

A National Survey of the Types and Extent of the Marketing of Foods of Minimal Nutritional Value in Schools

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Executive Summary

This national survey of district public school officials finds that advertising in schools is pervasive, that it is dominated by corporations that sell foods of minimal nutritional value and foods high in fat and sugar, that schools make little money from their participation in advertising, and that most schools' programs would not be reduced if advertising were eliminated. School officials tend to favor increased regulation of advertising in schools, particularly when that advertising is for foods of minimal nutritional value and foods high in fat and sugar. The survey's findings, generalizable to all district public schools in the United States, call into question the common view that schools need advertising money to support key programs.

Advertising targeted at children, particularly with regard to foods of minimal nutritional value and foods high in fat and sugar, is increasing in general and in schools nationwide. According to the Institute of Medicine of the National Academies, the rate

of childhood obesity has more than doubled over the past three decades. The American Academy of Pediatrics warns of the health complications of obesity to which children may become susceptible: high cholesterol, high blood pressure, type 2 diabetes mellitus, coronary plaque formation, and psychosocial problems. The Institute of Medicine's 2005 report on food marketing to children and youth found that advertising influences children's food purchase requests and their beliefs about food, and that there is a strong relationship between advertising and how overweight children are.

Research conducted to this point provides limited information about the nature and degree of advertising in schools. The Commercialism in Education Research Unit at Arizona State University has found considerable evidence from secondary sources that advertising of foods of minimal nutritional value and foods high in fat and sugar content is prevalent in schools. These analyses, however, indirectly measure commercial activities in schools by tracking commercialism-related citations in the press rather than by gathering data directly from schools. The research reported here is the first to directly assess the nature and extent of advertising in schools nationwide.

A stratified random sample of 391 school officials at U.S. district public primary, middle, and high schools reported the extent of each of the following types of advertising activities at their school:

- Sponsorship of school programs and activities, such as sports teams, clubs, or scholarships.
- Exclusive agreements, such as an agreement for a school to sell only Coke products on campus.

- Sponsorship of incentive programs, such as Pizza Hut’s “Book It” program, in which children receive free pizza when they read a certain number of books.
- Appropriation of space on school property, such as when a sports field or laboratory is named after the corporation that donated funds to build it; or when corporations advertise on scoreboards, vending machine fronts, or cups provided at school.
- Sponsorship of educational materials, such as the “What’s on Your Plate?” program sponsored by McDonald’s.
- Electronic marketing, such as the provision of software or televisions, as done by Channel One (which requires that in exchange for the televisions, students view television programming with commercials daily).
- Fundraising, such as General Mills’ “Box Tops for Education” program, in which schools receive funds in exchange for labels and box tops turned in by families.

School officials also reported the amount of money their schools earned from advertising in the 2003-2004 academic year, whether their schools would have to reduce programs if advertising were eliminated at their school, and their attitudes toward increasing regulation of advertising, particularly advertising of foods of minimal nutritional value and foods high in fat and sugar.

The key findings are:

- It is estimated that in American district public schools, between 33.4 and 36.7 million of the 42.2 million students in attendance are exposed to corporate

advertising, and between 26.6 and 30.3 million of those students are exposed to corporate advertising that involves a corporation that sells foods of minimal nutritional value or foods high in fat and sugar.

- 82.6 percent of district public schools have advertising by corporations in schools (24 percent have three or more corporate advertising activities in their schools).
- 67.2 percent of district public schools have advertising by corporations that sell foods of minimal nutritional value or foods high in fat and sugar.
- 43.0 percent of school officials report participating in fundraising programs run by corporations that sell foods of minimal nutritional value or foods high in fat and sugar.
- Of the schools that participate in income-generating advertising activities, 73.4 percent did not receive any income in the 2003-2004 academic year through activities with corporations that sell foods of minimal nutritional value and foods high in fat and sugar. An additional 12.6 percent of schools received \$2,500 or less and 0.4 percent of schools that participated in income-generating advertising activities received more than \$50,000 from corporations that sell foods of minimal nutritional value and foods high in fat and sugar.
- 60.6 percent of school officials support increasing the regulation of advertising in schools, and 68.5 percent support increasing the regulation of

advertising of foods of minimal nutritional value and foods high in fat and sugar in particular.

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Introduction

Arizona State Superintendent of Public Instruction Tom Horne echoed the sentiment of Kevin Costner's Iowa farmer in *Field of Dreams* when he noted about food in schools, "If you sell it, they will buy it."¹ He was referring to the results of a 2004-2005 pilot study at eight Arizona schools. The study found that schools that began offering healthy options at their school stores, snack bars, and vending machines experienced no negative financial impact.² Horne reached the same conclusion as other administrators whose schools have experimented with changing their food offerings:³ "If you sell unhealthy things, [the students] will buy that. But if you sell healthy foods, then they will buy that."

These observations are worth noting. Children in the U.S. buy a lot of high-fat, high-sugar snack food.⁴ The journal *Pediatrics* reported on the soft-drink consumption of 12,498 adolescents who participated in United States Department of Agriculture surveys

from 1965 through 1996: Researchers found that American teenagers drink more than twice as much sweetened soft drinks than they did in 1965,⁵ in containers whose sizes have increased substantially since then (from 12 oz in the 1960s to 20 oz by the late 1990s⁶). Added fats and sugars account for 40 percent of their daily energy intake.⁷

Perhaps not surprisingly, American children are increasingly obese. According to the Institute of Medicine of the National Academies (IOM), over the past three decades the rate of childhood obesity has more than doubled for preschool children aged 2 to 5 years and for adolescents aged 12 to 19 years, and has more than tripled for children aged 6 to 10 years.⁸ The Centers for Disease Control (CDC) and the American Academy of Pediatrics (AAP) warn about the myriad illnesses to which obese children are susceptible.⁹ According to the AAP, complications of obesity include high cholesterol, high blood pressure, type 2 diabetes mellitus, coronary plaque formation, and psychosocial problems.¹⁰

Simply put, people become obese because their caloric intake exceeds their energy output. The reasons for this imbalance are complex, and involve both the eating (energy intake) and activity (energy output) sides of the equation. This report focuses on advertising in schools that encourages children to eat foods high in fat and sugar content (FHFS), such as candy bars, pastries, cookies, french fries, and pizza, as well as foods classified by the U.S. Department of Agriculture as “foods of minimal nutritional value” (FMNV). Foods of minimal nutritional value, including sodas, “water ices,” and certain candies,¹¹ provide “empty calories”—calories that are not accompanied by other nutritional benefits, such as amino acids, fiber, vitamins, or minerals.¹²

Although these foods may not necessarily always be “bad” or “unhealthy” in and of themselves, the fact is that American teenagers generally fail to meet the *2000 Dietary Guidelines for Americans*, which recommends that children two years old and older be physically active at least one hour each day and eat a diet low in fat, sugar, and sodium, and high in fruits, vegetables, and whole grains.¹³ California’s Public Health Institute found that only 2 percent of California teenagers met all five diet and activity recommendations of the *2000 Dietary Guidelines for Americans*.¹⁴ Current concern about FMNV and FHFS arises largely from the awareness that millions of American children, in and out of school, consume large amounts of these foods. In these large amounts, particularly without extensive physical activity, FMNV and FHFS qualify for the label of “unhealthy foods.” This being the case, and particularly in light of the fact that schools’ health and nutrition curricula encourage children to minimize consumption of these foods, advertising in schools intended to promote the consumption of FMNV and FHFS is inherently problematic.

What Causes Children to Eat Too Much Unhealthy Food?

Unhealthy Foods Are Abundant

Foods of minimal nutritional value (FMNV) and foods high in fat and sugar content (FHFS) – together popularly referred to as “junk foods” – are heavily advertised to children.¹⁵ Moreover, children like them.¹⁶ Advertising encourages children to pester their parents to buy these foods, and, as soon as children are old enough to make independent purchases, to buy them for themselves.¹⁷

In schools, these items are sold in addition to, or in competition with, food sold as part of the National School Lunch Program. Foods that are not part of the National School Lunch Program are referred to as “competitive foods,” and schools are permitted to sell them as “à la carte” items in the cafeteria and in the vending machines, snack shops, and school stores.¹⁸ Although foods offered through the National School Lunch Program are regulated to limit fat, provide specific minimum levels of vitamins and nutrients, and eliminate foods of minimal nutritional value, competitive foods are not similarly regulated.¹⁹ The only federal regulation regarding these foods is that FMNV may not be served in food service areas during mealtimes.²⁰ In effect, this regulation affects only a small number of food products and does not prevent them from being sold, for example, on campus right outside the cafeteria doors during meals.

