

How to Develop a Salad Bar for School Lunch Menu Programs

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I. INTRODUCTION

The following guide will present a general overview on how to implement a salad bar program in an elementary school cafeteria. It is the author's goal that this manual can help schools, cafeteria personnel, parents or any other community member implement a salad bar as part of the lunch menu option in school. The enclosed information is based on the combined experiences of members in the Los Angeles Unified School District (LAUSD), Occidental College Community Food Security Project, and the University of California, Los Angeles (UCLA) School of Public Health who have been involved in piloting a salad bar program in three LAUSD schools beginning in 1999. To the best of the author's knowledge, no such written guide exists.

LAUSD is the second largest school district in the country, next to New York City. Roughly 700,000 children attend schools in LAUSD. Its large size makes it unique in terms of fiscal and organizational scale and complexity. Therefore, the following guide may not be appropriate for all districts, and adjustments will have to be made accordingly. Similarly, issues will differ between urban, rural, and suburban districts and between areas with different growing climates and agricultural base.

II. BACKGROUND

In order to verify Las Angeles Times anecdotal reports of hunger in the LAUSD elementary schoolchildren (Nazario, 1994), and to provide a baseline from which to measure effects of impending changes in the food assistance programs, members of the UCLA School of Public Health undertook a cross-sectional study in 1998. This study

looked to establish the extent, distribution and severity of nutritional problems and their main determinants among a sample of Hispanic, African American and Asian children from low-income families attending elementary schools in the LAUSD. In addition, the survey was designed to identify dimensions, perceptions and expression of hunger in order to inform the process of policy formulations at state and local levels. No previous comprehensive study had ever been carried out regarding the food situation and nutritional status of elementary school children in the LAUSD.

In the 1998 survey, 919 children in grades 2-5 from 14 schools were measured and interviewed. Over 40% of the children studied were obese (>120% of median, weight for age), and 12.2% were overweight (110%-120% of median, weight for age) based on National Center for Health Statistics (NCHS) growth reference data (1977). The preliminary findings of the dietary intake from the children attending 12/14 schools studied indicated high consumption of sodium and fat and low intake of vitamin C. Most of the high fat and sodium consumption took place during out of school hours; however, children were also eating fatty and salty foods at school. Children were only eating on average about 3 fruit and vegetable servings per day (five servings/day are recommended by the US Department of Agriculture). These findings confirm other reports in the literature (Burghardt, Gordon, Fraker, 1995,; Mei, Scanlon, Grummer-Strawn, et al., 1998; Ogden, Troiano, Briefel, et al., Troiano, Flegal, 1998). In response to these findings, a salad bar menu option has been introduced by the LAUSD Food Services Branch and the Community Food Security Project at Occidental College in 3 of the 14 schools that were part of the 1998 study. In conjunction with broadening the food

choices in the food services, the salad bar menu option has a nutrition education component.

Interventions that combine food service changes at the school with child and parent education have been considered critical to impacting the overall nutrition status of the child (Epstein, Valoski, Wing et al. 1990; Fitzgibbon, Stolley, Kirschenbaum, 1995.). In a review of the development of eating behaviors among children and adolescents, Birch and Fisher (1998) list four areas that can modify children's eating habits: 1) exposure to and accessibility to foods; 2) modeling behavior of peers, siblings, and parents; 3) the physiologic consequences of ingestion; 4) child feeding practice. Previous studies have demonstrated that a child's food choices from the school lunch program can be modified by offering a variety of foods at school and through nutrition education within the school curriculum (Birch, Fisher, 1998; Luepker, Perry, Mckinlay, Nader et al., 1996; Perry Bishop, Taylor et al. 1998). Moreover, it has been found that by increasing the dietary intake of fruits and vegetables, the intake of more calorically dense fatty foods can be reduced in the diet without impacting overall normal growth of a child (Birch, Fisher, 1998; Luepker, Perry, Mckinlay, et al., 1996; Perry Bishop, Taylor et al., 1998). Still more studies need to be done in order to demonstrate ways that may help increase the daily consumption of fruits and vegetables in children. This is particularly important in light of all of the improved health outcomes for persons who consume five or more fruits and vegetables servings per day.

III. OUTREACH: SOCIAL MARKETING THE SALAD BAR

Before it can be implemented, the salad bar must be marketed to the students and staff. Outreach efforts can help ensure a successful program, and have been a key component of the LAUSD pilot program.

