

Small Steps Towards a Smarter Lunchroom: A Case Study

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I. BACKGROUND/SCHOOL PROFILE:

School X is a 4-year public high school with an approximate enrollment of 2,150 students, ranging from grades 9-12. In order to meet the needs of the growing student population, yet still provide a personal learning community environment, students are separated into two buildings, grades 9-10 in one building and grades 11-12 in an adjacent, adjoined building. There are 192 classroom teachers, with a student-teacher ratio of 11.3 to 1 and an average class size of 23 students. The ethnic composition of the school is mainly Caucasian (88.9%), followed by Asian (5.2%), Black (4.4%), Hispanic (1%), and other (.4%).

Student academic achievement is measured by assessments such as the SATs, HSPAs (High School Proficiency Assessments), and AP tests, which consistently score above state and national averages, and the school boasts a 98% graduation rate (31.2% attending 2-year colleges, 64.6% attending 4-year colleges). Consistent with the state average, school is in session for 6 hours and 52 minutes, from 7:30am-2:26pm. The bell schedule is divided into 13 periods, with the first 3 periods exclusive to academic instruction (42 minutes each) while the remaining 10 periods are broken up into 21-minute lunch periods, alternating between each session (i.e., periods 4, 6, 8, 10, 12)—See exhibit 1 (Bell schedule). Accordingly, the first lunch period goes from 10:06am-10:31am while the last lunch period goes from 1:14-1:39pm.

II. SURROUNDING AREA:

School X is one of four sister high schools that serve the regional district in the area, with the other three high schools possessing similar demographic and academic characteristics. The majority of the students that enter High School X come from the township school district's two public middle schools, although some students also come from the local Catholic school. The town itself is suburban, with a population of about 10,000 residents and a median household income of \$52,271. An estimated 2.1% of families and 3.5% of the population are below the poverty line, composed of 3.6% of those under age 18 and 2.9% age 65 or over.

III. PRELIMINARY LUNCHROOM OBSERVATIONS

Lunchroom structure: The cafeteria is divided into two large dining areas; the majority of the students choose to dine in the larger of the two, while a smaller area is partitioned off and located in the back, mainly for the purpose of holding 'spillover' students as a result of overpopulation. Students are also given the option to dine outside in an enclosed courtyard, consisting of round stone tables and benches. Within the larger dining area, long rectangular tables are set up along the perimeters of the room, while circular dining tables are located within the middle. Large glass windows surround three sides of the room, with various student activity posters on the walls. Vending machines are located in the far back corner of the cafeteria, along with a 'snack shop' operated by a single lunchroom staff. Lines for hot lunch and a la carte are located in the front of the cafeteria, with separate entrance and exit points for each line. Lines are typically long on any given school day. Lunch aides monitor each lunch period, with one or two stationed at each door to verify hall passes for students leaving early or latecomers, or to moderate the overall lunchroom environment.

The lunch program is managed by Nutri-Serve Food Management, Inc. The menu of lunch offerings is consistent across all four regional high schools and is available for viewing on the school website (see Exhibit 2-lunch menu). Each daily hot lunch offering consists of the following: 2 choices of main entrée, 2 side options (typically cooked vegetable or fruit, but can also consist of a dessert item), chilled fruit or juice, and choice of milk. Lunch prices are as follows: \$2.75 for regular lunch, \$.40 for reduced lunch, \$2.00 for student second lunch (double portion of main entrée), and \$3.75 for adult lunch. The school offers a keypad system for payment, where parents are able to put money into the student's account in advance and money is deducted from the account. This is also the method of payment that is used for students on free or reduced lunch programs, with the added benefit of ensuring their privacy. Alternatively, students are able to pay for items with cash or check. The alternatives that are listed to be available daily are peanut butter and jelly, fresh fruit and a bread basket. Homemade soup is available daily with any entrée. Milk choices include white, 1%, skim, chocolate, and strawberry. No lunches are served during single session days or delayed opening schedules. Nutri-serve also distributes a monthly newsletter known as 'Nutri-news,' consisting of nutrition facts and tips, although it is poorly circulated and not many are aware of its circulation.

