



The Creation and Evolution of the Smarter Lunchrooms Scorecard

Presented by David Just, PhD, Professor and Co-director of the Center for Behavioral Economics in Child Nutrition Programs at Cornell University

Welcome, thank you for joining!

During the last 10 minutes of this presentation David will address as many questions as time allows. To ask a question please use the Q & A feature.

If you are interested in joining the Healthy Food Choices in Schools Community of Practice or have any questions, please contact us at: healthy_food_choices_in_schools@cornell.edu



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Welcome to

SMARTER LUNCHROOMS



The Creation and Evolution of the Smarter Lunchrooms Scorecard

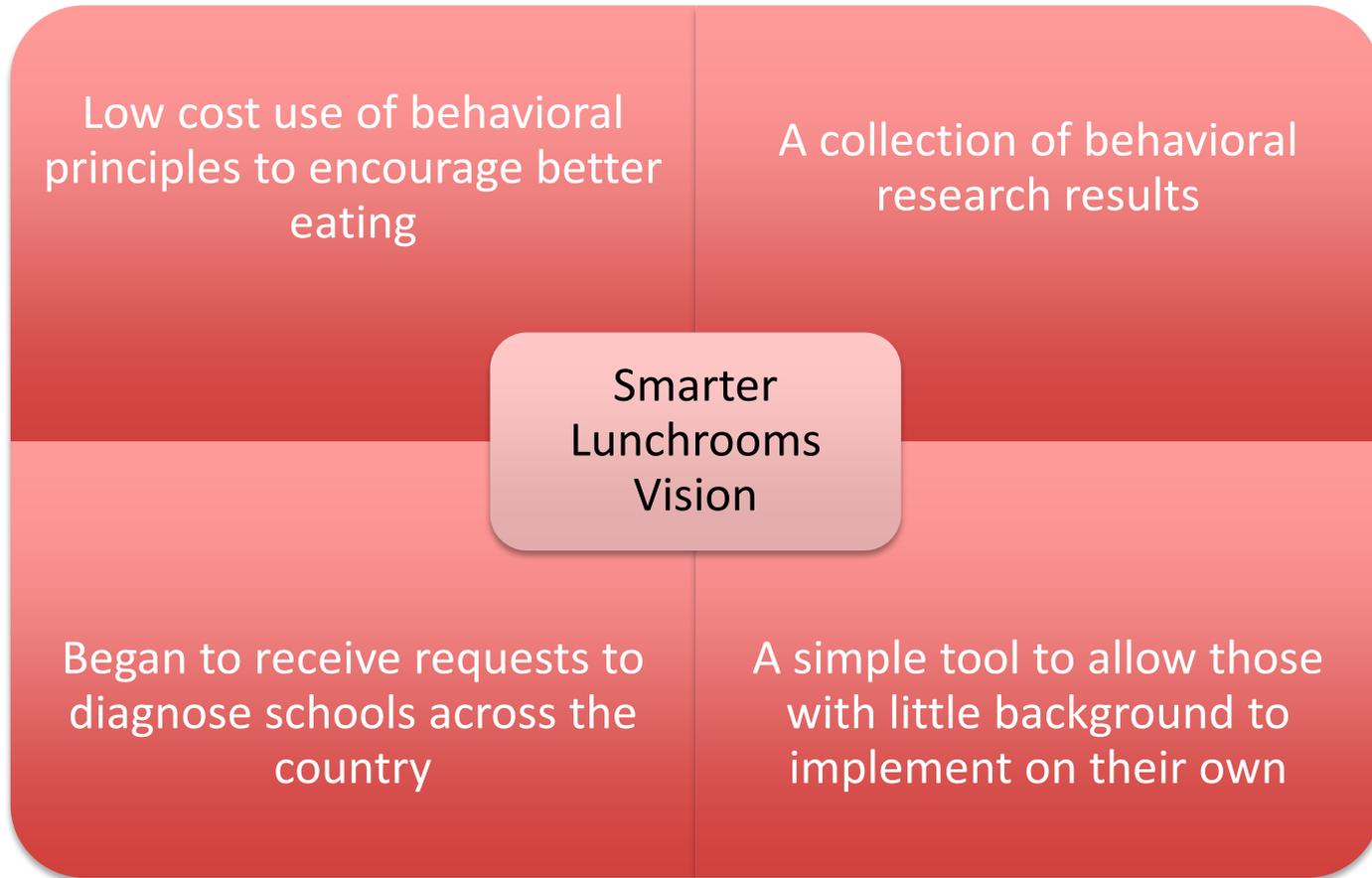
David R. Just

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The Early Motivation



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The Matrix (2012)