In order to market the salad bar, there are several things that must be kept in mind. The target audience is the student, and the anticipated behavior change is increasing the consumption of fruits and vegetables. The following steps can lead to a successful salad bar implementation: listen, plan, pretest, implement, structure/revise, and monitor.

A. LISTEN

Listening to the students and school participants about what they would like served on the salad bar ensures that the salad bar serves food appropriate for its target population. This helps give participants a sense of ownership in the program.

Conducting focus groups is a good way to find out what the students will eat and enjoy from the salad bar. Focus group discussions should cover what fruits and vegetables the child will/will not eat, and what would make them choose the salad bar over the hot lunches. Follow up focus groups are recommended in order to make appropriate food item changes (see appendix 1 sample questions).

B. PLAN

Planning for the salad bar includes setting up the kitchen, ordering the proper equipment, and planning the menu. The planning phase involves the following key players: cafeteria manager, food service employees, support staff, and students.

1. Cafeteria Manager:

It is of utmost importance to work with the cafeteria manager, and win him/her over to the idea of a salad bar. This can be done by taking them to visit a nearby salad bar (if possible), or reviewing other salad bar successes in other schools. The cafeteria manager can then prepare the cafeteria staff for the salad bar, and pass his/her enthusiasm on to them.

2. Food Service Employees:

From our experience with the salad bar pilot project, we have identified a need to formally train and educate employees on themes specific to child nutrition. Employees should be educated on how to identify seasonal foods (lists should be provided), and how to prepare these items. Ideally, the cafeteria manager can do this. The more aware the food service employees are of the benefits of the salad bar, the more supportive they can be of the program. Their support can directly increase the student participation and enthusiasm, and is, therefore, an important link to maintaining strong salad bar participation.

Prior to opening the salad bar, a meeting should be held with the entire kitchen staff. This should include any student helpers that are involved, as this will give them a greater feeling of involvement, responsibility, and in addition be an excellent educational opportunity. During this meeting, items to be discussed include aims of the program, its unique benefits, how to prepare the foods, and storage and food rotation (monitoring students' choices, taking and recording tickets, refilling food bins, making sure the line runs smoothly, and assisting students to increase efficiency).

For the salad bars implemented in the LAUSD, students are required to choose from specific food groups in order to comply with National School Lunch Program

standards. That is, the salad bar is comprised of foods from the five food groups (fruits, vegetables, meat/protein items, breads, and dairy/milk), and students must choose foods from at least three different food groups in order to fulfill the requirements. Therefore, the cafeteria employees (those stationed at the salad bar throughout the lunch period) should also help monitor and assist the students in order to ensure that they choose at least 3 of the 5 food groups for lunch.

3. Support Staff:

The support staff includes anyone who is involved with the cafeteria operations (i.e. janitors, lunchtime monitors, ticket clerks, and student helpers). Janitors have been responsible for assembling the new salad bars and equipment.

Lunchtime monitors need to be informed of the salad bar arrangement so that they may help the students who choose the salad bar lunch menu option. This applies more at the start of the program, when students are just learning how to utilize the salad bar and are becoming accustomed to making choices. The novelty of the salad bar has created an overlap of lunch periods in the early phases of initiation. Thus, monitors need to be flexible and help maintain order during this period of adjustment.

Tickets clerks are responsible for keeping track of the number of salad bar lunches and hot lunches that are sold daily (see sample tally sheet - appendix 2). By keeping a record of the number of salad bar lunches sold, one can obtain the positive count of the lunches sold. A negative count is taken by monitoring the number of salad bar plates set out daily and counting the number left. Both numbers are used to monitor participation as well as help the cafeteria manager plan for future purchases for hot or

salad bar lunches. The first month will require the greatest adjustment in food purchasing and the cafeteria manager will rely heavily on this data (see Monitoring).

Other support staff, such as teacher, help make the cafeteria environment a supportive and educational one. Their vigilance and assistance is key to the willingness of the students to use the salad bar, and makes their transition a smooth and positive one.

4. Students:

By increasing the students' awareness of the foods that will be served on the salad bar and generating enthusiasm for the new lunch meal, you can increase the success and acceptance of the salad bar. The following are a few examples of how this can be accomplished: nutrition education, classroom visitors, field trips, cooking, taste tests, posters, and assemblies.

Nutrition Education:

Nutrition education in the classroom is a good way of helping the students realize the benefits of a salad bar and how they can choose to eat more nutritious foods. Teachers can lead these activities by discussing the food pyramid, having students monitor their consumption of fruits and vegetables, and studying the vitamin and mineral content of foods. They can also make cookbooks of family recipes as a classroom project.

