ratings for School Lunch (based on a 5 point scale)

1 = Poor 2 = Below Average 3 = Average 4 = Good 5 = Excellent

<table>
<thead>
<tr>
<th>Variety</th>
<th># of choices</th>
<th>Taste</th>
<th>Presentation</th>
<th>Temperature</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>2.2</td>
<td>2.4</td>
<td>2.5</td>
<td>2.8</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Focus Areas for Next Steps:
- Improving tastes eg: taste tests for favorite foods
- Since favorite/least favorite/new foods all overlap, focus on these foods for taste tests, menu development, branding, etc.
- Improve presentation with branding and/or actual food presentation
- Marketing to make eating at school more appealing than packing a lunch or going off campus

Top 10

<table>
<thead>
<tr>
<th>Favorite School Lunch Foods</th>
<th>Least Favorite School Lunch Foods</th>
<th>Requests for New Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pizza</td>
<td>Pie</td>
<td>Chicken sandwich</td>
</tr>
<tr>
<td>Chicken nuggets</td>
<td>Everything</td>
<td>Pizza</td>
</tr>
<tr>
<td>Nachos</td>
<td>Nachos</td>
<td>Buffalo Chicken/Sandwich wings, nuggets</td>
</tr>
<tr>
<td>Chicken</td>
<td>Popcorn Chicken/Nuggets</td>
<td>Fresh Fruit</td>
</tr>
<tr>
<td>Burger</td>
<td>Burger</td>
<td>Chick-fil-a tenders/ nuggets, potato</td>
</tr>
<tr>
<td>Fries</td>
<td>Vegetables</td>
<td>Sub</td>
</tr>
<tr>
<td>Cookies</td>
<td>Mac and Cheese</td>
<td>Salad/Chicken</td>
</tr>
<tr>
<td>Chicken sandwich</td>
<td>Sandwiches</td>
<td>Pizza</td>
</tr>
<tr>
<td>Chicken tenders/strips</td>
<td>Chicken</td>
<td>Tater Tots</td>
</tr>
<tr>
<td>Tater Tots</td>
<td>Hot dogs/potatoes (Hot)</td>
<td>Burger</td>
</tr>
</tbody>
</table>


### Appendix C

**Child Nutrition Services**

**District Interview Summary and Interview Questions**

<table>
<thead>
<tr>
<th>School district*</th>
<th>District A</th>
<th>District B</th>
<th>District C</th>
<th>District D</th>
<th>District E</th>
<th>District F</th>
<th>District G</th>
<th>District H</th>
<th>District I</th>
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</thead>
<tbody>
<tr>
<td><strong>State</strong></td>
<td>NC</td>
<td>NC</td>
<td>CA</td>
<td>NC</td>
<td>FL</td>
<td>MD</td>
<td>NC</td>
<td>NC</td>
<td>VA</td>
</tr>
<tr>
<td><strong>Enrollment</strong></td>
<td>72,388</td>
<td>142,612</td>
<td>43,000</td>
<td>18,391</td>
<td>181,205</td>
<td>125,136</td>
<td>25,597</td>
<td>33,341</td>
<td>49,343</td>
</tr>
<tr>
<td><strong>F and R</strong></td>
<td>56.58%</td>
<td>56.82%</td>
<td>64.7%</td>
<td>56%</td>
<td>59.6%</td>
<td>61.43%</td>
<td>56%</td>
<td>44.9%</td>
<td>38.09%</td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td>Unavailable</td>
<td>Breakfast: 16.5% Lunch: 39.5%</td>
<td>68.5% (6th-12th grade)</td>
<td>Breakfast: 25% Lunch: 59%</td>
<td>Breakfast: 19.3% Lunch: 39.2%</td>
<td>Unavailable</td>
<td>69% (lunch 6th-12th grade)</td>
<td>Breakfast: 7.31% Lunch: 25.09%</td>
<td>Breakfast: 38.01% Lunch: 36.01%</td>
</tr>
<tr>
<td><strong>Rationale for Interview</strong></td>
<td>• Large county • Innovative strategies</td>
<td>• Large county • Innovative strategies</td>
<td>• Innovative strategies • High participation • High revenue</td>
<td>• High participation • Similar F&amp;R%</td>
<td>• Recommended by Carol Chong (Alliance for a Healthier Generation)</td>
<td>• Similar demographics • Large district</td>
<td>• High participation • Similar size • Similar F&amp;R%</td>
<td>• Similar size • In-state</td>
<td>• Similar size • Similar demographics • Website</td>
</tr>
<tr>
<td><strong>Strategies</strong></td>
<td>• Promotions • Taste Tests • Advertising</td>
<td>• Menu Committee • Student Food Show • Advertising</td>
<td>• Menu Innovation • Marketing • Menu Committee</td>
<td>• Taste Testing • Marketing Plan • Menu Innovation</td>
<td>• Menu Innovation • Taste Testing</td>
<td>• Menu Innovation • Taste Testing</td>
<td>• SNAC • Menu Innovation</td>
<td>• Taste testing • Cafeteria redecoration</td>
<td>• NutriSlice Online Menus • Taste Testing • Promotions</td>
</tr>
</tbody>
</table>