IV. LUNCHROOM ANALYSIS:

How strengths can be leveraged

Given the demographic characteristics of the surrounding area and the high graduation rate of seniors, the students are likely to come from educated families and backgrounds. Having been consistently exposed to education, it would not be very difficult to change the students' perceived notions of nutrition through education, which may serve as a foundation for achieving healthier lunchroom consumption habits. Additionally, coming from relatively upper-middle income households would suggest that they are likely to possess disposable income, and that the ability to afford more nutritious foods is not of considerable cost. This provides support that a feasible market exists for selling nutritious foods, even at a premium price, and that this market could be maintained. Therefore, schools can seek to meet this need by offering foods that are nutritious, yet still be profitable by charging a higher price.

Moreover, few fast food restaurants are located near the school, with the closest fast food restaurant located at least a 15 minute drive from the school. Given the short lunch periods (21 minutes each), not many people would consider this meal option attractive or feasible, so this would make students more inclined to choose the school lunch. In fact, technically, students are not allowed to go off-campus for

lunch anyway and therefore must either bring a lunch or buy from the cafeteria. Therefore, this provides a great opportunity for cafeterias to be able to implement a 'smarter lunchroom' that would impact a majority of the students.

Furthermore, as most students do have a lunch period, either because they are required to or because they value this time to socialize with their friends, and thus are exposed to the cafeteria (rather than having to take an extra class due to a heavy academic load), this also increases the likelihood that students will purchase foods from the cafeteria while they are there.

In assessing the strengths of the lunchroom structure and layout, it is observed that the large windows minimize the amount of artificial lighting of the room by allowing sunlight to enter, creating a more positive consumption environment, as non-natural or dimmed lighting may make foods appear less appetizing. Additionally, students are offered various choices in terms of seating (indoor or outdoor, long rectangular tables or circular tables, alone or with a group), which provides them with greater leeway in terms of proactively influencing their social environment, which has been shown to affect eating behavior. The snack shop is located in the back corner of the cafeteria, which minimizes its visibility and is not as salient as one enters the cafeteria. Similarly, the soda and vending machines are located in an equally low-traffic position along the back walls, lessening the likelihood that students will contemplate purchasing a less healthy item from one of these sources. Along these same lines, the ice cream sold in the snack bar is located underneath silver freezers that need to be opened rather than in plain sight, while soda is sold behind the counter and distributed by cafeteria staff. The advantage of these harder-to-reach placements is that it creates an additional 'pause point' where individuals must consider their choices a second time before actually purchasing and consuming the item. Furthermore, as the snack bar and vending machines only accept cash as payment, this may also serve as an additional 'pause point' for students who are less aware of their food choices to become more aware of what they are buying.

In terms of actual food items, the school offers both healthy and unhealthy options and does not completely eliminate the unhealthy items. This is consistent with the 'smarter lunchrooms' philosophy, for although students are still able to access less healthy items, the goal is not to abolish these foods altogether but to encourage kids to make their own self-determined decisions towards choosing healthier options.

How weaknesses can be improved

Several weaknesses within the school that could negatively impact the smarter lunchroom initiative were also observed. As such, some of the weaknesses themselves will first be discussed, followed by their potential for improvement. For starters, the school allows pretzel sales in the mornings as fundraisers for various clubs or student organizations. Thus, some students see this as a solution to skipping lunch. Along these same lines, students also consider other less healthy foods as 'meal substitutes': For example, soda machines are located directly near school entrances where students come in during the morning. This creates easy access for students to purchase one on their way into school, resulting in sales of 'soda for breakfast'. Thus, students are seen purchasing soda early in the mornings before class to get a 'caffeine fix', as well as between classes and after school. In fact, although soda machines within the cafeteria are located near the corner, many other machines are located next to most entrances of the school. Additionally, since the soda machines have no time constraints, while students may not necessarily purchase a drink during lunch, they have ample opportunity to do so outside of their lunch periods. Besides, none of the soda machines offer diet soda as an option; only water or full-calorie sodas are offered. Likewise, vending machine items are equally