Classroom Visitors:

Guest appearances are also a fun way for students to learn about different foods and increase their enthusiasm for the salad bar. Visitors can include local chefs and farmer's market representatives.

Field Trips:

Field trips are a powerful educational tool students. Through field trips, students gain a greater appreciation for where their food comes from, and how it is grown.

Touring local farms or farmer's market are two such examples.

1. Farm Tours:

Farm tours help students identify their food source. They learn where their food comes from, what it takes to grow food, what differentiates organic from non-organic, processed from non-processed foods, etc. If the farm that is visited supplies some of food to the school's salad bar this could be even a greater learning experience. Students will return to their salad bar with a greater knowledge of the foods they eat. Prior to a farm tour, teachers could be provided with an activity book to teach students about organic growing methods and other farming related procedures (see appendix 3 for sample). Also, the tour is more meaningful if the teachers explain to the students what they will be seeing and should be looking for during their tour.

2. Farmer's Market Tours:

Another fun trip for students is visiting a local farmer's market. The farmers' market can be a fun way of educating students on different types of fruits and vegetables that they may have never seen before. For example, students can learn about many different varieties of tomatoes, or be introduced to and taste fruits and vegetables that may be entirely new to them. Such exposure will increase their familiarity with the salad bar foods and potentially make them more willing and eager to try new foods (see appendix 4 for sample activities).

Cooking:

Due to the additional utensils required, preparation, and clean up time and other equipment (e.g. Bunsen burners), cooking in the classroom relies heavily on teacher initiative. However, with the proper preparation, it is an excellent way for students to utilize their school garden foods (if they have one), and discover what they can do with the fruits and vegetables they have been learning about throughout the program.

Activities need not be labor intensive and can include pickling cucumbers and making salsa- that is, activities that do not require heating. The educational benefits become evident as students practice measuring ingredients (thus incorporating a math component). Cooking sessions also reaffirm what they are learning with regard to the food pyramid, and empowers students to make their own nutritious snacks.

Taste Tests:

Taste testing is an ideal way of introducing foods students may not be familiar with and otherwise not try on their own. By having them try new foods with their peers they will be able to choose these foods from the salad bar. The new item is prepared for the salad bar and for students to taste. The program coordinator can pass out items such as green beans drizzled with ranch dressing. This can also be a good activity for parent participation.

Taste tests are an effective way of introducing the salad bar to parents, teachers, and students. In order to reach these three groups, taste tests can be set up at Open House or Back to School Night, for example. This is an opportunity to conduct outreach and elicit support and interest for the salad bar program. It involves setting up a table and offering cup up fruits and vegetables that will be included in the salad bar. Informational fliers (advertising the new program) and a sign-in sheet (for contacting interested volunteers) should also be made available. This activity can serve to recruit parent and staff support, in addition to getting the students excited about their new salad bar. As mentioned before, this activity can also be used as measure for determining the students' food choices. Their preferences should be taken into account when developing the salad bar lunch menu option.

Posters/Assembly:

In the days approaching the salad bar implementation, it is helpful to have posters advertising the salad bar posted throughout the school (classroom, cafeteria, and hallways). Students can make these posters as a classroom project.

Since the salad bar lunch menu option requires proper etiquette for removing the food items from the salad bar, the children need to be taught these skills. This can be done by the program coordinator, a parent volunteers or cafeteria personnel. The LAUSD pilot schools had an assembly the day before the opening of the salad bar, which covered salad bar etiquette (see appendix 5).

Students from the 4th and 5th grades who were chosen by the school principal can lead the assembly. As leaders in their school, these participants will be designated as promoters of the new program. Students should be engaged in a dialogue about healthy and unhealthy foods, what diseases and problems are caused by poor nutrition and then asked why they think a salad bar is important. The discussion will cover information on the salad bar and its purpose, and what their role is in its promotion. Through this interactive approach, students will be able to understand the benefits of a healthy diet, that a healthy diet includes eating at least five servings of fruits and vegetables a day, and how choosing the salad bar can help meet this requirement. As evident from the sample skit in the appendix, the key to this activity is to engage the students and thereby not only inform but raise enthusiasm for their new salad bar.

C. PRETEST

Depending on the district, in addition to planning for the program, it may be necessary to pretest new foods by a test kitchen. These kitchens evaluate the product's nutritional value, content, and preparation. Pre-testing includes sampling the foods by the test kitchen, as well as offering samples to students during taste tests.