	Fruit	Vegetables	White Milk	Targeted Entrée	Reimbursable
0	Fruit with peel is under sneeze shield in metal chaffing dish	Vegetables are difficult to identify/see on the lunch line	White milk is placed in the back of coolers, in disproportionate amount to flavored milks and cannot be seen/reached	No nutrient dense entrée is identified on the lunch line and no entrée is highlighted	Reimbursable meal is not identifiable/ by staff or students and is not highlighted
1	Fruit with a peel is under sneeze shield in an attractive bowl	Vegetables are moved to a well-lit area on the lunch line	White milk is easily reachable in one location where beverages are sold/displayed but less so to flavored milks	Nutrient dense entrée is identified by staff and has been placed first in at least one service line	Reimbursable meal is offered in at least two meal service lines/locations
2	Fruit with a peel is in an attractive bowl and in an easily reached location.	Vegetables have been assigned creative and age-appropriate names and are moved to a well-lit area on the lunch line	White milk is easily reachable in at least two locations where beverages are sold/displayed but, is disproportionate to flavored milks	Nutrient dense entrée is identified by staff, placed first in at least one service line and has been assigned a creative/ age-appropriate name	Reimbursable meal is offered in at least two meal service lines/locations and has at least two different meal combination options

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The Process

1. Establishing general principles based upon accepted behavioral science

What influences food choice in the moment?

Visual/physical
cues of portion
size norms

Convenience

Visibility

Taste
Expectations

Suggestive
selling

Bundling

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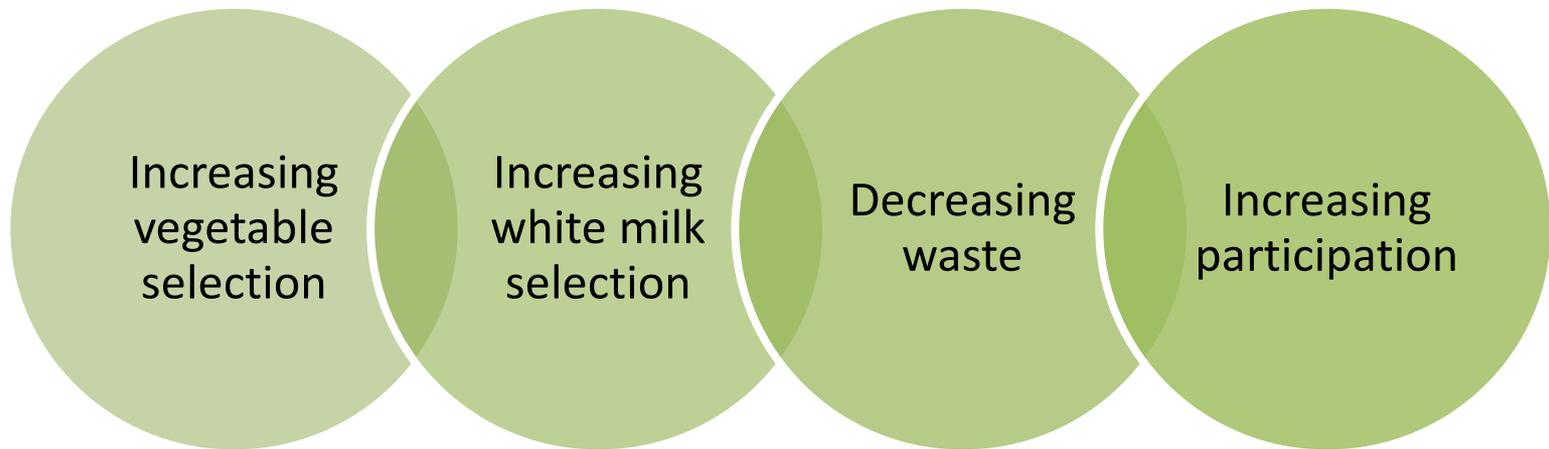
The Process

2. What strategies are supported by the research literature?



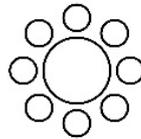
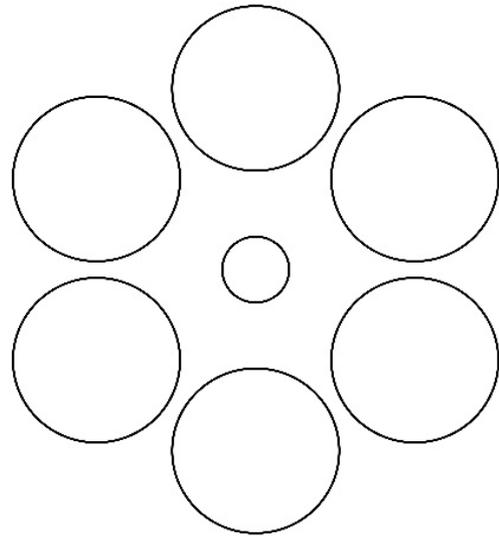
The Process

