

# ***Nudging Your Students to Make Healthy Food Choices***

Thompson School District  
Colorado State University



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## **Session Presenters**

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## Purpose

- Examine why students make the choices they do in the cafeteria
- Share ideas about low-cost, no-cost changes to improve student meal participation and food choices
- Share how these strategies are being applied in TSD



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## TSD/CSU Partnership

- Students were not consuming all foods on their trays
- Needed to determine how much was wasted and why
- Collaborated with Dr. Cunningham-Sabo and CSU in 2009 to conduct plate waste study



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## Thompson School District Profile

- 34% of students qualify for free/reduced priced meals
- 50% of all students eat lunch at school
- Meals are planned with a 20-day (4-week) menu cycle
- 5 production kitchens produce meals for 30 schools and 9 early childhood centers
- Lunches already meet most of the proposed USDA school meal standards
- Limited number of a la carte foods are sold during lunch at secondary schools



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## Healthy, Hunger-Free Kids Act, 2010

- Directs USDA to develop stronger nutrition standards for school meals, consistent with the current Dietary Guidelines
- There must be nutrition standards for ALL foods sold in schools
- Ensures water is available and readily accessible during meals
- Strengthens school wellness policies

*USDA, Summary of Healthy, Hunger-Free Kids Act of 2010 (by program)*



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## A Snapshot: USDA Final Meal Standards

- Fruit and vegetables separate components
- Weekly requirement for vegetable subgroups
- Must choose a fruit or vegetable
- May decline 2 meal components
- Total fat 25-35%
- Zero *trans* fat
- Milk
  - Flavored – fat free only
  - White – low fat or fat free
- Major sodium reduction
  - 53-54% for lunch in 10 years
- At least ½ grains must be whole after 2 years
- All whole grains by 2014



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## School Lunch “Tri-Lemma”

- School nutrition programs are expected to:
  - ✓ Serve healthy meals
  - ✓ Increase student participation
  - ✓ Control costs



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## Why do children eat what they eat?

- Preferences
  - biological
  - learned from home, experiences
  - Eat “with our eyes”



- What is available
- Marketing
- Many choices are subconscious



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## How do we “nudge” children to make food healthy choices?

- What is effective?
  - Experiential
  - Multiple opportunities for education and reinforcement
- Why aren't all schools doing this?
- How can we overcome obstacles?
  - Behavioral economics can help...



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## What is Behavioral Economics?

- Standard Economic Theory
  - Assumes people have unbounded...
    - ✓ Rationality
    - ✓ Willpower (self-control)
    - ✓ Selfishness
- Given adequate information (price, income, dietary information, and benefits) we make rational, non-impulsive decisions that are in our best self-interest



*Wilkinson N. An Introduction to Behavioral Economics. 1st ed. New York, NY: Palgrave Macmillan; 2008.*



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## Environment Can Decrease Self-Control

For Example:

- People have a preference for the default option
- External cues can influence our decisions



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## Preference for the “Default” Option

- We follow the path of least resistance
- Asking for something different is difficult
- So...make the best (healthiest) choice the default (easy) choice
  - How could you do that in your cafeteria?

“Do you want fries with your meal?”



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## Influence of External Cues

- Portion size
  - Packaging and package size
  - Distractions
    - Noise, TV
  - Signage
  - Verbal cues
  - Food placement
- } All can influence food choices and decisions
- External cues have more of an influence when we are under stress or distracted

Wansink B, Sobal J. Mindless eating - The 200 daily food decisions we overlook. *Environ. Behav.* 2007;39(1):106-123.



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## How can we minimize the influence of external cues?

### In a lunchroom...

- Ask the students to commit to a choice before lunch time (before hungry)
- Keep the environment quiet and stress free
- Change the layout of the line to favor healthy options



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## How do we “cue” the most healthful choice?

- **In the lunchroom...**
  - Place healthful items next to the cash register
  - Verbally cue fruit and vegetable choices
  - Change traffic patterns



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## Make the Healthy Choice the Easy Choice

In a lunchroom...