unhealthy (including candy bars, moon pies, chips, and Rice Krispy treats) and are also located close to athletic locker rooms and entrances as well, while the snack line in the cafeteria also carries similarly unhealthy items, including chips, fries, ice cream, and candy.

Additionally, the lunch periods themselves are not conducive to healthy eating. In an attempt to accommodate the large student population and be able to provide all students with an opportunity to eat lunch, the lunch periods are very spread out, ranging from 10:00AM to 1:40PM. However, the large time difference between the first lunch period and last lunch period may have a substantial impact on students' lunch purchases and consumption behavior. As a result, this might lead students to end up eating even when they are not hungry (if scheduled for an earlier lunch time) or create difficulties staying focused on academics without going hungry (if scheduled for a later lunch time). On the other hand, those students who happen to be scheduled for the first lunch period may purchase less food during lunch, but may end up snacking more heavily later in the day (thus spending more at the vending machine), while those assigned the last lunch period are likely to be much hungrier, but having had to wait so long, may ultimately buy food in excess at the cafeteria and overeat.

The compressed lunch periods are exacerbated by the fact that the school allows for some students to skip lunch periods if they take certain electives (such as band, orchestra, or choir). As a result, many students skip lunch altogether rather than going through the trouble of packing a lunch. Moreover, hot lunches are prohibited from being brought outside the cafeteria, while waiting for the long snack line leads to too much time wasted and cuts into valuable instruction time. Furthermore, this 'time crunch' also affects students who *do* take a lunch; many complain that the snack line is too long, and hence there are always students who don't even attempt to wait in line and end up not eating anything at all. Others feel that the current hot lunch menu is bland and unexciting, and thus are not motivated to eat the hot lunch foods, either.

Despite these weaknesses however, there is always potential to turn weaknesses into strengths or future opportunities. For example, while supporting food fundraisers is commendable and may serve as a necessary means of funding for many clubs, perhaps organizations may be able to hold pretzel sales in the afternoon rather than in the mornings. This would not only provide students with an opportunity to eat a proper lunch in the cafeteria and still support the causes of their peers, but would help to create a more balanced diet by not having students skip lunch. Additionally, holding afternoon pretzel sales may even be more profitable, given that many students with extracurricular activities or athletes are seeking an after-school snack—and pretzels can serve as a healthier alternative to the less healthy items offered from the vending machine.

In relation, vending machines can be regulated to only function during certain periods of time (i.e., after school), and more healthy items (such as nuts, trail mix, granola bars) can also be incorporated into the vending machines, without eliminating all of the unhealthy items. The same can be applied to items in the cafeteria's snack line and a la carte line, which also carry similarly unhealthy items, along with ice cream, fries, and candy; there are no signs of fresh fruits or other healthy alternatives to the unhealthy snacks. However, integrating healthier items will at least raise students' awareness of alternate options, and wouldn't leave students with the 'shock' that would be felt if all of the unhealthy foods were eliminated.

Additionally, it may be possible to blur the distinction between foods that are only sold in the 'snack line' versus in the 'hot lunch' line. For example, by moving some of the 'snack foods' to the hot lunch line, and offering more healthy snack foods, students might be more inclined to enter the hot lunch line

due to the shorter wait time. This would increase the cafeteria's efficiency by reducing the wait time in the long snack line, as well as encourage greater traffic through the 'less popular' hot lunch line, so that students spend less time waiting in line and more time being able to enjoy their food. Besides, this may also encourage those students who only wish to buy one or two items (such as a granola bar or a fruit cup) to complement their bagged lunch to enter the 'hot lunch' line as well. More importantly, it might also encourage those students who normally don't eat lunch due to the perceived 'time constraint' to actually consider the hot lunch line, since other foods would now be offered as well.