3. How can these strategies be operationalized for likely school goals?

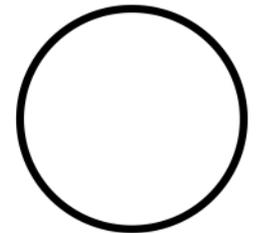
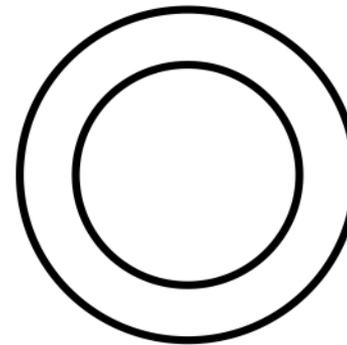


Established Behavioral Science

Ebbinghaus- 1800 (later Titchener)



Delboeuf- 1887



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Work Specific to School Lunchrooms

- 🍏 In prioritizing strategies, we focused first on work established in school lunchrooms
 - 🍓 Demonstrates some practical ability to apply in the right context
 - 🍓 Provides the best evidence of actual effect
 - 🍓 Stress on strategies we can find multiple support for

Other Work in Food Environments

- 🍌 If no work had been done in the lunchroom
 - 🍓 Is there work in other context or labs with children
 - 🍓 If not children is there work on older populations
- 🍌 These points rely on generalizability
 - 🍓 Are they based upon well known phenomena that are likely to prevail in a school setting?
 - 🍓 Can we really implement this in a school lunchroom?

Example 1: At least 2 kinds of fruit are offered

🍏 Behavioral principal:

Kelley, Harold H. "Attribution theory in social psychology." *Nebraska symposium on motivation*. University of Nebraska Press, 1967.

- 🍓 The individual wants to know the causal structure of the environment
- 🍓 Interpret selection as being a result of rational intent

Langer, Ellen J. "Rethinking the role of thought in social interaction." *New directions in attribution research 2* (1978): 35-58.

- 🍓 We are compelled to find a rationale for our actions
- 🍓 Can influence future decisions

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Example 1: At least 2 kinds of fruit are offered

🍌 Lab work: Carrots vs. Celery – simple test of whether choosing between carrots and celery versus passively taking carrots impacts consumption decisions

🍌 Field work:

Roe, L. S., Meengs, J. S., Birch, L. L., & Rolls, B. J. (2013). Serving a variety of vegetables and fruit as a snack increased intake in preschool children. *The American journal of clinical nutrition*, 98(3), 693-699.

🍓 Children offered snacks with a variety of fruits and vegetables selected more often (94% vs. 70%) and consumed more (about 31g)

Hakim, S. M. and G. Meissen. (2013) “Increasing Consumption of Fruits and Vegetables in the School Cafeteria: The Influence of Active Choice.” *Journal of Health Care for the Poor and Underserved*, 24(2): 145-157.

🍓 Replication of Carrots vs. Celery

🍓 There was a 15% increase in consumption on days when students made an active choice

🍓 10 days pre, 10 days post



Example 2: Fruit is offered in at least 2 locations

🍏 Behavioral principal:

Tulving, Endel, and Daniel L. Schacter. "Priming and human memory systems." *Science* 247.4940 (1990): 301.

- 🍓 Viewing objects or words changes the way we respond to closely related objects in the near term
- 🍓 Related objects are activated in memory, changing how quickly we recognized them

🍏 Lab work

Strahan, Erin J., Steven J. Spencer, and Mark P. Zanna. "Subliminal priming and persuasion: Striking while the iron is hot." *Journal of Experimental Social Psychology* 38.6 (2002): 556-568.

- 🍓 College students shown words relating to thirst reported being more thirsty and were more likely to have a drink



Example 2: Fruit is offered in at least 2 locations

🍏 Field work

Harris, Jennifer L., John A. Bargh, and Kelly D. Brownell. "Priming effects of television food advertising on eating behavior." *Health psychology* 28.4 (2009): 404.