When both are available, students often prefer the heavily-advertised, competitive foods to the healthier foods offered as school meals.²¹ A 2000 study examining the à la carte offerings at 19 suburban junior and senior high schools in the St. Paul/Minneapolis area found that à la carte sales were highest for foods in the cookie, nondairy drink, vegetable, milk, and entrée categories. In the vegetable category, sales were higher for french fries than for all other vegetables, and in the entrée category, sales were highest for pizza and hamburgers.²² A 2003 study examining the eating behaviors of 598 seventh-grade students in the St. Paul/Minneapolis area found that, on average, students in schools with à la carte programs ate fewer fruits and vegetables, and got more of their daily calories from fat than did students in schools without à la carte programs.²³

Actions taken to restrict the availability of competitive foods vary widely from state to state and by locality.²⁴ Not only do regulations vary – so does enforcement. At

one high school in Maryland, for example, where state law prohibits schools from turning on vending machines until after the final lunch period, a reporter found vending machines to be on all day. Indeed, the school's contract with Pepsi contained a clause that suspended the \$55,000 in annual commission that the school would receive as a result of soft drink sales in the event that the Board of Education actually started to enforce the state regulations.²⁵

Pediatricians are particularly concerned about the role sweetened soft drinks play in providing excess calories to children, and warn against their sale and advertising in schools.²⁶ A May 2005 article published in the *Journal of Pediatrics* pointed out that among all the unhealthy foods that children consume, soft drinks are the most problematic because they are the number-one source of added sugars in the American diet.²⁷ Together, sweetened soft drinks and sweetened fruit drinks account for 35 percent of the added sugars consumed by children aged 6 to 11. That percentage rises to 48 percent for girls aged 12 to 17 and 53 percent for boys aged 12 to 17.²⁸ A 2004 study that used an intervention program to promote alternative drinks found that less than one cup of sweetened soft drink per day affected children's weight.²⁹ This study examined 644 English schoolchildren aged 7 to 11. Children in the treatment group learned about nutrition and participated in activities designed to help them reduce their intake of sweetened soft drinks. They decreased their carbonated soft drink consumption by 150 ml per day, whereas children in the control group increased consumption by 50 ml per day. After one year, the percentage of overweight and obese children decreased in the treatment group by 0.2 percent, but increased in the control group by 7.5 percent.

Unhealthy Foods Are Sold and Advertised in Schools

According to the CDC's School Health Policies and Programs Study (SHPPS) 2000 survey, 43 percent of elementary schools, 89.4 percent of middle/junior high schools, and 98.2 percent of senior high schools had a school store, canteen, snack bar, or vending machines where students could purchase competitive foods or beverages.³⁰

Many of the foods and beverages commonly provided through school vending machines, school stores, canteens, and snack bars are foods of minimal nutritional value (FMNV) and/or foods high in fat and sugar (FHFS), such as sweetened soft drinks, high-fat, salty snacks and baked goods, ice cream, and candy.³¹ A 2003 study of California high schools found pizza, chips, cookies, and soda were more commonly sold than healthier alternatives such as yogurt, bagels, or packaged salads (fruit was the one healthy alternative sold as often as the FMNV and FHFS options).³²

Though for different reasons, nutrition researchers and food industry spokespeople typically emphasize the parents' role in educating their children toward healthy eating practices.³³ Parents are not, however, the sole determiners of their children's food preferences. With FMNV and FHFS available to such a great degree at school, it is increasingly difficult for parents to meaningfully influence their children's nutritional choices.³⁴ Although parents play a major role in teaching children about good eating habits, and should be good role models, many children spend nearly half of their waking hours at school and sometimes eat two full meals in the school cafeteria. Therefore, they may be more likely to construct their long-term attitudes about nutrition from behaviors adopted at school despite lessons learned at home or in the classroom. The school social environment models for the students which foods and beverages are

“socially acceptable.” Thus, when schools decide to provide pizza, french fries, and soda, they create an environment in which the school’s social rules undermine the lessons taught in class about proper nutrition.³⁵

Public Outcry Leads to Backlash

In 2004 Senator Tom Harkin (D-Iowa) introduced the HeLP America Act, which calls for regulation of the sale of competitive foods in school. “How in the world,” he asked during a hearing on the National School Lunch Program administered by the Department of Agriculture, “does a healthy, balanced meal stand a fair chance against billions of dollars worth of marketing? In the absence of any alternative, we should ban school vending machines and regulate à la carte sales.”³⁶

Although currently there is no federal legislation restricting the sales of competitive foods in schools,³⁷ individual states and districts have been responding to public pressure to remove FMNV and FHFS from schools. In 2003 and 2004, six states passed legislation to regulate competitive foods.³⁸ In 2005, 17 states passed such legislation.³⁹

At the local level, an increasing number of schools, school boards, and communities have acted to limit or eliminate soda sales at school.⁴⁰ Although many districts seek funding provided by corporations in exchange for marketing access to students, many are rejecting that lure in consideration of the growing concern about childhood obesity. In 2002, the Los Angeles Unified School District, the second largest district in the nation, passed a policy prohibiting the sale of carbonated drinks during school hours. School boards in Oakland and San Francisco went even further: In 2002,

Oakland banned all sales of soda and candy in vending machines and in cafeterias. In 2003, San Francisco banned the sale of sodas and unhealthy snacks by schools.⁴¹ In 2003, the Austin, TX, school district banned soda and junk food in vending machines and the DeKalb County, GA, school district banned the sale of soft drinks, candy, and other items during the school day.⁴² Also in 2003, the Lake County, FL, school board voted to turn down a \$5 million, 10-year contract with Pepsi and to limit vending machine sales to water, juice, and sports drinks.⁴³ In 2005, the Phoenix Union High School District, which will not be subjected to Arizona statewide regulations for middle and elementary schools effective July 2006, decided to ban sale of FMNV and much FHFS in its 11 schools.⁴⁴

The following large cities established health-conscious policies in 2004: (1) Chicago banned vending machines from elementary and public schools, banned FMNV and carbonated soft drinks from high school vending machines, and established criteria regarding the sugar, sodium, and fat content of foods sold in high school vending machines; (2) Philadelphia decided to permit sales only of 100 percent juice drinks, water without sweeteners, flavors, or colors, and milk and milk-flavored drinks;⁴⁵ and (3) New York City prohibited the sale of FMNV and competitive foods until after the end of the last lunch period.⁴⁶

Another development involves private lawsuits. A loose coalition of lawyers, nutritionists and campaigners had been sharing information for possible litigation against soft drink firms since 2004. In Massachusetts, a state with strong consumer protection laws, a class-action lawsuit was prepared for filing in 2006 to call for banning the sale of sugared soft drinks in public schools, on the grounds that such sales constitute unfair and deceptive marketing.⁴⁷ According to an article published in the *American Journal of*

Preventive Medicine in January 2006 coauthored by a law professor involved in the lawsuits, the goal of the suits is not necessarily to win in court, but rather to change public perception of the food industry and, ultimately, to induce changes in industry practices.⁴⁸ The soft drink industry's agreement in May 2006 to self-regulate its sales in schools suggests that this strategy may be effective.⁴⁹

Although awareness of the problem has increased, the difficulty of making what seem to be small changes is exemplified by the experience of Scottsdale, AZ, elementary school principal Christine Loots during the 2004-2005 school year. Frustrated by the contradiction between the health guidelines that children are taught in class and what they learn in the school lunch line, and concerned about the effects on children of high fructose corn syrup (HFCS) in the chocolate milk offered in the cafeteria, Dr. Loots was stymied in her attempts to replace it with regular chocolate milk because of limitations in the offerings of the distributor with which her district contracts. The best she could do was add strawberry milk (without HFCS) to the offerings.^{50, 51}

Consistent with Dr. Loots' experience, a 2002 study of California school districts' contracts with soft drink companies found that contracts sometimes extend for 10 years and require the agreement of the soft drink company to change any aspect of drink sales, thereby trapping schools into conditions that they may prefer to change.⁵² A similar study of Oregon school districts in 2005 found the same: contract lengths ranged from three to 15 years, with an average of nine years. In these contracts, vendors retain significant control over the selection of products, the number and placement of machines, and the hours that beverages are accessible to students. Of the 12 districts with contracts, only one had full and sole discretion over the products sold to students, and three more

had contract terms that allowed them to specify some restrictions on the types of products that may be offered to students in different grade levels.⁵³

Part of the problem is that food service in schools tends to be thought of as a business rather than as a program that not only provides nutritious foods but models what is known about a healthful diet. One reason for this is that school food service programs are expected to pay their own way. California's Public Health Institute reported that of 173 districts that responded to their survey, approximately half indicated the financial goal of the food service department to be breaking even and covering their costs. Nearly 41 percent, however, reported the goal of making a profit and maintaining a financial reserve.⁵⁴

A 2002 study that focused on district-wide beverage contracts in California found that contracts with beverage suppliers tend to be administered by non-nutrition personnel, such as Business Services, Fiscal Services, or External Programs.⁵⁵ These findings suggest that school districts tend to view beverage contracts as business tools rather than as part of the school's child nutrition program. The findings also suggest that non-nutrition personnel, who may not be aware of health trends and recommendations, may make decisions based on fiscal rather than health considerations.⁵⁶

Regulation could reduce the amount of money made by school food service programs.⁵⁷ This is, however, by no means certain. Several examples suggest that Arizona's state superintendent, Tom Horne, is correct and that students will buy what is available. Arizona's Healthy School Environment Model Policy Implementation Pilot Study, upon which Horne based his statements, suggests that schools will not suffer financially.⁵⁸ San Francisco's Aptos Middle School provides another example of a

school that eliminated junk food from its halls over time. Proponents of this school's food service policies point out that price is an important influence on children's purchase behaviors, just as it is for adults: Children will buy healthy selections from vending machines if they are priced competitively in relation to unhealthy selections.⁵⁹ These examples suggest that the assumption of schools' financial dependency on unhealthy foods may be illusory.⁶⁰