D. IMPLEMENTATION

Once the salad bar has been planned out, the equipment and foods have been ordered and organized, and the parents, students and staff have been informed of the new cafeteria lunch menu option, the salad bar is ready for implementation. Again, it is important to remind the teachers the day the salad bar is set to open, so they can remind their students prior to lunch time.

E. STRUCTURING

Once the salad bar is in use, the cafeteria manager and personnel must make continuous adjustments to the foods on the menu, the layout of the salad bar (to increase efficiency), and continue to build support for the salad bar. Each individual school will have unique characteristics, which may not manifest themselves until after the salad bar is implemented, and therefore continued feedback and adjustments are essential to ensure continued success of the salad bar.

F. MONITORING

Cafeteria managers at the three LAUSD pilot schools have kept a daily count of the number of hot lunches and salad bar lunches sold (see appendix 2 for tally sheets). This record has proven vital for several reasons. First, it helps the cafeteria manager gauge the amount of food s/he needs to prepare the next day. As mentioned before, the salad bar was tremendously popular upon initiation in our pilot schools. However, sales gradually dropped and have now reached a steady state. Counting the number of lunches sold gives the cafeteria staff a better idea of the quantity of hot lunches and salad bar

items to prepare. In addition, such foresight reduces waste and serves the needs of the students. Furthermore, the hot lunch served can impact the sale of the salad bar lunch. By maintaining a record of the hot lunch meals also with the sale of both lunches, managers can predict daily differences in sales depending on the food served in the hot lunch.

IV. FOOD PURCHASING

LAUSD has its own food purchaser on staff responsible for supplying the school cafeterias with their food. The Community Security Staff at Occidental College worked closely with this individual to set up a viable system for purchasing farmer's market produce.

The first step in securing salad bar food items is by designating food vendors. If you plan on using your regular vendors, make sure you can receive more frequent deliveries (LAUSD received two deliveries per week compared to one/week for regular hot lunch cafeteria foods).

If you plan on using farmers' market produce, recruit several local farmers' markets by handing out informational memos reviewing the project and requesting farmer participation. Interested farmers' are required to fill out a W9 form. Due to LAUSDs large size, it is not required to have formal contract set up with vendors. Smaller school districts may need to arrange contracts with farmers' market vendors. Standard order forms and invoices must be agreed upon to make the purchasing process a smooth one for the farmers, school food purchaser, and cafeteria manager.

One problem that the LAUSD food purchaser has been facing is safety concerns in the way foods are packaged and delivered by the farmers. Unlike larger food vendors, farmers who participate in farmer's markets are not under continuous and strict regulations that larger vendors are. Therefore, special attention needed to be paid regarding the way farmers package and handle the food items. School districts that wish to use farmers' market produce must come to an agreement with the farmers as to how the food will be handled, packaged, and delivered. In LAUSD, the farmer's market produce delivered (by the program coordinator) to the general food distribution warehouse. From there, the food is loaded into the LAUSD vans and delivered to the participating schools.

Schools must weigh the advantages and limitations (some of which are listed below), when choosing their vendors. The relevancy of each point depends on the individual school, its size, monetary means, and available resources.

CENTRAL SUPPLIER:

Advantages:

- Safe / standard packaging
- Prepared items (pre-cut and pre-washed)

Already established delivery and payment system

Limitations:

- Fewer non-standard food items / choices
- Food items less fresh

FARMER'S MARKET:

Advantages:

- More unique food choices tend
- Supports local small farms
- Fresh because grown locally
- Less chemical/pesticide treatment

Limitations:

- Often no standard packaging (raises safety concerns)
- Method of delivery and payment must be arranged
- Foods tend to be more expensive
- Foods are more time consuming to prepare
- Foods have less shelf life

V. CAFETERIA PREPARATION

This includes setting up the salad bar, preparing the cafeteria staff, and obtaining appropriate equipment. In the salad bar pilot project, 2-4 weeks was enough time to prepare the cafeteria for the salad bar.

Location:

Cafeteria that will use farmers' market items must have a full service kitchen. These kitchens will have the capacity to provide storage and space required for a farmers' market salad bar produce. Furthermore, according to Health Department regulations, salad bars must be stationed indoors. Schools that normally do not have an indoor serving area can make use of their auditorium. Thus, creative arrangements can be made to meet guidelines.