Finally, logistically speaking, it is very difficult to accommodate and still provide lunch for the large number of students in such a short period of time, so modifications to the schedule and the large time differences between the first and last lunch periods may take more planning outside the scope of the lunchroom initiative.

How Opportunities Can Be Leveraged

A wealth of external opportunities exists for improving the school lunchroom. First, given that the school currently boasts both healthy and non-healthy food items, this suggests that they do not seem to be limited to having only one food vendor. Therefore, the school might choose to sign more agreements with healthy vendors than non-healthy vendors, and by exposing students to more healthy foods options, this might ultimately lead students to choose those healthier options over less healthy ones. Additionally, since many after-school sports or music practices run from 2-5PM or even later, vending machines are patronized more frequently for snacks (than during the school day or during the lunch periods), especially for those students who typically bring a lunch. Thus, by offering healthier options in vending machines, this could nudge the students to make healthier choices during lunch as well. Along the same lines, supplying more healthy offerings in the cafeteria itself (both for the snack shop and a la carte) is also another viable opportunity for change. For example, the introduction of whole grains into existing items (such as bagels or pasta) may be possible, as students are generally open and flexible to new options. Besides, if these offerings are combined with nutrition education about the benefits of healthier ingredients, this may increase the students' receptiveness to these items.

Another opportunity that could be highly influential in changing school lunchrooms is to involve the parents of students. Understandably, many parents are actively involved in their child's educational experience and concerned about their son or daughter's overall well-being, including what their child eats. Thus, by proposing ideas for improving school lunchrooms to parents and gaining their support, this may open up other avenues of resources as well as provide further backing to implement some of the measures discussed. What's more, the school itself features a website which many parents access to find information, including the school lunch menu. Thus, any information regarding school lunchroom updates would receive much exposure on the website; establishing an interactive feature where parents can provide input or creating some type of school lunchroom forum might also facilitate communication between the school and parents or even amongst the parents themselves. Taking this idea even further, since keypads are already used for payments in lieu of cash at the cafeteria, perhaps it would also be possible to implement some kind of arrangement with the keypad transactions that would allow parents to keep track of their child's food purchases and alert them about what the child is (or is not) eating at school.

Likewise, the entire regional district also creates a newsletter which is sent to all parents in the district, and is available either in electronic/email or paper format. This could also serve as another potential communication outlet to parents. Additionally, other forms of communication that could be leveraged include the district's own local TV channel, which notifies parents about weather closings and school

events, as well as a daily morning announcements for students, which are reported by students in the TV channel production room: since all homeroom teachers are required to turn on morning announcements each day, students would certainly be exposed to any messages that are broadcast, including those related to the lunchroom.

Securing the involvement of as many actors as possible seems to be a powerful way to leverage support and create opportunities for this initiative. In fact, local restaurants and businesses are very well-connected to the high school and can serve as valuable resources in terms of food donations or promoting healthier options. Additionally, teachers and administrators would serve as effective contributors to the initiative. Lunch aides may also serve as another potential source of influence and provide additional support: while they currently monitor the lunchroom environment in a passive manner, giving them a more active role, in terms of what they say or do, might also bring about changes in students' food choices.

Finally, the school also features a 'student/employee of the month' recognition program, which recognizes and encourages individuals to become more involved with the school, so this may also stimulate involvement in the school lunchroom initiative by serving as an incentive for individuals to gain recognition for their efforts.