*Actual district names were not used to respect privacy of their data*

**Interview Questions:**

1. What strategies have you used to introduce healthy and tasty items since the Healthy, Hunger Free Kids Act has been implemented?
2. What are some of the most popular menu items in the high schools? Do you do taste tests or focus groups before introducing new menus?
3. With the introduction of Smart Snacks guidelines this coming school year, what type of adjustments will have to be made to your menu items? Are there any popular items that you will need to remove from the menu?
4. What types of marketing techniques do you use to increase participation in high schools?
5. Do most high schools have the option to go off campus for lunch? Do you use any techniques to try to get them to eat in school?
6. What are your high school breakfast and lunch participation rates from the last two school years?
Staying fit over summer

With homework and tests out of the way, your teenager is likely to have more free time over the summer. What to do with those extra hours? Get active! Encourage him to exercise regularly with these tips.

Start a mini sports league
Suggest that your child choose a time each week (or two or three times a week) for a pickup game of lacrosse or roller hockey with friends. He'll be more likely to keep up with his mini league if he sets a regular time and place, such as a centrally located park or school.

Train for an event
It's easier to keep exercising if your teenager has a goal to work toward. Encourage him to sign up for a race or enter a tournament, for instance. Then, he can develop a training plan leading up to the event. Note: Many races now include concerts or other festivities — your teen might be inclined to participate if he knows it's more than just a race.

Become an explorer
Getting to know your community and state is another way to keep fit. Your child could look at community websites or library books to find places to hike or parks with canoeing. Have him check with your parks and recreation department or ask at the library for a list of happenings like naturalist-led walks or kayaking classes.

Sundae sense

An occasional scoop of ice cream can be part of a balanced diet, especially if your teen or tween keeps these strategies in mind.

- Go small. Ask for a kid-sized cup if you're at an ice cream parlor. At home, keep servings small by using a teacup rather than a large bowl.
- Swap the toppings. Substitute fresh berries or cut-up fruit for whipped cream, hot fudge, and sprinkles. The fruit will add just the right taste of summer!
- Lower the fat. Pick reduced-fat ice cream, frozen yogurt, or sorbet. She'll find these at grocery or convenience stores, as well as in restaurants and ice cream shops.
- Select portion-controlled. Read nutrition labels on ice cream bars and cups at the grocery store. She's likely to see a good variety at or around 100 calories.
Camp out the healthy way

Show your tween how easy it can be to make healthy food choices—even when you’re in a campground—with these suggestions.

Plan ahead. Brainstorm together which meals will work best around the campfire. Then, write out a menu, and shop for ingredients. Idea: Make tacos by cooking the meat before you go, freezing it, and taking it in a cooler to thaw. At your campsite, serve taco ingredients (the precooked meat, shredded lettuce, diced tomatoes) layered in a cup. Or use a tortilla chip as a scoop—no spoon needed!

Stay organized. Keep meal ingredients together so it’s easy to cook in limited light or space. Your child might bag ingredients for each meal and stack them in the cooler, with the last night’s bag on the bottom and the first night’s on top. When you’re camping, you could pull out each meal’s packet when you’re ready for it. Note: Replenish the ice in the cooler daily to keep the food cold.

Pack healthy snacks. Physical activity and all that outdoor air can make campers hungry, so be sure to take along snacks, too. Good choices include fresh fruit that doesn’t get “mushy” (apples, oranges) or trail mix made of dried fruit, seeds, and nuts. Don’t forget a canteen or plastic bottle for each person to refill often with water.

Be a food blogger

My daughter, Lily, really enjoys cooking. Since she also likes to write, she decided to start a cooking blog. Luckily, she found a website called blogger.com, where she can post entries for free.

I encouraged her to use blogging as a chance to experiment with healthy recipes. So far it has been exciting for her to share her latest ideas, like “light” brownies or green peppers stuffed with brown rice and vegetables. She loves to snap pictures at every stage and post them along with step-by-step instructions.

Now Lily’s friends—and my friends—are starting to follow her blog. She feels good when they try her recipes and tell her they liked them. Plus, some friends have begun posting their own nutritious recipes in response. It’s good to see her connecting with other teens who like to talk about healthy cooking!

Splish, splash, and sweat!

Whether your child is an avid swimmer or just likes to play in the water, he can get a good workout in the pool. Here’s how.

Do intervals. Suggest that he swim one length, rest 30–60 seconds, and repeat. Eventually, he could build up to 2–4 lengths before a break. Variation: Swim one length fast and the next one at a relaxed pace.

Run the lanes. Instead of swimming, your teen or tween might jog back and forth in the shallow end. Unlike on land where he’s pounding the pavement, pool jogging is easy on his knees.

Play water ball. Many community pools have basketball hoops or volleyball nets. Diving for a ball or “running” to make a shot can be good—and fun—exercise.

Burger bonanza

For a new spin on the classic burger, try these three recipes. Note: Grill or bake each until cooked through, and serve on a whole-wheat bun.