Staff:

Ideally, two people are required the salad bar and two (can be the same individuals) are needed to monitor it during lunchtime. Program coordinators (or the cafeteria managers) must train designated personnel to prepare the salad bar foods (chopping, cutting, washing, etc.). Of note is that the salad bar had many more bins and utensils that must be washed, and this extra time spend in preparation and clean up must be anticipated. Preparation is more intensive because foods need to be set up in such a way that makes them easier for children to take (cut or sliced). One of the pilot schools has students help prepare and monitor the salad bar. This is particularly advantageous at the start of the program since it can help mitigate some of the added initial stress the staff may feel, as well as spread the word among students as to the introduction of a new salad bar. Thus, students can take on a health advocacy role while helping stock and maintain the salad bar.

Quantity:

During the start-up phase, the salad bar is usually very popular. LAUSD salad bars have experienced great initial popularity with the students. Therefore, the staff will need to prepare fewer hot lunches and prepare greater quantities of the salad bar items in the first weeks of starting in salad bar lunch menu option. This heightened popularity usually lasts for about a month, and begins to slow down to a steady state thereafter. Thus, cafeteria personnel must maintain a close count of hot lunches and salad bar lunches sold daily, and adjust to the changing demands accordingly (see appendix 2 for sample tally sheets). The pilot schools initially surveyed students in order to project rates of participation in the salad bar. A survey was circulated to all of the teachers to find out

how many of their students were interested in participating. This estimate was a gauge for how much produce to prepare. In the case of the LAUSD pilot program, the estimate was close.

Equipment:

The number of children who choose the salad bar determines how much equipment needs to be purchased. A school with 900, children for example, serves between 250-300 salad bar meals daily. Two carts with inserts are therefore necessary. The layout depends on the number of anticipated meals and the organization of the line.

Cost:

For the participating LAUSD pilot schools, the cost to purchase two salad bars, inserts, serving utensils and ice packets was \$3771.04. The average meal cost for food only per student was tabulated at \$1.50 in October 2000. This number decreased down to \$0.97 by January 2001. As a comparison, the cost for the hot meal is \$0.93. Thus, it has been found that there is no significant difference in cost between the hot meal and salad bar once the salad bar is established and the cafeteria manager can prevent large wastage.

Menu:

Under LAUSD regulations, Test Kitchen Nutrition Specialists usually evaluate first time products. These specialists check for mandated specifications, and evaluate product quality and acceptability of food. Items evaluated were: ingredients, storage, temperature requirements, shelf life, cooking instructions, nutrition information, packaging, serving size, and price. Once approved, the vendor is placed on a qualified Products List for a specified contract period (usually 1-3 year contract).

While this may vary for individual schools the LAUSD schools have followed certain mandated specifications in developing their salad bar lunch menu option (see appendix 6). The federal guidelines must be followed if the students are to obtain free lunches.

The greater variety the cafeteria manager can provide for, the better. The pilot schools offer fat-free chocolate milk in addition to regular 1% milk. They also take advantage of variety of the foods that the farmer's market vendors provide, such as sunflower seeds, nuts and cherries. Depending on the available kitchen facilities, initiative, cafeteria manager can even create their own recipes. Examples include a carrot raisin salad, pasta or rice salad, etc. These choices should reflect the cultural preferences of the student population.

VII. CONCLUSION

This manual encompasses the many lessons learned as a result of Los Angeles Unified School District's salad bar pilot program. The pilot project had expanded to include 21 elementary schools in LAUSD. It is the author's hope that other school districts can benefit from LAUSD's experiences and use the suggestions and guidelines in this manual to start a salad bar lunch menu option.

CHECKLIST

Outreach:

- _____ focus groups
- _____ cafeteria manager: recruit and inform, obtain support
- _____ food service employees: train
- _____ support staff: train
- _____ students: inform and educate
 - _____ nutrition education in the classroom
 - _____ classroom visitors
 - _____ field trips (farm and farmer's market)
 - _____ cooking
 - _____ taste test
 - _____ posters
 - _____ assembly

Food purchasing _____ choose vendors

_____ decide on a delivery schedule

-if using farmer's market:

_____ information flyers for farmers market vendors

_____ decide payment methods

_____ W9 form for farmer's market vendors

_____ agree on set packaging and handling of foods

Cafeteria preparation: _____ choose appropriate location for salad bar

_____ assign staff to job of preparation and monitoring

_____ prepare tally sheets, for hot lunches and salad bar

_____ order equipment / utensils

Menu: _____ fit federal guidelines if applicable.