How threats can be mitigated

The obesity epidemic has become a health concern on a national level, affecting adolescents of all ages, and serves as a primary threat to the lunchroom initiative. The pervasiveness of this epidemic makes it a difficult issue to tackle, as it is influenced by eating behavior both within and outside of the lunchroom. On the other hand, being able to find strategies to curb rates of obesity within school lunchrooms could have universal applications across many schools, and create a positive effect on changing eating behaviors outside the lunchroom as well.

Second, financial conditions typically, if not always, shape any decisions that are made—this is no different for school lunch programs, which are also largely subsidized by the government. Thus, when schools face budget cuts as a result of the economy, this no doubt affects the cafeteria, as well as the choices that people make in terms of what they purchase and/or eat—thereby serving as another potential threat to the lunchroom initiative. In particular, data from school X's profile shows that the school does not budget for Total Food Service Costs, yet ends up actually spending much more than the state average (spending \$85 versus the state average of \$22 in 2006, and \$130 versus \$24 in 2007). These figures may indicate that further examination is necessary to locate the sources of these higher costs, and whether the spending is justified. Additionally, the issue of costs may also generate some pushback from administrators and personnel, not only in monetary terms but in terms of service costs as well. Implementing initiatives will likely require more time and effort on the part of the cafeteria staff, with adjusting to changes regarding how they interact with students or how the lunchroom structure is set up. Administrators may also be hesitant to changes that would be incurred from having to locate healthier food vendors or incorporate additional educational instruction regarding nutrition.

Besides, given that the school is part of a 4-school system, the three other sister schools must also agree to these changes in order for them to be implemented. Thus, since it would be much harder to modify the lunch environment in only one of the sister schools without modifying the policies of the other schools, so other schools might serve as potential obstacles to the lunchroom initiative. In the same way, the school may also face resistance from their current food service managing company, Nutri-

Serve, with whom they have a contractual agreement. This would also make it more difficult to make changes in the cafeteria.

Nevertheless, if key decision makers are made to see the significant health benefits that changing the current lunchroom structure may generate, or be exposed to testimonies of how lunchrooms have been transformed as a source of tangible evidence that change is possible, then this may moderate some of their concerns against agreeing to implement the changes.

V. RECOMMENDATIONS

The purpose of the smarter lunchrooms initiative is not to merely implement change through conventional approaches such as increasing prices or completely eliminating unhealthy foods. Rather, it is believed that small changes can lead to large impacts. Accordingly, it is believed that many of the recommendations for school X are not only practical, but feasible in terms of minimal cost and effort. Additionally, rather than an all-or-nothing approach of advocating measures that accomplish sweeping changes or none at all, these measures are designed to be flexible and easily tailored to each individual school's objectives, whether the school's goal is to improve the overall participation rate of students in the school lunch program, increase overall cafeteria sales, focus on incorporating more healthy foods into the program, or to discourage students from eating less healthy foods on a daily basis. Therefore, below is an outline of several recommendations that schools may want to consider, as well as a table outlining some of the advantages and disadvantages of each set of options.

Option A: Implementing relatively low cost action items to promote more healthy foods

- Moving healthier offerings, such as the salad bar, from a remote location to a more prominent or salient location where students frequently walk by
- Increasing the amount of lighting on healthy foods to make them seem more appetizing
- Use colorful bowls or nicer dishes to display fruit to make them seem more appetizing
 - Presentation is important aspect of inducing consumption
- Creating additional signage to promote healthier products
 - Use creative labels to name food items
 - Make healthier foods more salient by increasing the number of signs towards them, and reducing the number of signs promoting less healthy items
- Increase the serving size of utensils that dispense healthier foods (e.g., spoons for sides of vegetables or fruit)
 - Increase the serving bowl/plate size for healthier items
- Make healthy foods more accessible and within reach
 - Ex., Put fruit cups at eye level and in easy-to-transport containers
- In the hot lunch line, feature the vegetable or healthier options first, and the unhealthy options last, since people may be more likely to choose the options they see or are offered first
- Modifying the school lunch menu design and offerings
 - Promote 'themed' lunch days related to different ethnic foods, holidays, or even school spirit
- Have cafeteria staff encourage healthier options when students are paying at the register
 - Ex., Promote skim milk over chocolate milk
 - Ex., Promote taking an apple as a snack 'for later'
- Incorporate healthy foods that are easy to grab or eat with hands (e.g., sandwiches, veggie sticks, whole grain pretzels)