Advertising in Schools

The advertising of foods of minimal nutritional value (FMNV) and foods high in fat and sugar (FHFS) complicates and compounds the problems associated with the sale of competitive foods on school campuses. Corporations target children using an overwhelming number of straightforward television ads supplemented by more sophisticated approaches, such as product placement over the Internet and in movies, and by various methods of advertising in schools.⁶¹ Much of the advertising directed at children is for unhealthy foods. Several studies have found that approximately 60 percent of all ads shown during children's weekend and weekday television programming were for food products, particularly candy, sweetened cereals, and fast food.⁶²

Although research suggests a link between media use and childhood obesity, the relationship is complicated by the fact that "media use" involves more than simple exposure to commercials.⁶³ However, it is a fact that obesity has increased along with the increase in the number of advertisements directed at children. In the late 1970s, children viewed about 20,000 television commercials per year, whereas now they view about twice that number.⁶⁴

Advertising Influences Children's Food Choices

Despite the complexity of media influences, studies of the effects of commercials do indicate that commercials have an effect independent of other factors.⁶⁵ When researchers manipulated the ads seen by 5- through 8-year-olds at summer camp, they found that the children's food choices were significantly influenced by whether they saw ads for fruit and juice or for candy and Kool-Aid.⁶⁶ A 2001 study of preschoolers found that those who saw a popular cartoon with an embedded commercial later preferred the advertised product to a similar product, especially if they saw the commercial more than once.⁶⁷ Research has shown that advertising induces children to want unhealthy foods,⁶⁸ to pester their parents for such foods,⁶⁹ and to buy these foods when they have the ability to do so.⁷⁰ A review of research published by the Institute of Medicine in 2005 reported strong links between food advertising, children's purchase requests, and children's weight.⁷¹

With advertisements so prevalent in children's environments, some school officials say, in effect, "What's the difference?" What is the difference, after all, between the advertisements that children see on television and those to which they are exposed at school? And does it matter if children see 40,000 advertisements or 50,000, particularly when schools may receive money from marketing relationships that could help them fund sports, arts, and other programs they might otherwise have to cancel?⁷² In 2003, when California adopted legislation banning the sale of soft drinks in its public schools, opposition to the bill came from unlikely sources such as the California State Conference of the NAACP, the Black American Political Association of California, the California Black Chamber of Commerce, the California State Grange and TELACU (The East LA

Community Union).⁷³ According to an editorial in *The Sacramento Bee*, the theme of the opposition from these groups was that schools, especially in less affluent neighborhoods, need the money from soft drink sales to help fund extracurricular activities such as sports teams and bands.⁷⁴

The large dollar amounts reported in the press for exclusive soft drink contracts certainly make the contracts seem beneficial to both schools and corporations. However, the actual financial benefit to schools is much less clear than the financial benefit to corporations. In a 2000 article, public health researcher Marion Nestle analyzed a contract signed in 1998 by Coca Cola and the North Syracuse Central School District in New York State.⁷⁵ This contract called for the company to pay the district \$1.53 million over 10 years, plus additional commissions on purchases that exceed the guaranteed minimum. At first view, such a contract seems to provide a lot of money to the district, particularly since the initial \$900,000 payment came in a lump sum and was not tied to sales. However, the guaranteed \$1.53 million actually turns out to be a payment of approximately \$15 per student per year – not so much money when the figures are calculated that way, and much less than Coca Cola expected to make in soda sales (Nestle estimated that if half the students consumed an average of one soda per day at \$1 per day, gross sales would exceed \$25,000 weekly). And considering the value of the exclusive marketing by way of Coke's name on every vending machine and every can and bottle in every school for every day of students' academic careers, the value to the corporation increases. Nevertheless, the bottling industry continues to describe commercial activity in school as a win-win situation, in which businesses, schools, and students all gain from mutually beneficial cooperation.^{76, 77}

Advertising in Schools Is Pervasive

Research to date suggests that marketing to children in schools is pervasive.⁷⁸

The Commercialism in Education Research Unit at Arizona State University has followed the trends in schoolhouse commercialism since the mid-1990s, finding eight distinct types of commercializing activities in schools.⁷⁹ The categories are:

1. Sponsorship of school programs and activities, such as sports teams, clubs, or scholarships.
2. Exclusive agreements, such as an agreement for a school to sell only Coke products.
3. Sponsorship of incentive programs, such as Pizza Hut's "Book It" program, in which children receive free pizza when they read a certain number of books.
4. Appropriation of space on school property, such as when a sports field or laboratory is named after the corporation that donated funds to build it; or when corporations advertise on scoreboards, vending machine fronts, or cups provided at school.
5. Sponsorship of educational materials, such as the "What's on Your Plate?" program provided by McDonald's.
6. Electronic marketing, such as the provision of software or televisions, as done by Channel One (which requires that in exchange for the televisions, students view television programming with commercials daily).

7. Fundraising, such as General Mills' "Box Tops for Education" program, in which schools receive funds in exchange for labels and box tops turned in by families.
8. Privatization, such as in the case of corporate charter schools and virtual schools.⁸⁰

In most of these categories, corporations "partner" with schools: the corporations support programs, provide educational materials or technology, help with fundraising, provide a product, and/or help defray the cost of school facilities that, in turn, bear their names. The Government Accountability Office (GAO) reported in 2005 that 75 percent of all high schools, 65 percent of all middle schools, and 30 percent of all elementary schools have exclusive beverage contracts with soft drink corporations.⁸¹ The exact amounts received by schools vary based on factors such as whether the agreement is negotiated by the school or the district and the negotiating expertise of the school or district officials. A 2001 article in *The Washington Post*, for example, described a 10-year exclusive agreement negotiated by Montgomery Blair High School with Pepsi. This contract provided the school with a one-time \$100,000 fee that was received in March 1998, \$55,000 in annual commission, \$1,450 annually in promotional materials for the school, five athletic scoreboards, and other athletic supplies.⁸² The dollar amounts reported in articles such as this suggest that schools make a lot of money from their arrangements with soft drink companies. However, consistent with Nestle's analysis cited earlier, surveys of the actual income received by schools indicate that these dollar amounts may be misleading. Oregon's Community Health Partnership reported in 2005 that district contract revenues amount to less than 0.5 percent of annual district per-

student spending.⁸³ Similarly, a 2005 report by the College of Public Health at the University of Arkansas for Medical Sciences states that 81 percent of Arkansas public schools with vending machines receive \$5,000 or less annually from sales.⁸⁴

Advertising in Schools is Insidious

Psychologists worry about the effect of advertising on young children because they are cognitively unable to recognize and respond to the persuasive intent of the advertisements.⁸⁵ Such advertising, according to the American Psychological Association Task Force on Advertising and Children, is unfair.⁸⁶ Interestingly, the forms of advertising found in schools intentionally blur the persuasive intent, so that children – even older, more cognitively able children – are unable to recognize the advertisement and evaluate it as such. For this reason, commercialism in schools presents a powerful, insidious form of persuasion.

Persuasion researchers have outlined two basic routes to persuasion: In the first, persuasion occurs at a conscious level, in which the targets (in this case, children) evaluate the arguments made in a persuasive message and decide whether they agree or disagree with those arguments. In the second route, persuasion occurs at a lower level in which the targets do not evaluate the arguments in a message, but rather are influenced by peripheral factors that they may not even identify.⁸⁷

When corporations advertise to children at school, they are getting a lot of persuasion for their money. If a child is cognitively aware and savvy enough to notice that Pizza Hut's sponsorship of a reading program is part of an effort to cultivate her loyalty to the Pizza Hut brand, she also notices that her school – an authoritative and respected source – supports that effort. Pizza Hut must be okay, she is encouraged to

reason, because the school would not support it if it was not. The school's collusion in the marketing effort thus becomes an argument in favor of Pizza Hut. The child is persuaded to like Pizza Hut directly, based on a reasonable argument. If a child is younger, or less cognitively able, or less savvy, she develops brand loyalty to Pizza Hut because the sponsorship makes her feel good. She enjoys receiving her gift certificate for free pizza and eating the pizza with her family. Add social pressure to the mix when every child in class is asked to participate and when evidence of achievement is a coupon for a personal pan pizza. When she is older, Pizza Hut is part of her fond memories of her early school years. In this situation, the child is persuaded because she does not recognize what is happening and has no chance to do any cognitive work to counteract the effort to influence her.⁸⁸

Corporations literally sneak their brands into children's mental perspective by sponsoring programs, educational materials, activities, incentive programs, and fundraising efforts, or by arranging for their brand names to be emblazoned on school property or on vending machines around campus. Corporations know this and are willing to pay, if necessary, to get into the schools;⁸⁹ and that is why the American Psychological Association, the Better Business Bureau, the Kaiser Foundation, and Consumers' Union are so concerned about it.⁹⁰

Research makes clear that advertising influences children's desire for unhealthy foods, and that it influences their short-term preferences and purchasing behavior.⁹¹ Corporations are banking on these effects, and also on the long-term influence of their advertising. The long-term influence has yet to be carefully studied, but basic research in persuasion suggests that the insidious nature of school-based advertising will make for

the lasting “brand loyalty” that corporations covet.⁹² The relationship between the advertising of unhealthy foods (FMNV and FHFS) and obesity is complex, and it would be inaccurate to describe either food industry corporations or schools as being solely responsible for causing obesity and its attendant medical problems. Advertising of FMNV and FHFS, however, is designed to convince kids to want and eat more of the foods that are bad for them when eaten to excess. If children are taught in their nutrition classes to limit their intake of these foods, and at the same time the foods are promoted by school-based advertising, the lessons of their health and nutrition curricula are subverted.

