



6 Principles of Behavioral Economics to Use in Smarter Lunchrooms



This guide reviews 6 principles of behavioral economics that can be used in Smarter Lunchrooms. Each principle has a description, an example from the research field, a connection to Smarter Lunchroom strategies, and Food for Thought.

It's Not Nutrition...
Until It's Eaten!





Principle 1: Manage Portion Size

Portioning hugely influences how much we eat, regardless of official serving sizes. For example, who stops drinking at 8 ounces into a 20-ounce bottle of soda? Nobody! Similarly, we consume more chips when snacking directly out of the bag versus from a small bowl. **Keep portion sizes appropriate** by using pre-portioned snacks and smaller service items¹².

The Evidence in Action

In one study, moviegoers were given small, medium, large, or jumbo-sized containers of free popcorn and asked to return any uneaten portions after the movie. Participants ate the portion they were given, regardless of container size—they “cleaned their plates” even if they were not hungry or they disliked the popcorn. They ate what they were served... and the popcorn was two weeks old! ³

Smarter Lunchrooms Strategies

- Serve condiments and sauces in **individual packets** or with **small-size serving utensils** (a teaspoon rather than a pump canister or ladle).
- Smart salad: Lay out **small tongs** for croutons, and larger ones for greens, vegetables, and other nutrient-dense choices.
- **Offer half-sized portions** of desserts and treats.
- **Review correct portion sizes** with lunchroom service staff. If the lunchroom tacitly allows hungry kids to request larger portions, encourage extra helpings of fruits, vegetables, and other target foods.

Food for Thought

Best of all, *students will self-employ moderation* without any new “rules” or adult supervision needed! No more “ranch police” or other labor-intensive oversight needed!

¹ Wansink, B. & Cheney, M. M. (2005). Super bowls: Serving bowl size and food consumption. *Journal of the American Medical Association*, 293(14): 1727-8.

² Wansink, B., van Ittersum, K., & Painter, J. E. (2006). Ice cream illusions: Bowl size, spoon size, and serving size. *American Journal of Preventative Medicine*, 31(3): 240-3.

³ Wansink, B. & Kim, J. (2005). Bad popcorn in big buckets: Portion size can influence intake as much as taste." *Journal of Nutrition Education and Behavior*, 37(5): 242–5.



Principle 2: Increase Convenience

Convenience influences food decisions⁴. If a food is within easy reach, along a normal travel route, already prepared, or easy to hold and eat, we are far more likely to eat it rather than if we need to spend extra time or effort to obtain or eat it. **Make healthy foods more convenient** than less healthy options.

The Evidence in Action

One experiment showed that kids' perceived preference for chocolate milk over white milk was largely a matter of convenience, since lunchrooms often stock chocolate milk in larger quantities and in the front area of coolers. When test schools stocked 50% white milk and placed it in front of the chocolate milk, it prompted a 46% increase in the number of students choosing white milk instead of chocolate milk.⁵

Smarter Lunchrooms Strategies

- Offer **fruit and vegetables at least twice** in each service line, including by each point of sale⁶.
- **Pre-portion** fruits and vegetables (canned or raw) for fast, easy, clean pick-up.
- Social time is hugely important to kids! Create a **healthy convenience⁷ service station** (window, cart, etc.) with fast, healthy grab-and-go reimbursable meals including fruits, vegetables, white milk, and target entrees.
- Place white milk first at the **front** of coolers, comprising **at least 50%** of all milk stocked⁸; offer white milk at **all points of sale⁹**.
- Offer **pre-plated reimbursable meals** for quick ordering and pickup.
- Offer pre-bagged meals at **alternative food service and dining areas** (school entrances, hallways, bus, classrooms, food trucks/carts, or other approved school locales).

Food for Thought

In elementary schools, little arms have short reaches and beginning readers may have trouble reading signs! Make target foods easy to find and self-serve.

⁴ Hanks, A. S., Just, D. R., Smith, L. E., & Wansink, B. (2012). Healthy convenience: Nudging students toward healthier choices in the lunchroom. *Journal of Public Health, 34*(3): 370-6. DOI: 10.1093/pubmed/fds003.

⁵ Hanks, A. S., Just, D. R., Smith, L. E., & Wansink, B. (2012). Healthy convenience: nudging students toward healthier choices in the lunchroom. *Journal of Public Health, 34*(3): 370-6. DOI: 10.1093/pubmed/fds003.

⁶ Blanchette, L. & Brug, J. (2005). Determinants of fruit and vegetable consumption among 6-12-year-old children and effective interventions to increase consumption. *Journal of Human Nutrition and Dietetics, 18*(6): 431-43.

⁷ Bridge, E., Granquist, L., Hoffer, E., & Schwartz, A. (2010). Child obesity research project: Testing signage at two middle schools in Everett prepared for and funded by the Office of the Attorney General of Massachusetts. Northeast University, School of Public Policy and Urban Affairs; Access: Researchgate.net.