- Finger foods are extremely popular among kids (ex., chicken nuggets, dippers, mozzarella sticks, etc.), so creating more healthy ‘finger foods’ may encourage kids to try them because they appear convenient
- Incorporating cut-up fruit into the menu, instead of only offering whole fruit
 - Cut-up fruit is more convenient, and smaller pieces encourage people to eat more
- Offer additional lettuce or tomato fixings with deli meat sandwiches so that students who normally don’t elect vegetarian sides/options will have an additional opportunity to add vegetables to their diet
- Advertise the ‘vegetarian’ options offered, even if these options are not strictly limited to those consumed by only vegetarians (ex., bagels and peanut butter, meatless tomato sauce, salad with cheese crumbles)
- Pre-package healthy foods together that are convenient for grab-n-go, so that students do not have to wait in a long line for them, while keeping the unhealthy items separate so that students are less willing to stand in line multiple times to purchase them
 - This can consist of bundling two healthy items together (ex., sandwich and carrot sticks, bagel and fruit) or a healthy item and a less healthy item (ex., salad and chips)
- Kids tend to prefer fruits over vegetables, so at least promoting greater consumption of fruits, if unable to promote both fruits and vegetables to children

Option B: Implementing slightly higher cost action items to promote more healthy foods

- Adding a stereo system or jukebox to the cafeteria
 - By adding music and making the cafeteria environment ‘cool’, kids might be more likely to want to eat there
- Changing vendor contracts to incorporate healthier foods
- Sell more foods considered ‘upscale,’ such as yogurt parfaits or gourmet salads that are also more healthy
- Purchase fruits that are more kid-friendly but may also cost more (ex., strawberries, mandarin oranges, watermelon)
- Offer additional sides of fruit or vegetables at no extra charge with the meal
- Subtly incorporate foods containing whole grains (breads, pastas, even baked goods) into the menu—these do not necessarily have to be advertised or to draw kids’ attention to these items
- Adding more variety to healthy items (ex., adding carrots, tomatoes, cucumbers to salad) to increase the perception of variety and make foods more appetizing
- Increasing the efficiency of the hot lunch line may incentivize kids to choose this line instead of the long wait snack line
- Create an additional ‘healthy snacks only’ line or area in the cafeteria that would feature items such as low-fat milk, granola bars, or fruit, such that students can buy these items but forego the longer lines
- Motivate the cafeteria staff to get more involved/passionate about encouraging kids to eat healthier

Option C: Implementing relatively low cost action items to discourage unhealthy foods

- Put less healthy foods in harder-to-reach, less visible locations or locations requiring extra effort to obtain them
 - Placing the ice cream freezer out of sight, having an opaque cover (so you can’t see what is inside), or making it difficult to grab out of the freezer

- Putting soda or sugary drinks and cookies behind the cash register so that students need to request this item
- Alternatively, having to go to separate locations or lines to acquire and to purchase a single item
- Sell unhealthy items separately rather than using bundling or discounts on multiple items
- Reduce the serving size of utensils that dispense less healthy foods (e.g., spoons for mayonnaise, butter, or higher-calorie salad dressing) or use dispensers with smaller openings
- Limit the amount of unhealthy items (e.g., cookies) that a student can buy at a time
- Require that students use cash to pay for unhealthy items, while allowing students to pre-pay or use keypad for more healthy items
 - The use of cash to pay for items makes people more aware that they are spending actual money, and thus may lead them to ‘think twice’ about their purchase
- Decrease the amount of unhealthy snacks ordered from vendors, and replace this with larger orders of healthier snacks
- Limit the number of bake sales or pretzel sales before/during lunch; the same principle applies to classroom parties
- Reduce portion sizes of less healthy food, increase portion sizes of healthier items
 - Ex. Sell bags of chips in smaller sizes, while selling cut-up vegetables or fruits in larger sizes
- Change the orientation of which foods are ‘main entrees’ (more healthy items) and which foods are ‘side items’ (less healthy items), since kids tend to be very ‘entrée-oriented’
 - Ex., For a lunch menu of breadsticks with marinara and a side salad, instead of putting the breadsticks in the ‘main entrée’ compartment, put the salad in that compartment and the breadsticks on the side