As in the case of nutrition education, researchers have emphasized parents’ moderating role on the effects of advertising.⁹³ Strasburger and Donnerstein, for instance, suggest that the “co-viewing” of advertisements is effective because the adult serves simultaneously as a values filter and as a media educator. With respect to television, however, Strasburger and Donnerstein note that children don’t watch the same television with parents as they do when they’re alone – so parents cannot co-view as much as they might like. And when children are in school, parents cannot co-view at all. The school is, effectively, in the role of the parent – serving as values filter and as media educator. When the school allows advertising without filtering (i.e., using financial gain as the only filter), it abdicates both of these roles.

The Purpose of this Research

Existing research provides limited information about the nature or degree of advertising in American schools. A 2003 study of California high schools found that

only six percent of 173 responding school districts prohibited advertising of fast foods and beverages on high school campuses. Where advertising was allowed, ads on vending machines were most popular (found in 48 percent of districts), followed by ads on scoreboards or signs (in 31 percent of districts), posters (in 23 percent of districts), and ads on equipment (in 17 percent of districts).⁹⁴ The Commercialism in Education Research Unit at Arizona State University has tracked and analyzed the trends in commercializing activity in schools for the past 15 years, and found considerable evidence from secondary sources that advertising of FMNV and FHFS is very prevalent.⁹⁵ However, these analyses measure the coverage of commercialism in the popular and education presses rather than the nature and extent of commercial activity in schools directly.

To assess the nature and degree of the advertising of foods of minimal nutritional value (FMNV) and foods high in fat and sugar (FHFS) in schools, a survey of school officials at primary, middle, and high schools nationwide was conducted. The results are generalizable to all district public schools in the U.S. and provide the clearest picture to date of the type and extent of advertising activities to which children are exposed at school.

The survey was designed to assess:

1. The types and extent of advertising in American schools in 2003-2004.
2. The amount of money schools make from advertising activities and the extent to which schools are dependent on advertising funding to support activities.

3. School officials' attitudes toward the regulation of the advertising of foods of minimal nutritional value (FMNV) and foods high in fat and sugar (FHFS) in schools.

Methodology

Survey Construction

Initial survey items were based on a review of extant surveys on student food choices and school food environments.⁹⁶ After this review, a draft survey was constructed utilizing the categories of school commercialism developed by the Commercialism in Education Research Unit (CERU). Experts in the field of school nutrition reviewed the draft survey.⁹⁷ After the feedback from the experts was incorporated into the survey, two principals reviewed it again for content, clarity, and length. The final survey reflects the feedback received during this two-stage review process.

Survey questions assess the type and extent of advertising activities (including schools' financial gain from these activities) and school officials' attitudes toward increased federal, state, and local regulation of advertising in schools. The survey questions cover the seven categories of commercial activities in schools that are highlighted in CERU's annual content analysis of the trends in schoolhouse commercialism:⁹⁸

1. Sponsorship of school programs and activities, such as sports teams, clubs, or scholarships.

2. Exclusive agreements, such as an agreement to sell only Coke products on campus.
3. Sponsorship of incentive programs, such as Pizza Hut's "Book It" program, where children receive free pizza when they read a certain number of books.
4. Appropriation of space on school property, such as when a sports field or laboratory is named after the corporation that donated funds to build it; or when corporations advertise on scoreboards, vending machine fronts, or cups provided at school.
5. Sponsorship of educational materials, such as the "What's on Your Plate?" program sponsored by McDonald's.
6. Electronic marketing, such as the provision of software or televisions, as done by Channel One which requires that in exchange for the televisions, students view television programming with commercials daily.
7. Fundraising, such as General Mills' "Box Tops for Education" program, in which schools receive funds in exchange for labels and box tops turned in by families.

The first four types of advertising listed above (sponsored programs, exclusive agreements, incentive programs, and appropriation of space), typically require school official consent, and therefore, school officials are likely to be well aware of their existence at the school. For this reason, school officials were asked a series of questions about these programs that differentiated between advertising programs with corporations in general and advertising programs with corporations that sell foods of minimal

nutritional value (FMNV) or foods high in fat and sugar (FHFS). School officials first were asked whether the advertising activity was present in the school. If it was, they were asked how many such programs were present, both conducted by any corporation and conducted by corporations that sell FMNV or FHFS. If the activity was not present, they were asked whether the school was currently negotiating an agreement with a corporation that sells FMNV or FHFS.

The remaining three activities (electronic marketing, supplementary materials, and fundraising) often occur at the classroom level and school officials may not be aware of the full extent to which they are present in the school. For this reason, they were asked only if the activities in question were conducted at the school by corporations that sell FMNV or FHFS. If the school was engaged in the activity, the respondent was asked follow up questions about how many programs were present. All respondents were asked if they were currently negotiating an agreement to engage in the activities with a corporation that sells FMNV or FHFS.

Privatization of food services was assessed by asking if food services were provided by a private company. If so, school officials were then asked if the food service company sold FMNV or FHFS.

School officials also were asked to report their knowledge and opinions of state and local regulations of advertising at schools, the amount of money their schools received in the prior year from advertising activities, and whether their schools would have to reduce programs if advertising were prohibited.

Sample

Sample Selection

The random sample of 800 schools was derived from a pool of 76,609 eligible schools contained in the 2002-2003 U.S. Department of Education Common Core of Data (CCD). The CCD contains demographic data for all public, magnet, and charter schools in the United States.⁹⁹ Schools identified in the CCD as either closed or new, schools that reported zero students enrolled, and charter schools were eliminated from the universe of schools eligible for selection.

To capture a representative sample of all schools in the United States, the sample was stratified on three variables: geographic region (Northeast, South, Midwest, and West), grade level (primary, middle, and high school), and a threshold of 40 percent of students eligible for free or reduced price lunch. The geographic region variable is based on groupings established by the United States Census Bureau. All schools are coded into one of four geographic regions: Northeast, South, Midwest and West.¹⁰⁰ The grade-level variable is based on a pre-coded field in the CCD. Schools in the CCD are coded into separate levels based on grades served. The sample includes schools coded as primary, middle, or high schools.¹⁰¹ The final sampling variable, the threshold of 40 percent of students eligible for free or reduced price lunch, is also based on a pre-coded field in the CCD. Schools were divided into two categories: those where less than 40 percent of students qualified for a free or reduced price lunch, and those where 40 percent or more students qualified for a free or reduced price lunch.

For the universe of eligible schools in the CCD, the percentage of schools meeting each unique combination of the sampling variables was calculated to derive the

population parameters. The sample was then drawn to mirror the population parameters. All schools were drawn randomly and independently. The population parameters for each sampling variable and the corresponding percentage of schools in the sample are discussed in the Sample Validation section.

Interviews

To ensure that all respondents were presented with a standard stimulus, interviewers followed a set script during their phone calls. To minimize selection bias, the survey was described in a neutral way as a “national survey of schools about the advertising of foods to children in schools, which is being funded by a grant from the Robert Wood Johnson Foundation” (See Appendix A for the survey protocol).

Interviewers were extremely rigorous in their efforts to reach an appropriate school official—a person with knowledge of marketing programs in schools. Based on the expert knowledge of the researchers (the project director has 39 years of experience in professional education and has studied commercialism in schools for the past 20 years; another team member is a former associate state superintendent of public instruction for policy), a priority order of potential respondents was established as follows: principal, assistant principal, district personnel, and food service director. Interviewers were instructed to contact these people directly and in this order. If these people were not available, interviewers were instructed to ask when would be the best time to reach the principal, note the time, and schedule a call back. Interviews with district personnel and food service directors usually resulted from being referred to them. At least 10 callbacks were conducted (sometimes as many as 16) in order to reach the appropriate school official. Only after multiple unsuccessful calls was a decision made that it would be

impossible to talk to an appropriate school official and the school was coded as a non-respondent.

During the introductory script of the survey, respondents were informed that the published results would be completely confidential, but that their names and contact information would be retained for possible follow-up interviews and stored separately from their survey responses. No one declined to participate after hearing this information. Following the initial scripted introduction to the survey, interviewers moved directly into asking the survey questions (see Appendix A for the introductory script and Appendix B for the survey questions).