- 🍏 An experiment with elementary school aged children
- 🍏 Children ate 45% more when exposed to food on TV versus non-food

Perry, C.L., Bishop, D., Taylor, G.L., Davis, M., Story, M., Gray, C., Bishop, S.C., Warren Mays, R.A., Lytle, L.A. & Harnack, L. (2004) A randomized school trial of environmental strategies to encourage fruit and vegetable consumption among children. *Health Educ. Behav.* **31**, 65–76.

- 🍏 More fruit and vegetables on the school lunch line increases consumption

Lytle, L. A., Kubik, M. Y., Perry, C., Story, M., Birnbaum, A. S., & Murray, D. M. (2006). Influencing healthful food choices in school and home environments: results from the TEENS study. *Preventive medicine*, 43(1), 8-13.

- 🍏 Offering more fruit and vegetables in a la carte lines as well as regular lines increases fruit and vegetable sales (primarily in a la carte)

Cardenas, M. K., Bensiger, C. P., Pillay, T. D. and J.J. Miranda. (2014) "The effect of changes in visibility and price on fruit purchasing at a university cafeteria in Lima, Peru." *Journal of Public Health Nutrition*: 1-8.

- 🍏 Experiment, introducing an additional instance of fruit displayed near the register with a price reduction
- 🍏 Fruit purchases doubled

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Example 3: Lunchroom is branded and decorated in a way that reflects the student body

🍏 Behavioral principal

Chaudhuri, Arjun, and Morris B. Holbrook. "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty." *Journal of marketing* 65.2 (2001): 81-93.

- 🍓 Branding influences purchases and loyalty
- 🍓 Large scale survey (one of many such studies)

🍏 Lab work

PJ Horne, K Tapper, CF Lowe, CA Hardman, MC Jackson and J Woolner. (2004) "Increasing children's fruit and vegetable consumption: a peer-modeling and reward-based intervention." *European Journal of Clinical Nutrition*, 58: 1649-1660.

- 🍓 Cartoon characters eating fruits and vegetables increased consumption on 16 days

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Example 3: Lunchroom is branded and decorated in a way that reflects the student body

🍷 Field work

Hanks, Andrew S., David R. Just, and Adam Brumberg. "Marketing vegetables in elementary school cafeterias to increase uptake." *Pediatrics* (2016): e20151720.

- 🍷 Vegetable characters on salad bar wrap increased selection of salad

Killeen, J. P., Evans, G. W., & Danko, S. (2003). The role of permanent student artwork in students' sense of ownership in an elementary school. *Environment and Behavior*, 35(2), 250-263.

- 🍷 They find generally positive behavioral impacts of allowing students to display artwork

Maxwell, L. E., & Chmielewski, E. J. (2008). Environmental personalization and elementary school children's self-esteem. *Journal of Environmental Psychology*, 28(2), 143-153.

- 🍷 Personalization of the school lunchroom space can positively effect self esteem



The Product



Smarter Lunchrooms Self-Assessment

2014
Scorecard

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Since its founding in 2009 the Smarter Lunchrooms Movement has championed the use of evidence-based, simple low and no-cost changes to lunchrooms which can simultaneously improve participation and profits while decreasing waste. This tool can help you to evaluate your lunchroom, congratulate yourself for things you are doing well and and identify areas of opportunity for improvement

Instructions

Read each of the statements below. Visualize your cafeteria, your service areas and your school building. Indicate whether the statement is true for your school by checking the box to the left. If you believe that your school does not reflect the statement 100% do not check the box on the left. After you have completed the checklist, tally all boxes with check marks and write this number in the designated area on the back of the form. This number represents your school's baseline score. The boxes which are not checked are areas of opportunity for you to consider implementing in the future. We recommend completing this checklist annually to measure your improvements!

It's not nutrition
...until it's eaten!



Important Words

Service areas: Any location where students can purchase or are provided with food

Dining areas: Any location where students can consume the food purchased or provided

Grab and Go Meals: Any meal with components pre-packaged together for ease and convenience – such as a brown bag lunch or “Fun Lunch” etc.

Designated Line: Any foodservice line which has been specified for particular food items or concepts – such as a pizza line, deli line, salad line etc.

Alternative entrée options: Any meal component which could also be considered an entrée for students - such as the salad bar, yogurt parfait, vegetarian/vegan or meatless options etc.

Reimbursable “Combo Meal” pairings: Any reimbursable components available independently on your foodservice lines which you have identified as a part of a promotional complete meal – For example you decided your beef taco, seasoned beans, frozen strawberries and 1% milk are part of a promotional meal called the, “Mi Amigo Meal!” etc.