Option D: Increasing participation rates in the cafeteria

- Highlight different organizations (such as athletic teams) by featuring articles or news about them in the cafeteria, so that kids are curious about which of their peers will be featured next
- Involve different organizations/clubs (ex., art club) to decorate the cafeteria and make it ‘their own’—personal investment in the cafeteria may make students more likely to come eat in the cafeteria
- Decorate the cafeteria walls with cool posters or posters that encourage nutrition (ex., featuring role models promoting healthy foods)
- Students who bring lunch tend to sit with those who also bring lunch; those who buy lunch tend to sit with those who buy lunch—by changing the behavior of one or two ‘leaders’ in the group, this may lead to changes within the entire group
 - This may be due to common interests, or because the additional time required to buy lunch would lead those individuals to ‘miss out’ on socializing with their peers
- Involve the faculty and staff—allow them to pick a ‘themed menu’ which features the teacher’s favorite foods
 - Students may be more curious to eat foods that their teacher chooses as favorites
- Incorporate the theme of school spirit into the cafeteria—either in terms of menu offerings, cafeteria atmosphere, or raffles for tickets to school events with the purchase of a hot lunch
- Increase student involvement to promote healthier foods
 - Recruit a group of students who are passionate about nutrition to help brainstorm more creative ideas for initiatives or help implement some of these ideas

- Create a student advisory board that seeks to incorporate more healthy foods in the lunchroom
- Redesign the menu that is distributed to students and parents
- Create a 'menu of the day' sign that students will walk by at the school entrance, to inform them what is on the school lunch menu that day
- Implement a Word-of-Mouth campaign that creates buzz about different events in the cafeteria
- Increase length of lunch period so that students do not feel pressured by the time crunch
 - Students who don't usually buy lunch may feel they will actually have sufficient time to go buy lunch

Some advantages and disadvantages of implementing changes of varying levels and objectives

Option/Alternative	Examples	Advantages	Disadvantages	Implications on Participation
<p>Option 1: Maintaining the status quo; not changing any aspects of the current school lunchroom</p>	<ul style="list-style-type: none"> No change in school lunchroom environment, offerings, or prices 	<ul style="list-style-type: none"> Maintains current costs of lunchroom operations Does not require cafeteria staff nor administrators to change current procedures 	<ul style="list-style-type: none"> It is evident that the school lunchroom plays an important role in children’s eating habits There ARE opportunities that exist for change; not taking action would be a waste of resources Current state of obesity epidemic and unhealthy eating habits of students necessitate some type of action In order to sustain the school cafeteria’s economic viability, more lunches need to be sold Changes of switching or adding new food items may be unfamiliar to students 	<ul style="list-style-type: none"> Not all changes are difficult nor costly—in fact, changes may lead to win-win situations for students, administrators, as well as food vendors
<p>Option 2: Implementing traditional methods</p>	<ul style="list-style-type: none"> Increasing the prices of unhealthy food items, decreasing the prices of healthy items, or eliminating unhealthy foods altogether 	<ul style="list-style-type: none"> Relatively simple to implement Intuitively, seems to be the concept that will generate the most response 	<ul style="list-style-type: none"> Past research and experience has shown that this has not been effective for creating lasting changes Eliminates unhealthy foods completely— 	<ul style="list-style-type: none"> If unhealthy items are eliminated, students will still find other ways to acquire these foods Those who tend to buy less healthy snacks are not especially price-sensitive; raising prices may not deter them from purchases