Response Rate

The delivery method of the survey was an important methodological decision. The goal was to choose a delivery method that would result in the highest possible response rate given the budgetary constraints of the project. A mail survey was ruled out early in the proposal development process because a typical mailed survey (depending on area and type of survey) can be expected to achieve a response rate of 5 percent to 40 percent.¹⁰² Also rejected was the idea of sending an introductory letter or e-mail to potential participants, which was determined to be time inefficient and unlikely to increase the participation of the randomly selected schools (letters get lost and e-mails get ignored). The research team decided that the most efficient and timely method to contact participating schools was to call directly and use multiple callbacks in order to reach the appropriate respondent.

Table 1 below shows the results of efforts to contact each of the 800 schools in the sample. The survey was administered successfully to 391 schools in the sample. The

telephone numbers were either wrong or disconnected for 89 schools. After contacting the information operator in the relevant area code, the telephone numbers for 10 of the 89 schools were corrected. In total, 79 of the original 800 schools were not contactable because of either wrong or disconnected telephone numbers.

For purposes of computing relevant sample statistics, the 79 schools with either wrong or disconnected telephone numbers were removed from the sample because there was no chance of generating an interview. Removing these interviews generated an “effective” sample of 721 schools.

Of the 721 schools in the effective sample, interviews were successfully conducted for 391 schools, for a response rate of 54 percent. After at least 10 attempts to contact an appropriate official at each school, interviewers were unable to conduct an interview with an appropriate school official in 266 schools, or 37 percent of the sample. School officials at 64 schools refused to participate in the study, for a refusal rate of 9 percent (Table 1).

Table 1: Sample Disposition

Status	Number of schools (percentage of effective sample)
Completed Calls	391 (54.2)
No interview after at least 10 callbacks *	266 (36.9)
Refused to participate	64 (8.9)
Total	721** (100.0)

* Many numbers were called 15 times. The “contact rate” was 100%; failure to complete interviews was a result of inability to speak to a knowledgeable respondent.

** Excludes 79 schools where the number listed in the CCD data is either wrong or disconnected and attempts to correct the number were unsuccessful.

Response rates from other surveys provide a useful context in which to understand the response rate of this survey. According to the Pew Research Center, the typical response rate for a telephone survey, employing standard techniques used by most opinion polling organizations, was 27 percent in 2003 (down from 36 percent in 1997). For a rigorous survey, the typical response rate was 51 percent in 2003 (down from 61 percent in 1997).¹⁰³ Given the trajectory of declining response rates over the years, it is likely that response rates in 2004 are even lower than those described here; regardless, the obtained 54 percent response rate here exceeds those described by the Pew Center for a rigorous survey.

The 2003 Parent and Family Involvement in Education Survey (PFI) and the 2003 Adult Education for Work-Related Reasons Survey (AEWR) report an expected response rate of 60 percent for both surveys, using a 14-callback design, a delivery method similar to the one used in the present survey. In actuality, the PFI survey achieved a 54 percent response rate and the AEWR survey achieved a 49 percent response rate.¹⁰⁴ There are examples of other surveys with higher response rates than our survey; however, unconditional comparisons to these surveys are inappropriate unless the comparison survey has the same the goals and methods as our survey. Most surveys are not as extensive as our survey because of the difficulty associated with navigating several layers of an organization to find a knowledgeable person.¹⁰⁵

Sampling Error

Based on a sample size of 391 and assuming a 95 percent level of significance, the sampling error for this survey is plus or minus 4.9 percent when the response is dichotomous at 50 percent. Sampling error varies with the distribution of the statistic

being used to estimate each parameter. For instance, for an estimate of 40 percent or 60 percent, the sampling error would be plus or minus 4.8 percent; for an estimate of 30 percent or 70 percent, the sampling error would be plus or minus 4.5 percent; and for an estimate of 20 percent or 80 percent, the error would be plus or minus 3.9 percent.

Survey Validity and Reliability

Validity

Validity in survey research refers to the extent to which the observed survey responses reflect the underlying concepts that the investigator has intended to measure. In the present survey, the underlying concepts are behavior, facts, and opinions about school activities and policies. The two forms of validity relevant to this type of research are face validity and external validity. Face validity relates to how well the instrument measures what it purports to measure, whereas external validity relates to the ability of the results to generalize to the designated population.^{106, 107, 108} Face validity was established in the development of the survey by two means:

1. Scholars with relevant knowledge about food in schools reviewed the survey questions, and their suggestions were incorporated into the final survey instrument.
2. School principals pre-tested the survey prior to administration.

External validity is measured by validating the sample in relation to the population parameters. Because of probabilities associated with randomness, samples can be scientifically selected but not representative of the population being estimated.

The match between the sample statistics and the known population parameters provides the best evidence in support of the external validity of the sample statistics. Table 2 compares the population parameters and sample statistics for each of the three sampling variables: geographic region, school level, and the 40 percent free or reduced price lunch threshold. The sample statistics match the population parameters closely, indicating that based on the three variables used to stratify the sample, the sample is a valid microcosm of the population being estimated and the results can be generalized to the population within plus or minus 4.9 percent sampling error or lower.

Table 2: A Comparison of the Population Parameters and Sample Statistics

Number and percentage of schools

	Population N (%)	Sample n (%)
US Region		
Northeast	12,261 (16.0)	63 (16.1)
South	25,214 (32.9)	130 (33.2)
Midwest	22,316 (29.1)	114 (29.2)
West	76,609 (22.0)	84 (21.5)
School Level		
Primary	47,073 (61.4)	239 (61.1)
Middle	14,459 (18.9)	74 (18.9)
High	15,077 (19.7)	78 (19.9)
Free/Reduced Price Lunch		
At or above 40%	39,257 (51.2)	188 (48.1)
Below 40%	37,352 (48.8)	203 (51.9)
Total	76,609 (100.0)	391 (100.0)

Reliability

Reliability refers to the ability of the survey to generate similar results consistently.¹⁰⁹ Test-Retest, Cross-Test, and Split-Half reliability tests are normally not used to determine the internal reliability of survey data. Nevertheless, to assure ourselves that the obtained data were internally consistent, we conducted chi-square tests of randomly selected halves of the data to determine if each question in each half of the data varied significantly from its counterpart in the other half. No statistically significant differences were found between the two halves.

Steps Taken to Ensure Validity and Reliability

Survey Construction

Survey questions were worded carefully to make sure that they were clear and that they assessed what they were intended to measure. Also, careful attention was paid to developing questions for which respondents had the proper knowledge with which to provide an informed answer.

Collaboration and Review by Peer Experts

The draft survey was sent for review to experts in school nutrition. These experts reviewed the survey and offered feedback for improvement. Based on their comments, the survey was restructured according to the seven categories of school commercialism developed by the Commercialism in Education Research Unit at Arizona State University. It was then reviewed again by experts before undergoing final revisions and use.

Pre-testing

After final revisions were made, two principals pre-tested the survey to assess its length and the comprehensibility of the questions. The principals took the survey as if they were actual participants. They both completed the survey within 15 minutes. After completing the survey, the principals were asked if any of the questions were confusing, if anything needed to be added, and if they had any other comments or criticisms. They indicated that the survey questions were easily understandable and answerable.

Pilot testing then began on randomly selected school officials throughout the country. The pilot participants indicated no problems with the survey. Based on the positive feedback from the pilot participants, the results of the pilot administration were included into the national study.

Training of Interviewers

For consistency, it is important that all respondents were presented with a standard stimulus. To this end, all interviewers participated in an extensive training process to ensure standardized interactions between all respondents and individual interviewers (see Appendix A for the survey protocol and Appendix B for the survey items). In addition, interviewers were supervised to make sure that they followed the interview schedule as trained.

Accurate Coding and Data Entry

Data were collected and recorded using a Computer Assisted Telephone Interviewing (CATI) system. The CATI system ensures that data are entered correctly. The system is programmed to make sure that skip intervals are followed according to the

directions, and alerts the interviewer of any errors so that the interviewer can make the necessary corrections during the interview.

Response Error

As with any survey, response error (respondents providing either incorrect or misleading answers) is a threat to validity. In this case, there is the possibility that school officials who agreed to respond to the survey may have tended to be those who did not receive much money from advertising in schools, whereas those who declined to be interviewed may have tended to receive more money from advertising, thus introducing a systematic bias. Although it is not possible to rule out entirely the possibility of the aforementioned systematic bias, the following features of the survey design and administration argue strongly against the presence of such systematic bias in the results:

1. The questions about income are at the end of the survey, not the beginning, so it is highly unlikely that knowledge of their schools' income from corporate activity could have swayed potential respondents from participating in the survey. If anything, principals would be more inclined to brag about corporate partnerships with their schools.
2. As seen in Table 2 above, the external validity of the survey is high. The statistics generated in the sample are almost identical to those in the population parameters for the population.
3. No one refused to answer the income questions and only 10 percent of respondents answered "don't know."

Limitations

Sample Size

The sample is generalizable to all district public schools in the United States. The sample size, however, does not allow for any disaggregation by the stratification variables. Therefore, several interesting questions cannot be explored with the current sample, such as potential differences in the type and extent of advertising activity in schools that serve students from different ends of the socioeconomic spectrum, or in schools at different levels of education (i.e. primary, middle and high schools).