⁸ Goto, K., Waite, A., Wolff, C., Chan, K., & Giovanni, M. (2013). Do environmental interventions impact elementary school students' lunchtime milk selection? *Journal of Applied Economic Perspectives and Policy, 35*(2): 360-76.

⁹ Stroebele, N. & De Castro, J. M. (2004). Effect of ambience on food intake and food choice. *Nutrition, 20*(9): 821-36.



Principle 3: Improve Visibility

Foods that are easy to see are the first to be selected and eaten¹⁰. Make healthy foods the stars of the lunchroom: **front, center, colorful, exciting, and impossible to ignore. Place target items first** in the serving line or in the front, eye-level shelf of coolers.

The Evidence in Action

In one district, fresh fruit sales were poor. Fruit was kept in hard-to-see, dull metal chafing dishes behind nearly-opaque sneeze guards. Elementary students couldn't even see them, much less reach them. Researchers simply **moved the fruit** into a well-lit, colorful bowl or stand near the register and fruit sales rose 103%¹¹!

Smarter Lunchrooms Strategies

- Place foods, signage, and labels at **eye-level to the students**^{12,13} (Remember: younger kids are shorter!)
- Place foods in **multiple places along the line**¹⁴. Students may miss them the first time!
- **Use signage and menus**¹⁵ to highlight special items. Post the **following day's menu** to spark interest and increase participation.
- **List healthiest foods first** on menus and announcements¹⁶.
- Have fun with eye-catching detail! Use **bright colors, arrows, eye-catching fonts, and pictures**. These are especially helpful to beginning readers and English language learners.

Food for Thought

Out of sight = out of mind. Line of sight placement = gets attention.

¹⁰ Painter, J. E., Wansink, B., & Hieggelke, J. B. (2002). How visibility and convenience influence candy consumption." *Appetite*, 38(3): 237-8.

¹¹ Hanks, A. S., Just, D. R., & Wansink, B. (2013). Smarter lunchrooms can address new school lunchroom guidelines and childhood obesity. *The Journal of Pediatrics*, 162(4), 867-9. DOI: 10.1093/pubmed/fds003.

¹² Hanks, A. S., Just, D. R., Smith, L. E., & Wansink, B. (2012). Healthy convenience: Nudging students toward healthier choices in the lunchroom. *Journal of Public Health*, 34(3): 370-6. DOI: 10.1093/pubmed/fds003.

¹³ Thorndike, A. N., Sonnenberg, L., Riis, J., Barraclough, S., & Levy, D. E. (2012). A 2-Phase labeling and choice architecture intervention to improve healthy food and beverage choices." *American Journal of Public Health*: 102(3): 527-33.

¹⁴ Stroebele, N. & De Castro, J. M. (2004). Effect of ambience on food intake and food choice." *Nutrition*, 20(9): 821-36.

¹⁵ Nicklas, T. A., Johnson, C. C., Myers, L., Farris, R. P., & Cunningham, A. (1998). Outcomes of a high school program to increase fruit and vegetable consumption: Gimme 5 -- a fresh nutrition concept for students. *Journal of School Health*, 68(6): 248-53.

¹⁶ Wansink, B. & Love, K. (2014). Slim by design: Menu strategies for promoting high-margin, healthy foods. *International Journal of Hospitality Management*, 42: 137-43.



Principle 4: Enhance Taste Expectations

Food tastes as we expect it to taste¹⁷. Make healthy foods **look and sound delicious**.

The Evidence in Action

Color and contrast matter. In one study, people were served pasta with sauces that either matched or contrasted with their plate color. Diners whose sauce contrasted with plate color ate more of their portions.¹⁸ The contrasting color made the food look more appetizing, so they ate more than those served the exact same food but on same-color plates, which made for less interesting-looking meals.

Smarter Lunchrooms Strategies

- Nobody wants to eat while looking at the trash can! Ensure service and dining areas are **clean, orderly, and inviting**. Hide storage, cleaning materials, and garbage bins.
- **Restock** food trays and salad bars regularly. Trays should look fresh and bountiful.
- **Brand the lunchroom** using school colors, mascots, etc. Promote target foods with this branding.
- **Rotate and update** decorations and signage quarterly. Feature **student artwork and input**.
- **Give foods catchy names** to excite kids' imaginations and increase their interest in target items^{19 20 21 22}.
 - Big bad bean burrito, Dinosaur trees (broccoli), Power peas, etc.
 - Add **photos or graphics** when possible. Print in color.
- Add **splashes of color** to service lines using signs, trays, utensils, and linens.

Food for Thought

Stage a lunchroom like you'd stage a house for sale: clean, inviting, and easy to navigate. Don't forget walkways, behind the counter space, dining areas, entrances and exits, tray return, cleaning supply storage, and garbage/recycling/compost/lost-and-found areas. If the students can see it, it matters!

¹⁷ Wansink, B., Payne, C. R., & Painter, J. E. (2014). What is beautiful tastes good: Visual cues, taste, and willingness to pay. Available at SSRN: <http://ssrn.com/abstract=2473603> or DOI: 10.2139/ssrn.2473603.