- Change the default option
- Include more healthful options in the lunch room
- Move dessert from the regular line to another place



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## School-Based Examples

- Use of verbal prompts<sup>1</sup>
  - 70% of elementary students ate a serving of fruit with a meal when asked “would you like fruit or fruit juice”
  - Only 40% of students ate a serving of fruit when not prompted
- Moving the fruit (middle and high school)<sup>2</sup>
  - Fruit placed in colorful bowls in a convenient place in the lunch line doubled sales of fresh fruit
- Giving descriptive names to vegetables<sup>2</sup>
  - Vegetables were given creative names for one month in 2 elementary school and sales increased 20%

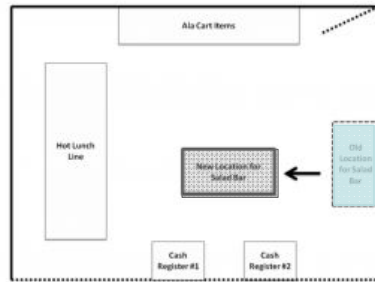
<sup>1</sup>Schwartz, MB. *IJBENPA*. 2007 4:6

<sup>2</sup>Wansink, *JNEB*. 2011; 43 (451): S1



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## School Application: Surprising Salad Sales



- Simple change in traffic pattern
  - Salad bar moved away from wall and rotated 90 degrees
- Sales immediately increased



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## Smarter (and Healthier) Lunchrooms

1. Manage portion sizes
2. Increase the convenience
3. Improve visibility
4. Enhance taste expectations
5. Use suggestive selling
6. Set smart pricing strategies



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## 4-Step Process

- Diagnose – assess the current situation
- Prescribe – determine how to address the issue
- Implement – make the actual changes to your program
- Evaluate – evaluate the effectiveness of those changes



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## Nudging Middle School Students to Make Healthier Food Choices

### Purpose

Identify, implement, and evaluate the effectiveness of targeted cafeteria changes on middle school student vegetable consumption



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# Assessing the Current Situation

## Assessment (Diagnose)

District and school meal program characteristics

Menu review and analysis

Cafeteria observation

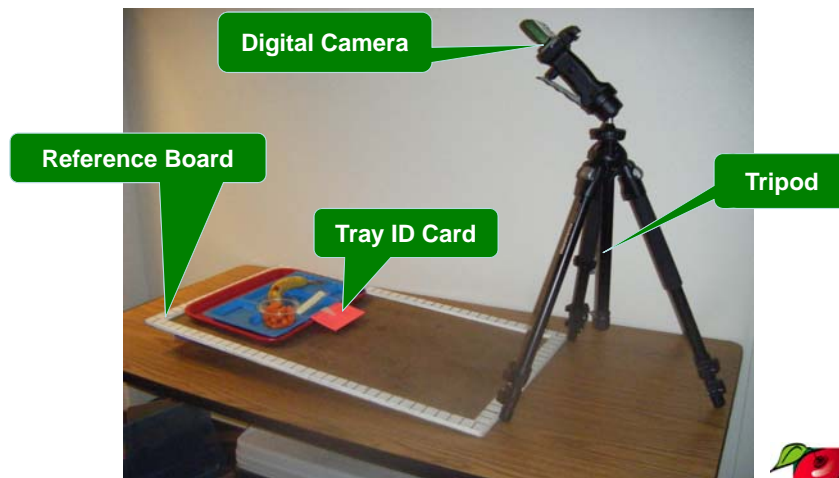
Plate waste assessment – using digital photography

Student surveys



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# Digital Photography Set-up



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# Tray Samples

**Pre Photograph**

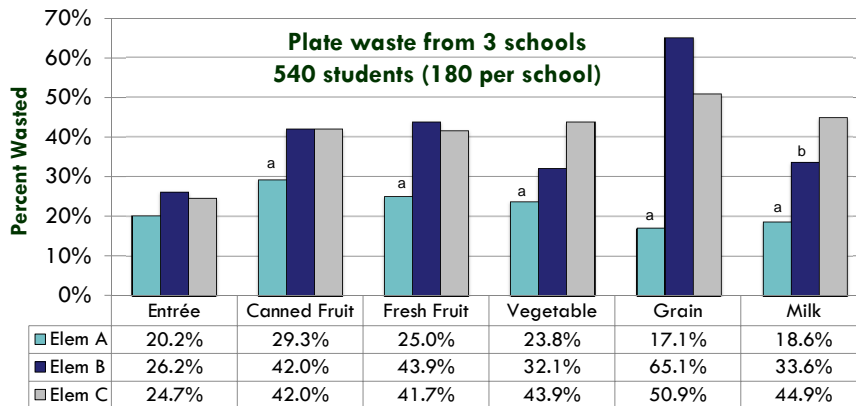


**Post Photograph**



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## Plate Waste: Elementary



**Menu Item and School**

<sup>a</sup> Elem A is significantly different from Elem B and Elem C  
<sup>b</sup> Elem B significantly different from Elem C