Subjective Nature of Survey Research

Several limitations, detailed below, stem from the limitations inherent in survey research. In all survey research, the purpose is to assess respondents' opinions about fact, rather than fact itself. For this reason, every effort was made to interview school officials for this research who were knowledgeable about the extent and nature of advertising at their schools. The survey was designed specifically to assess the opinions of these officials – at all levels of K-12 education and in high and low income schools nationwide – about advertising at their schools.

Making contact with school officials was a time-consuming task. In an effort to contact a sufficient number of schools in the sample, we encountered some inconsistency in the type of respondents. All of the respondents were selected because they were identified as having knowledge of the survey topic. Most of the respondents were school officials, but in six percent of cases the respondent self-identified as district personnel and in five percent as “other.” It is possible that some of the district or other personnel

provided answers with respect to their entire school district rather than to the particular school in question. However, this is unlikely to have occurred very often, since the respondents were identified as being knowledgeable about the sale and advertising of food on the specific school campus of inquiry.

As is typical in survey research, further refinement of some questions to improve clarity will improve the interpretability of responses in future survey administrations. For example, for the question, “Do you think your district’s policies regarding the advertising to students of FMNV and FHFS are (1) about right (2) too strict (3) not strict enough (4) don’t know/no opinion,” an answer of, “about right,” could mean that the respondent agrees with the severity of district policies because they are appropriately strict or because they are lax enough to give the school official sufficient leeway to permit extensive advertising. In addition, some of the respondents provided logical but uninterpretable responses, such as “not too many,” when asked to estimate how many programs at their school would have to be reduced if advertising was eliminated (see question 55 in Appendix B). In future administrations of this survey, this question could be improved by coding only the number of programs relative to all school programs that would have to be reduced.

The categories of advertising in schools for which school official consent is generally not required (electronic marketing other than Channel 1, fundraising, and use of free supplementary materials) are difficult to measure because sometimes corporations work directly with teachers and parent organizations. School officials might not have been fully aware of the extent of these types of advertising activities going on in their

schools. For this reason, their reports of these activities at their schools may be substantially underestimated, and the survey's findings particularly conservative.

Results

Respondents

The survey respondents were school officials that were identified as having relevant knowledge of the survey topic. 43.5 percent of respondents are school principals. Assistant principals and food service directors each constitute 23.0 and 22.5 percent of respondents, respectively. 5.9 are district personnel and 5.1 percent self-identified as "other." The respondents are a veteran group, averaging 7.0 years in their positions.

Type and Extent of Advertising

The seven types of corporate advertising in the survey have been organized into two general categories: (1) advertising that generally requires the consent of school officials (sponsored programs, exclusive agreements, incentive programs, and appropriation of space), and (2) advertising that generally does *not* require official consent (supplementary materials, fundraising, and many forms of electronic marketing). The latter category of activities often occurs at the classroom level and school officials may not be aware of the extent to which these activities are present in the school.

Advertising that Generally Requires Official Consent

A consistent pattern emerges in advertising that generally requires the involvement of school officials. A moderate percentage of all schools report involvement in advertising that generally requires official consent and in many of these cases, schools are involved with corporations that sell foods of minimal nutritional value (FMNV) and foods high in fat and sugar (FHFS). When schools report engaging in advertising with a corporation that sells FMNV or FHFS, overwhelmingly their *only* advertising activity is with such a corporation.

Sponsored Programs

15.6 percent of all schools report participating in at least one program sponsored by a corporation. Typically, schools have only one sponsored program. Of the schools with sponsored programs, 67.2 percent have programs sponsored by corporations that sell FMNV or FHFS. This means that 10.5 percent of *all* schools have a program sponsored by a corporation that sells FMNV or FHFS. In 74.4 percent of schools with a program sponsored by a corporation that sells FMNV or FHFS, their *only* sponsored program is with such a corporation.

Exclusive Agreements

36.6 percent of all schools report participating in an exclusive agreement of some kind with a corporation. Typically, schools are engaged in only one exclusive agreement. Of the schools with agreements, 57.3 percent have an exclusive agreement with a corporation that sells FMNV or FHFS. This means that 21.0 percent of *all* schools have an exclusive agreement with a corporation that sells FMNV or FHFS. In 93.8 percent of

the schools engaged in an exclusive agreement with a corporation that sells FMNV or FHFS, their *only* exclusive agreement is with such a corporation.

Incentive Programs

37.1 percent of all schools report engaging in an incentive program of some kind sponsored by a corporation. Typically, schools are involved in only one incentive program. Of the schools with incentive programs, 71.0 percent have an incentive program sponsored by a corporation that sells FMNV or FHFS. This means that 26.3 percent of *all* schools are engaged in an incentive program with a corporation that sells FMNV or FHFS. In 89.3 percent of schools with incentive programs sponsored by a corporation that sells FMNV or FHFS, their *only* incentive program is with such a corporation.

Appropriation of Space

17.9 percent of all schools report engaging in agreements to allow corporations to advertise on school property, or allow corporations to purchase “naming rights” to locations on school campuses such as laboratories, auditoriums, or sports fields. Of the schools with appropriation of space agreements, 40.0 percent allow advertising by corporations that sell FMNV or FHFS. This means that 7.2 percent of *all* schools have agreements for appropriation of space or naming rights by corporations that sell FMNV or FHFS. In 29.9 percent of schools that that have an agreement with a corporation that sells FMNV or FHFS to advertise on school space, their *only* agreement is with such a corporation.

Table 3: Extent of School Advertising: Activities that Generally Require Official Consent

National estimates by type of advertising activity and type of corporation

Advertising Activity	Percentage of U.S. Public Schools	
	With any corporation	With a corporation that sells FMNV or FHFS
Sponsored Programs	15.6	10.5
Exclusive Agreements	36.6	21.0
Incentive Programs	37.1	26.3
Appropriation of Space (including Naming Rights)	17.9	7.2

Notes: n = 391 schools. In addition to the activities represented above, the following percentages of schools are negotiating advertising activities with a corporation that sells FMNV or FHFS: sponsored programs 1.5, exclusive agreements 1.0, incentive programs 1.0, and appropriation of space 0.8.

Advertising that Generally Does Not Require Official Consent

Whereas the forms of advertising discussed above require the explicit consent of school officials, several forms of advertising may at times take place without official knowledge or consent. Sometimes, for example, corporations bypass school officials and send materials directly to teachers and parent organizations. In these cases, school officials likely do not know the full extent of advertising activities that may occur on campus. For the purposes of this survey, we assumed that school officials had limited, but not full knowledge of the following advertising activities: electronic marketing, the use of supplementary materials, and fundraising. This assumption has two direct implications for survey construction and the interpretation of survey responses. First, for

advertising activities in this category, school officials were asked to identify only activities with corporations that sell FMNV or FHFS. They were not asked to distinguish between advertising activities with corporations in general and activities with corporations that sell FMNV and FHFS. Second, as a consequence, the findings may under-represent the incidence of advertising activities that generally do not require official consent.

Electronic Marketing

“Electronic marketing” consists of advertising that is delivered electronically via media such as Channel One and free software. Channel One, the most well-known electronic marketing medium, requires official consent; however, the advertising content changes frequently and the list of advertisers is not made public. Therefore, school officials do not know how much of Channel One’s advertising is for FMNV and FHFS. In total, 14.1 percent of all schools report showing Channel One.

6.9 percent of school officials indicate that a corporation has provided computers and/or software free to their school. An additional 1.5 percent of schools are currently negotiating with a corporation that sells FMNV or FHFS to provide computers or software to their school.

Free Supplementary Materials

2.0 percent of school officials report receiving free supplementary materials from corporations that sell FMNV or FHFS.

Fundraising

Schools participate in many forms of fundraising at many different levels. 43.0 percent of respondents report either negotiating or participating in fundraising programs run by corporations that sell FMNV or FHFS. Of these schools, 56.9 percent participate in one fundraising program run by a corporation that sells FMNV or FHFS and 36.6 percent participate in two or more fundraising programs with such a corporation.

Extent of Advertising Activity

To assess the full extent of advertising in schools, the total number of advertising activities per school was calculated (see Table 4). 17.4 percent of schools report no involvement in any advertising. 58.8 percent of schools engage in one or two advertising activities, and 23.8 percent are involved in three or more advertising activities.

Table 4: Total Types of Corporate Advertising Activities per School

Types of Advertising Activities	Percentage of U.S. Public Schools
0	17.4
1	32.7
2	26.1
3	14.8
4	5.9
5	2.3
6	0.5
7	0.3

Note: n = 391 schools

The extent of advertising specifically with corporations that sell FMNV and FHFS is shown in Table 5. 32.7 percent of schools report no involvement in advertising with a corporation that sells FMNV and FHFS. 54.4 percent of schools engage in one or two types of advertising activities with corporations that sell FMNV or FHFS and 12.8 percent engage in three or more advertising activities with such corporations.