¹⁸ Kahn, B. E. & Wansink, B. (2004). The influence of assortment structure on perceived variety and consumption quantities. *Journal of Consumer Research*, 30(4): 519-33.

¹⁹ Wansink, B., van Itterstrum, K., & Painter, J. E. (2005). How descriptive food names bias sensory perceptions in restaurants. *Food Quality and Preference*, 16(5): 393-400.

²⁰ Wansink, B., Painter, J. E., & van Itterstrum, K. (2001). Descriptive menu labels' effect on sales. *Cornell Hotel and Restaurant Administrative Quarterly*, 42(6): 68-72.

²¹ Wansink, B., Just, D. R., Payne, C. R., & Klinger, M. (2012). Names sustain increased vegetable intake in schools. *Preventative Medicine*, 55(4): 330-2. DOI: 10.1016/j.ypmed.2012.07.012.

²² Wansink, B., Shimizu, M., & Campes, G. (2012). What would Batman eat?: Priming children to make healthier fast food choices. *Pediatric Obesity*, 7(2): 121-3.



Principle 5: Use Suggestive Selling

Students respond positively to a smile, a cheerful greeting, and a pleasant suggestion or question. Use **signage** and **staff development** to promote healthy target foods with **positive prompts** and great **customer service**.

The Evidence in Action

People take eating cues from each other^{23 24}. They “follow the leader” and order foods or portions similar to what the person before them orders.

Smarter Lunchrooms Strategies

- Use the power of **positive role modeling**^{25 26}! Ask teaching and administrative staff members to talk up school food by leading students through the serving line, pointing out or taking healthy options, and even eating with the kids.
- Employ **peer-to-peer** marketing. Involve students in making signage, promoting foods, and modeling eating healthy school meals.
- **Train service staff to gently prompt students** to select and eat target items and balanced meals.
- **Signage works!** Add colorful healthy food window clings, stickers, and posters to encourage kids to fill their trays with diverse, nutritious foods.
- Place **pre-plated complete meals** (or photos/models) along the service line²⁷. Make it easy for kids to point to a model tray and say “I’ll take that.”

Food for Thought

If a friend offered you a food by saying, “Try this, it’s amazing!” would you take a bite? What about if they prefaced it by making an icky face and asking, “Does this taste funny to you?” A friend’s or server’s words and attitude can make all the difference in the word!

²³ DeCastro, J. M. (2000). Eating behavior: Lessons from the real world of humans. *Ingestive Behavior and Obesity*, 16: 800-13.

²⁴ Herman, C. P., Roth, D. A., & Polivy, J. (2003). Effect of the presence of others on food intake: A normative interpretation. *Psychological Bulletin*, 129(6): 873-86.

²⁵ Centers for Disease Control (2013). Make a difference at your school! *Chronic Disease*, Paper 31.

²⁶ Rhodes, J. E. (2004). The critical ingredient: Caring youth-staff relationships in after-school settings. *New Directions of Student Leadership, Special Issue: After-School Worlds: Creating a New Social Space for Development and Learning*, 101: 145-61.

²⁷ Glanz, K. & Mullis, R. (1988). Environment interventions to promote healthy eating: A review of models, programs, and evidence. *Journal of Health Education & Behavior*, 15(4): 395-415.



Principle 6: Set Smart Pricing Strategies

People like to save money, which can have both positive effects (such as sticking to a budget) and negative effects (like prompting impulse purchases because treats were on sale, or **bundled**). Use the power of **smart pricing** to give healthy foods the edge.

The Evidence in Action

Paying with a credit or debit card can lead to less healthy purchases. One study looked at grocery store purchases that were paid for with cash versus those that were paid for with credit or debit cards. People buy less healthy items when they pay with a card than when they pay in cash²⁸.

Smarter Lunchrooms Strategies

- Offer **alternative Reimbursable Meal options** made up of a la carte items.
- Involve **parents** in their children's food decisions. Allow **pre-ordering**. Send **meal report cards** home regularly so parents are aware of their children's food choices. Include low-pressure, friendly tips for encouraging children to make healthy food decisions.
- When bundling treats, **combine them with healthy foods or beverages**, such as a cookie-and-milk combo versus a three-cookies-for-a-discount combo.
- Establish a **cash-for-cookies** policy, wherein students may use credit for meals and healthy a la carte items but cash-only for treats/desserts. Students are far more inclined to charge their accounts (and parents) for treats than to hand over their own cash for those items.

Food for Thought

If one large cookie costs 50 cents but you could buy 3-for-\$1, would you do it? Is that a good deal? How about if you were asked to pay 50 extra cents to eat 300 extra empty calories? Is that a good deal? Guess what? It's the same deal!

²⁸ Thomas, M., Desai, K. K., & Seenivasan, S. (2011). How credit card payments increase unhealthy food purchases: Visceral regulation of vices. *Journal of Consumer Research*, 38(1): 126-39.