1. Herbed turkey burgers
   Turkey + herbs = delicious. Combine 1 lb. ground turkey breast, 3 tsp. basil, 2 tsp. parsley, 1 tsp. lemon juice, 2 tsp. garlic powder, and 1 tsp. paprika. Form into four patties.

2. Inside-out cheeseburgers
   In this version, the cheese goes on the inside! Mix together 1 lb. lean ground beef, 1 beaten egg, 6 oz. chopped spinach (thawed or fresh), and 4 oz. feta cheese. Shape into four patties.

3. Black bean burgers
   Vegetarians and non-vegetarians alike can enjoy this meatless burger. Mash black beans (drained and rinsed) from a 16-oz. can. Add 1 egg, 1 cup whole-wheat bread crumbs, 1 tsp. onion powder, and 1 tsp. cumin. Mold into six patties. Serve with salsa and avocado slices.

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Nutritious and Delicious Facts:

- Apricots are excellent sources of vitamins A and C, and good sources of potassium, iron, and fiber.
- Apricots get their bright orange color from compounds called carotencoids, which help keep our eyes and our heart healthy! And because of the variety of nutrients they have, apricots can help the body fight off disease!
- Apricots are easy to enjoy - have your kids help you wash, cut, and serve them! Sliced apricots are the perfect addiGon to fruit salads, cereals, breads, or whole grain pancakes. You can even broil them in the oven! What a treat!
- If your child is shuning vegetables, offer apricots with dinner to help provide needed nutrients.

How to select and store?
- Look for fairly firm, plump apricots that have an orange-yellow color.
- When they are soft to the touch and juicy, they are ready to be enjoyed!

OH! SUMMER IS HERE!
The sun is shining, temperatures are rising and what do we want you to do? Put on sun block and head to the beach!
Enjoy the sun and sand while playing a fun summer sport with your family and friends. How about beach volleyball?
- Find an area on the beach where you can set up a net. If you need help ask a lifeguard if there are any designated areas for sports.
- Live far from the beach? Set up a net in your backyard and enjoy with family and friends.
- Do you live in an apartment? Check out recreaGonal centers in your community for indoor courts or check out nearby parks for a place to get your game on.
- Remember to stay hydrated by drinking water throughout the day! Learn more about your child’s hydraGon needs.
- Remember to pack healthy snacks and lunches to eat at halime!

Did you know...?
- That volleyball – outdoors or Indoors – is the second most popular game in the world?
- That beach volleyball first started in the 1920s in California?

Stay Cool and Have Some Fun!
Swimming outdoors is a great activity when it’s hot outside. The Centers for Disease Control and PrevenGons states that swimming is the fourth most popular sport in the United States. Swimming has been shown to increase muscle strength and improve mental health by boosting your mood, decreasing anxiety, and reducing feelings of depression. In addiGon, regularly engaging in water sports helps to preserve your bones and joints!
Some ideas for places to swim:
- Find a local swim club and become a member.
- If you have a pool in your backyard, put on your bathing suit and swim oJen.
- If a friend has a pool, ask if you can head over and swim with them.
- PractGce swim safety – make sure there is always an adult present or life guard.

Happy 4th of July! Celebrate with Red, White and Blue Berries:
Ingredients: Strawberries, blueberries, and lemon Greek yogurt
DirecGons:
1. De-stem strawberries, place upright and fill with Greek yogurt
2. Top with a blueberry
Parents Power Tips by SuperKids Nutrition Founder - Packing food for the Beach

- Get your family involved in the preparation the night before - let each family member choose their lunch and snacks so they can prepare their own.
- Bring a cooler to keep your water and any refrigerated items at the appropriate temperature.
- When deciding what to pack, choose fresh fruit, vegetable salads and whole wheat bread or whole wheat tortillas for wraps or sandwiches.
- If you're concerned about your sandwiches getting soggy, pack up the ingredients separately and build your sandwiches on-site. Pack them the night before to save time.
- Don't forget to be active! Take a family walk on the sand to collect shells!
- Bring sun block and apply after drying off, sweating excessively, or every two hours.
- Discover more ways to pack healthy snacks for a day on the beach!

Appendix E

Riverside Unified School District Advertisements:

Making a Difference
One bite at a time!

Fresh Express Fruit and Yogurt Parfait

Making a Difference
One bite at a time!

Fresh Express Southwestern Chicken Salad
Making a Difference
One bite at a time!

Fresh Express Beef Torta

Making a Difference
One bite at a time!

Fresh Express Pulled BBQ Pork Sandwich
Durham Public Schools School Nutrition Services
Student Taste Test Survey

Thank you for helping us to improve school lunches. Student opinions are what matter most to us so please be honest.

Name of item: __________________________________________

<table>
<thead>
<tr>
<th>Do you like...</th>
<th>Like</th>
<th>Dislike</th>
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<tbody>
<tr>
<td>The LOOK of the item</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The TASTE of the item</td>
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</tr>
<tr>
<td>The SMELL of the item?</td>
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<tr>
<td>The TEXTURE of the item?</td>
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<tr>
<td>Should we serve this item at school lunch (circle one)</td>
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<td>No</td>
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<tr>
<td>Comments:</td>
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