Table 5: Total Types of Advertising Activities per School with a Corporation that Sells FMNV or FHFS

Types of Advertising Activities	Percentage of U.S. Public Schools
0	32.7
1	32.7
2	21.7
3	9.7
4	2.3
5	0.5
6	0
7	0.3

Note: n = 391 schools

As noted above, schools often engage in more than one advertising activity. Of those schools that engage in more than one advertising activity, 23.1 percent are involved in a combination of incentive programs and fundraising and another 5.6 percent are involved in exclusive agreements and appropriation of space (see Table 6).

Table 6: Most Common Combinations of Advertising Activities

Combination of Advertising Activities			Percentage of U.S. Public Schools
Incentive Program	Fundraising		23.1
Exclusive Agreement	Appropriation of Space		5.6
Sponsored Program	Exclusive Agreement	Appropriation of Space	5.1
Exclusive Agreement	Incentive Program		5.1
Exclusive Agreement	Fundraising		4.6

Note: n = 195 schools. Includes only schools engaged in more than one advertising activity.

Exposure to Advertising

A total of 42.2 million students attend the population of eligible district schools used in this research to represent public education in the United States. As shown in Table 4 above, a total of 82.6 percent of all schools engage in at least one type of advertising. Based on this result, it is estimated that between 33.4 and 36.7 million students are exposed to corporate advertising in American district public schools. As shown in Table 5, 67.2 percent of all schools engage in at least one type of advertising with a corporation that sells FMNV and FHFS. Based on this result, we estimate that between 26.6 and 30.3 million students are exposed in school to advertising that involves at least one corporation that sells FMNV and FHFS.¹¹⁰

Income from Advertising Activity

To determine the amount of money that schools earned in the 2003-2004 academic year from advertising, schools that do not engage in any advertising and

schools that engage only in advertising activities that are not expected to yield income were excluded from the analysis. Non-income advertising activities include sponsorship programs, receipt of free supplementary materials, and electronic marketing.¹¹¹ The following analysis includes only schools involved in any of the advertising activities for which schools are expected to receive income: exclusive agreements, incentive programs, appropriation of space (including naming rights), and fundraising.

According to school officials, their schools receive little monetary compensation from advertising activities. Of the schools engaged in activities that are expected to yield income, 67.4 percent report receiving no income in the 2003-2004 academic year, 12.7 percent report receiving between \$1 and \$2,500, 13.3 percent report receiving between \$2,501 and \$10,000, 4.8 percent report receiving between \$10,001 and \$25,000, 1.5 percent report receiving between \$25,001 and \$50,000, and 0.4 percent report receiving more than \$50,000 (See Table 7).

School officials also were asked to report the amount of money earned in the 2003-2004 academic year from advertising activities with corporations that sell FMNV and FHFS. Of the schools that engage in income-generating advertising activities with corporations that sell FMNV and FHFS, 73.4 percent report receiving no income in the 2003-2004 academic year, 12.6 percent report receiving between \$1 and \$2,500, 9.8 percent report receiving between \$2,501 and \$10,000, 3.3 percent report receiving between \$10,001 and \$25,000, 0.7 percent report receiving between \$25,001 and \$50,000, and 0.4 percent report receiving more than \$50,000 (See Table 8).

Table 7: Amount of Income Earned from Corporate Advertising, 2003-2004

National estimates based on self-reports by school officials, including only schools engaged in income-generating activities

Income	Percentage of U.S. Public Schools
\$0	67.4
\$1 to \$2,500	12.7
\$2,501 to \$5,000	6.6
\$5,001 to \$10,000	6.7
\$10,001 to \$15,000	1.1
\$15,001 to \$25,000	3.7
\$25,000 to \$50,000	1.5
More than \$50,000	0.4

Notes: n = 391 schools.

Table 8: Amount of Income Earned from Advertising by Corporations that Sell FMNV and FHFS, 2003-2004

National estimates based on self-reports by school officials, including only schools engaged in income-generating activities

Income	Percentage of U.S. Public Schools
\$0	73.4
\$1 to \$2,500	12.6
\$2,501 to \$5,000	4.0
\$5,001 to \$10,000	5.8
\$10,001 to \$15,000	0.4
\$15,001 to \$25,000	2.9
\$25,000 to \$50,000	0.7
More than \$50,000	0.4

These modest income estimates are consistent with a perceived lack of dependence on income from advertising activities with corporations that sell FMNV or FHFS to support school activities: 87.5 percent of school officials report that no programs or activities would have to be reduced if advertising with corporations that sell FMNV or FHFS were prohibited.

Privatization of Food Services

18.2 percent of schools contract with a private company to provide food services. In those schools that contract with a private company, 60.6 percent of the companies sell foods of minimal nutritional value (FMNV) or foods high in fat and sugar (FHFS).

Attitudes of School Officials Toward the Regulation of Advertising in Schools

School officials were asked to report their opinions toward increased regulation of advertising to children in schools, in general, and toward increased regulation of FMNV and FHFS advertising, in particular. The questions were designed to distinguish between school officials' opinions of regulation based on different levels of government: state, federal, and no level specified. In addition, if school officials indicated that their district has a policy that regulates the advertising of FMNV and FHFS to students, they were asked to rate their district policy as either "about right," "too strict," or "not strict enough."

Overall, school officials support increased regulation of advertising of FMNV or FHFS more than they support increased regulation of school-based advertising in general.

60.6 percent of school officials support increasing the regulation of advertising in schools, and 68.5 percent support increasing the regulation of advertising of FMNV and FHFS in particular (Table 9). A cross-tabulation of responses found that 26.5 percent of school officials who oppose increasing the regulation of advertising, in general, shift their opinion to support the increased regulation of advertising of FMNV and FHFS (see Appendix D).

Table 9: School Officials’ Attitudes toward Increased Regulation of Advertising in Schools in General and Increased Regulation of FMNV and FHFS Advertising

National estimates based on self-reports by school officials, percentage of school officials

	Favor	Do Not Favor	Don’t Know/ No Opinion
Increased Regulation of Advertising	60.6	29.4	10.0
Increased Regulation of FMNV and FHFS Advertising	68.5	24.6	6.9

Note: Rows may not total to 100% due to rounding.

Although school officials’ attitudes toward increasing regulation becomes moderated when they are asked specifically about regulation by state (Table 10) and federal (Table 11) governments, the general trend remains consistent. School officials favor increasing the regulation of advertising of FMNV or FHFS more strongly than increasing the regulation of advertising, in general. 48.1 percent of school officials support increasing state regulation of advertising, in general, compared to 53.7 percent who favor increased state regulation of advertising of FMNV and FHFS. 13.8 percent of

school officials who oppose increased state regulation of advertising, in general, shift their opinion to support increased state regulation of advertising of FMNV and FHFS (see Appendix D). 37.1 percent of school officials support increased federal regulation of advertising, in general, compared to 41.4 percent who favor increased federal regulation of advertising of FMNV and FHFS. 8.9 percent of school officials who oppose increased federal regulation of advertising, in general, shift their opinion to support increased federal the regulation of advertising of FMNV and FHFS (see Appendix D).

Table 10: School Officials’ Attitudes toward Increased State Regulation of Advertising in Schools and Increased State Regulation of FMNV and FHFS Advertising in Schools

National estimates based on self-reports by school officials, percentage of school officials

	Favor	Do Not Favor	Don’t Know/ No Opinion
Increased State Regulation of Advertising	48.1	42.7	9.2
Increased State Regulation of FMNV and FHFS Advertising	53.7	39.1	7.2

Note: Rows may not total to 100% due to rounding.

Table 11: School Officials’ Attitudes toward Increased Federal Regulation of Advertising in Schools and Increased Federal Regulation of FMNV and FHFS Advertising in Schools

National estimates based on self-reports by school officials, percentage of school officials

	Favor	Do Not Favor	Don’t Know/ No Opinion
Increased Federal Regulation of Advertising	37.1	54.5	8.4
Increased Federal Regulation of FMNV and FHFS Advertising	41.4	51.9	6.6

Note: Rows may not total to 100% due to rounding.

39.6 percent of school officials reported that their district has a policy regulating the advertising of FMNV or FHFS. 91.0 percent of these school officials rate their district policies regulating advertising of FMNV or FHFS as “about right,” 8.4 percent as “not strict enough,” and 0.6 percent had no opinion. None rated their district policies as “too strict.”

Discussion

The results provide primary data about the scope and extent of commercial activities in American schools and generalize to all district public schools in the United States. We estimate that between 26.6 and 30.3 million students are exposed in school to advertising by corporations that sell foods of minimal nutritional value (FMNV) and foods high in fat and sugar (FHFS), most commonly in the form of fundraising, exclusive agreements, and incentive programs. Corporations that sell FMNV and FHFS dominate

the advertising landscape in schools. With respect to advertising that involves the negotiation and approval of school officials, 67.2 percent of schools with sponsored programs, 57.3 percent of schools with exclusive agreements, 71.0 percent of schools with incentive programs, and 40.0 percent of schools with appropriation of space agreements engage in these advertising activities with corporations that sell FMNV or FHFS.

With respect to advertising that generally does not require the consent of school officials, fundraising is the most common, with 43.0 percent of schools reporting participation in fundraising programs run by a corporation that sells FMNV or FHFS. This estimate—which very well may be an underestimate because fundraising may take place without school officials’ knowledge—makes fundraising in collaboration with corporations that sell FMNV and FHFS the most widespread form of advertising in schools.