			<p>this is not the message that the smarter lunchrooms initiative intends to communicate</p>	
<p>Option 3: Implementing relatively low cost action items to promote more healthy foods</p>	<ul style="list-style-type: none"> Moving the salad bar from a remote location to another, more prominent location Increasing the amount of lighting on healthy foods to make them seem more appetizing 	<ul style="list-style-type: none"> Focuses more on the positive aspects of food than the negatives Relatively low cost to implement, yet can result in substantial behavioral changes Simple to execute 		<ul style="list-style-type: none"> Those who are less inclined to give up their unhealthy snacks would be more amenable to this option, since it ‘adds to’, rather than ‘takes away’ from their current diet
<p>Option 4: Implementing relatively low cost action items to discourage unhealthy foods</p>	<ul style="list-style-type: none"> Placing the ice cream freezer in harder-to-reach locations Selling unhealthy items separately rather than using bundling or discounts on multiple items 	<ul style="list-style-type: none"> Relatively low cost to implement, yet can result in substantial behavioral changes Simple to execute 	<ul style="list-style-type: none"> Focuses more on the ‘negative’ aspects of food than the positives 	
<p>Option 5: Implementing slightly higher cost action items to promote more healthy foods</p>	<ul style="list-style-type: none"> Creating additional signage to promote healthier products Adding a stereo system or jukebox to the cafeteria Changing vendor contracts to incorporate healthier foods Incorporating fresh-cut fruit into the menu 	<ul style="list-style-type: none"> Focuses more on the positive aspects of food than the negatives May lead to more significant improvements over the lower cost options 	<ul style="list-style-type: none"> Relatively higher cost to implement May require more effort on the part of lunch staff (labor costs) 	<ul style="list-style-type: none"> May lead to more actors becoming involved in the initiative, which creates more support for the cause
<p>Option 6:</p>	<ul style="list-style-type: none"> Decreasing the 	<ul style="list-style-type: none"> May lead to more 	<ul style="list-style-type: none"> Relatively higher 	<ul style="list-style-type: none"> May necessitate a greater

<p>Implementing slightly higher cost action items to discourage unhealthy foods</p>	<p>amount of unhealthy snacks ordered from vendors, and replacing this with larger orders of healthier snacks</p>	<p>significant improvements over the lower cost options</p>	<p>cost to implement</p> <ul style="list-style-type: none"> • May require more effort on the part of lunch staff (labor costs) • Focuses more on the 'negative' aspects of food than the positives 	<p>level of involvement, both in terms of the number of actors as well as the degree of involvement of each actor</p>
<p>Option 7: Implementing all possible alternatives</p>	<ul style="list-style-type: none"> • Implementing all of the strategies listed above, as well as others 	<ul style="list-style-type: none"> • The ideal method for improving the lunchroom, with the most potential for change • Targets not only modifications in healthy foods, but unhealthy foods as well 	<ul style="list-style-type: none"> • Most schools would find this option to be financially unfeasible, given the scarce resources and budget limitations that each school faces 	<ul style="list-style-type: none"> • Requires highest level of involvement and support of all actors. Implementing all changes may seem like an overwhelming task, which can be discouraging to some • Too many changes occurring at once may also create some shock for students, leading to difficulties adjusting to the new environment

VI. TRACKING RESULTS

Finally, several measures can be used to track the success of these initiatives. Empirically, the number of lunches sold and the number of new healthier items that have been added to the menu can be compared to the baseline figures. Additionally, other forms of feedback can be obtained through direct observation and interviews with students or staff. These actions not only serve to measure the effectiveness of the actions taken, but would also help to guide appropriate changes to the program.