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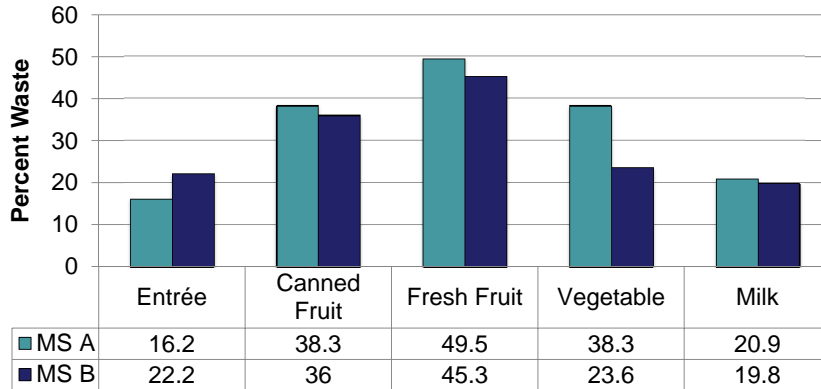
## Slide 26

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- 1 Correct the significance letters  
Stephanie Smith, 11/6/2011

## Plate Waste: Middle School

Plate waste from 2 schools  
380 lunch trays, 190 per school

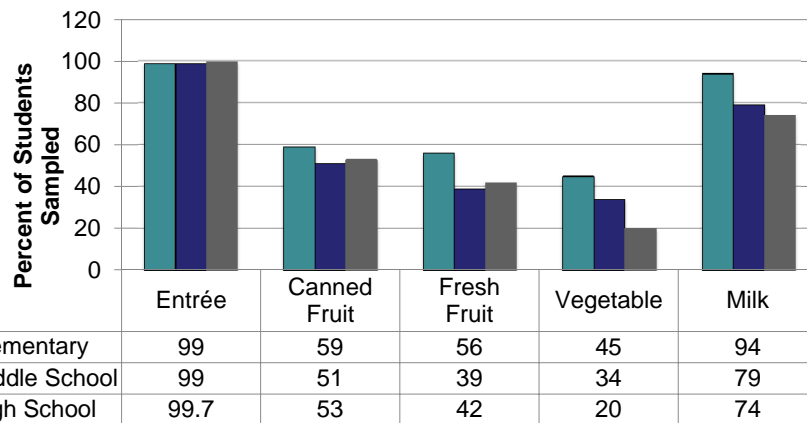


Menu Item and School



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## Student Food Choices Comparison by School Level



Menu Item



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## Cafeteria Observation



Difficult to read menu board and other signs



Unremarkable signs



Vegetables in opaque containers



No signs for fresh veggies

Very few prepared



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## What We Learned

- Students rarely look at anything but the food
- With limited time to eat, students make selections quickly, food is served grab-n-go
- Vegetables served in opaque containers with lids
- Signs may be non-existent; existing signs are difficult to read, placed above where students look
- Fruits and vegetables chosen less often, wasted the most



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## The Intervention – Fall 2011

### Prescribe

Use behavioral economic strategies to encourage (nudge) students to choose vegetables more often at lunch

Specifically:

- Give vegetables creative names, with student input
- Display those names on visible, easy to read signs in the cafeteria



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## Implementation of New Signs

### Implementation

New signs:

- Bold, black border for visibility
- Photograph of the vegetable
- Creative name to grab students' attention
- Easy for cafeteria staff to change signs daily




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# Evaluate Effectiveness

**Evaluation**

Pre and post sign installation

- ✓ Plate waste (digital photography)
- ✓ Food production records
- ✓ School lunch participation
- ✓ Cafeteria Observation




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# Intervention II

- Combine signage with verbal prompts

“Would you like green beans or fresh vegetables today?”



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## Next Steps

- Analyze plate waste data and food production records
- Identify strategies to decrease plate waste
- Implement new strategies in 2012-2013 school year



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## Smarter Lunchrooms Website

**Smarter Lunchrooms Movement**  
It's Not Nutrition Until It's Eaten

Home  
Our Mission  
Smarter Lunchroom  
Best Practices  
The Facts  
Our Heroes  
Video Tips  
In the News  
Contact Us  
Partners  
Your Ideas

How do I make my lunchroom smarter?  
Take our new Creating Smarter Lunchrooms online course. (We accredited for CEUs) [CLICK HERE](#)

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## Resources

- Smarterlunchrooms.org
- USDA FNS behavioral economics funding
  - Joanne Guthrie
  - [jguthrie@ers.usda.gov](mailto:jguthrie@ers.usda.gov); 202-694-5373
- Thaler, R.H. and Sunstein, C.R. (2009). Nudge: Improving decisions about health, wealth and happiness. Penguin Books.



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## What questions do you have?

## Thank you!



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**S1** The best resource for school nutrition staff is [smarterlunchrooms.org](http://smarterlunchrooms.org). Brian's other publications are list there.

Also, the lay book "Nudge" is an easy read and shows how BE is applied in many different settings (savings, health care, etc.)

Smith, Stephanie, 9/28/2011