- Fruit is available at all points of sale (deli-line, snack windows, a la carte lines etc.)
- Daily fruit options are available in at least two different locations on each service line
- At least one daily fruit option is available near all registers (If there are concerns regarding edible peel, fruit can be bagged or wrapped)
- Whole fruit options are displayed in attractive bowls or baskets (instead of chaffing/hotel pans)
- A mixed variety of whole fruits are displayed together
- Daily fruit options are easily seen by students of average height for your school
- Daily fruit options are bundled into all grab and go meals available to students
- Daily fruit options are written legibly on menu boards in all service and dining areas

Promoting Vegetables & Salad

- At least two types of vegetable are available daily
- Vegetables are not wilted, browning, or otherwise damaged
- At least one vegetable option is available in



- Available vegetable options have been given creative or descriptive names
- All vegetable names are printed/written on name-cards or product IDs and displayed next to each vegetable option daily
- All vegetable names are written and legible on menu boards
- All vegetable names are included on the published monthly school lunch menu

Moving More White Milk

- All beverage coolers have white milk available
- White milk is placed in front of other beverages in all coolers
- White milk crates are placed so that they are the first beverage option seen in all designated milk coolers
- White milk is available at all points of sale (deli-line, snack windows, a la carte lines etc.)
- White milk represents at least 1/3 of all visible milk in the lunchroom
- White milk is easily seen by students of average height for your school
- White milk is bundled into all grab and go meals available to students as the default



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Testing and Rollout

Used groups of novices

- Several would visit each school
- All filled out a scorecard
- Reliability rated above 90%
- Helped anyone diagnose and prescribe

Became part of all trainings in 2014

- Parts incorporated in HUSSC
- Started to survey schools on their use of the 100 strategies in 2015



Feedback and Revision

Since its introduction we have trained thousands with the 100 point scorecard



- Very long
- Some wording was ambiguous
- Not everything applies to every school
- Not everything varied between schools
- Somewhat repetitive

Last year we undertook a revision



- Simpler
- Shorter
- Easier to use

The *New* 60 Point Scorecard



Date _____ School Name _____ Completed by _____

The Smarter Lunchrooms Scorecard is a list of simple, no-cost or low-cost strategies that can increase participation, reduce food waste, and increase selection and consumption of healthy school food.

INSTRUCTIONS

1. Review the scorecard before beginning.
2. Observe a lunch period. Check off statements that reflect the lunchroom.
3. Ask other school nutrition staff, teachers, or administration about items that have an asterisk.*
4. Tally the score.
5. Discuss the results with stakeholders. Choose unchecked strategies to implement in the lunchroom.



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FOCUS ON FRUIT

- At least two kinds of fruit are offered.
- Sliced or cut fruit is offered.
- A variety of mixed whole fruits are displayed in attractive bowls or baskets (instead of stainless steel pans).
- Fruit is offered in at least two locations on all service lines, one of which is right before each point of sale.
- At least one fruit is identified as the featured fruit-of-the-day and is labeled with a creative, descriptive name at the point of selection.
- A fruit taste test is offered at least once a year.*

Focus on Fruit Subtotal ____ of 6

VARY THE VEGETABLES

- At least two kinds of vegetables are offered.
- Vegetables are offered on all service lines.
- Both hot and cold vegetables are offered.
- When cut, raw vegetables are offered, they are paired with a low-fat dip such as ranch, hummus, or salsa.*
- A serving of vegetables is incorporated into an entrée item at least once a month (e.g., beef and broccoli bowl, spaghetti, black bean burrito).*
- Self-serve spices and seasonings are available for students to add flavor to vegetables.
- At least one vegetable is identified as the featured vegetable-of-the-day and is labeled with a creative, descriptive name at the point of selection.
- A vegetable taste test is offered at least once a year.*



Vary the Vegetables Subtotal ____ of 8

HIGHLIGHT THE SALAD

- Pre-packaged salads or a salad bar is available to all students.
- Pre-packaged salads or a salad bar is in a high traffic area.
- Self-serve salad bar tongs, scoops, and containers are larger for vegetables and smaller for croutons, dressing, and other
- Pre-packaged salads or salad bar choices are labeled with creative, descriptive names and displayed next to each choice.

Highlight the Salad Subtotal ____ of 4

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The *New* 60 Point Scorecard

The same
research
proven
strategies

Pre-tested
wording and
applicability
with school
lunch staff
and
managers

Similar
reliability
ratings

Similar
award levels
despite score
changes

Now
incorporated
in our
national
surveys

Future plans
for further
effectiveness
training as it
comes into
wider use

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