A common argument against restricting corporate marketing activities in schools is that schools badly need the money they receive from such activities to fund programs.¹¹² Interestingly, the results reported here suggest that according to school officials, most schools are not receiving much, if any, money as a result of permitting corporate advertising. 73.4 percent of schools that have advertising by corporations that sell FMNV and FHFS report receiving *no* income at all in the 2003-2004 academic year, and only 4.4 percent report receiving more than \$10,000. Moreover, 87.5 percent of all schools report that no programs or activities would be reduced if advertising with corporations that sell FMNV or FHFS were prohibited. Of schools that have corporate advertising in their schools, 85.8 percent reported that no programs or activities would be

reduced, and of schools engaged in income-generating advertising activity, 85.2 percent reported that no programs or activities would be reduced. There are a few possible explanations for this finding:

1. It is possible that districts make contracts with companies and not schools. Therefore, schools may see a rather insignificant sub-amount of that money. Or, the dollars could be provided in a block format and administrators do not associate these dollars with the contracts.
2. When the press reports schools getting money, they may be using “school” as shorthand for “district.” Again, the schools may not be entering into contracts so much as districts are entering into contracts on behalf of schools.
3. Large dollar contracts make for interesting headlines. It may be that these are disproportionately represented in the press. It is also the case that as most exclusive agreements have consumption requirements and other contingencies, the dollar amounts reported as possible are higher than the dollar amounts actually received.

The survey data also provide a snapshot of school officials’ attitudes toward regulation of the commercial activity present in schools. The majority (60.6 percent) favors increased regulation, particularly when that regulation specifically targets advertising of FMNV and FHFS (68.5 percent). Officials’ favorable opinion was somewhat moderated, however, in their answers to questions that specified who – the state or federal government – should do the regulating. Overall, more respondents favor state (53.7 percent) than federal (41.4 percent) regulation, and this probably reflects the respondents’ general attitudes toward where regulation is appropriately initiated.

Favorability toward increased regulation of advertising of FMNV and FHFS may reflect respondents' assessments that – despite assumptions and rhetoric to the contrary – their schools actually do not make much money from advertising and are not dependent on advertising money to fund programs.

These data are particularly interesting when examined within the larger context of schoolhouse commercialism. Commercial activity targeted at children is increasing both in general¹¹³ and in schools nationwide¹¹⁴ as corporations appreciate the captured and impressionable audience they find in school settings. Foods of minimal nutritional value (FMNV) and foods high in fat and sugar content (FHFS) are a natural object of advertising at school, as they are often sold in school stores and vending machines. The advertising of these products can have a strong, immediate impact, especially when it occurs in the form of a naming-rights agreement for the school's sports field or an exclusive agreement in which the school is obligated to sell Coke products, for example.¹¹⁵

Critics of schoolhouse commercialism argue that schools are “selling out” their students when they offer them up to corporations as marketing targets.¹¹⁶ This may be the case particularly when the marketed products are FMNV and FHFS. In contrast to the limited short-term financial gains discussed above, the long-term cost of encouraging children to eat more FMNV and FHFS may be considerable. According to the National Institute of Medicine, over the past three decades, the rate of childhood obesity has more than doubled.¹¹⁷ Complications of obesity, of which we can expect to see more, include high cholesterol, high blood pressure, type 2 diabetes mellitus, coronary plaque formation, and psychosocial problems.¹¹⁸

The relationship between obesity and the advertising of FMNV and FHFS is complicated, and neither specific types of foods nor the people who advertise them are solely to blame for the obesity epidemic. The soft drink industry argues that sweetened soft drinks can be a reasonable part of a healthy, active lifestyle¹¹⁹ and fast food companies have begun to promote physical fitness.¹²⁰ However, schools' health and nutrition curricula, based on the best available evidence, teach children to limit the amount of FMNV and FHFS they consume because, in excess, these foods do become unhealthy. In sharp contrast, advertising of FMNV and FHFS is designed to encourage children to buy and consume more and more of these foods. When schools participate in advertising efforts, they are, in effect, encouraging over-consumption and thus compromising their curriculum.

For Future Study

The survey data generalize to all district public schools in the United States, and provide information about the extent and nature of advertising in schools that is qualitatively different than that provided by any other research to date. Even so, more can be learned by using complementary methodologies in future research. In particular, site visits to selected schools can accomplish several purposes that cannot be accomplished with a survey, even a national survey with a rigorous design like the one reported here. First, observations and interviews with teachers, parents, and students would make it possible to more accurately describe the extent and impact of those advertising activities that generally do not require official approval. Second, site visits would permit the documentation of how and when students are exposed to advertising,

and how such advertising influences students' food choices. Finally, they would provide a more complex understanding of the impact of advertising on students. This understanding could provide a basis for identifying where policy with regard to advertising is needed and, importantly, what good policy would be.

Several important questions remain open for further study:

1. The data provide a still photo of a rapidly changing situation, rather than a film that documents changes over time. As corporations increase their efforts to reach the child market, as awareness and response to the implications of advertising FMNV and FHFS increase, and as funds continue to be tight, it will be important to keep tabs on what is marketed to children in schools, and how.
2. Some districts have big-dollar contracts with corporations for advertising—particularly in the form of exclusive soft-drink agreements. However, the survey results find that most schools are not receiving big money. Further in-depth research on the financial implications for schools that engage in advertising activities would provide more information about the processes by which advertising efforts such as soft drink contracts do—or do not—yield money for schools.
3. In a related vein, it would be particularly interesting to follow schools, such as those in the Arizona pilot study,¹²¹ that decide to “go healthy.” Schools and districts hesitate to make this move out of fear of losing money from à la carte sales, and from contracts with corporations with whom schools want to be seen as good partners. In addition, industry sources give much play to

students' "right to choose" what they eat and drink at school at the same time that corporations are doing whatever they can to manipulate what students actually eat and drink at school. Further evidence that neither schools' bank accounts nor their students suffer from health-conscious policies and regulations may encourage more schools and districts to follow suit. It may also inspire both further assessment of the need for state regulation and further self-regulation by corporations in terms of the products that they advertise at school. As recently as May 2006, the American Beverage Association announced a new self-regulating policy for vending machines in schools.¹²²

4. It is widely held that low-income children are more exposed to advertising at school than middle or upper-income children.¹²³ The current research stratified by a 40 percent threshold of students eligible for a free or reduced price lunch in order to make sure that the sample contained an economically representative sample. The results suggest no difference between schools with more and those with fewer lower-income children, but as the sample size does not allow for disaggregation by school-income level, these results are suggestive rather than conclusive. Future research could explore this question further by specifically comparing schools with lower- and higher-income students.
5. Similarly, although the stratification by grade levels offered at the school was important to create a representative sample of all K-12 district public schools, it did not allow for an exploration of differences among primary, middle, and high schools. Fruitful future research could examine such questions as how

advertising differs among the different levels of schools, and how these differences affect children's food choices.

6. Given that several forms of advertising (i.e., electronic marketing, fundraising, and supplementary materials) do not generally require school official consent and are often introduced into schools via teachers or parent organizations, it could be that the incidence of these types of advertising reported in the current survey of school officials is substantially underreported. A follow-up national survey of teachers would provide a more accurate, generalizable assessment of these forms of advertising.
7. The finding of little income for schools from commercial arrangements is one of the most interesting findings in the current data. Site visits to selected schools would allow for exploration of the causes of the inconsistency between this finding and press reports of lucrative contracts between schools and corporations.

Conclusion

Our findings show that advertising in schools is pervasive, that it is dominated by corporations that sell FMNV and FHFS, and that not only do schools not make much money from their participation in advertising, but also that in most schools, programs would not have to be reduced if advertising were eliminated. These findings call into question the common wisdom that schools need to compromise their health and nutrition curricula in order to make the advertising money they need to survive, and they provide

support for efforts to remove advertising of foods of minimal nutritional value (FMNV) and foods high in fat and sugar (FHFS) from school campuses.

Appendix A: Survey Protocol

Hello, I'm calling on behalf of the Education Policy Studies Laboratory at Arizona State University. We're conducting a national survey of schools about the advertising of foods to children in schools, which is being funded by a grant from the Robert Wood Johnson Foundation. I'm calling to request your participation in the survey. May I speak to the principal please? *(If the principal was unavailable, interviewers asked for the assistant principal. If the assistant principal was unavailable, they asked whether someone in the District Office might be available to do the survey. And, finally, they asked for a food service director. If no-one was available, interviewers asked when the best time would be to reach the principal. They would then note the time and schedule a call back. Interviewers were instructed to stress speaking to the principal or assistant principal. District personnel and food service director interviews usually resulted from being referred to them.)*

(When interviewers reached the appropriate school official, they continued as follows)
Hello, I'm calling on behalf of the Education Policy Studies Laboratory at Arizona State University. We're conducting a national survey of schools about the advertising of foods to children in schools, which is being funded by a grant from the Robert Wood Johnson Foundation. I'm calling to request your participation in the survey.
May I tell you about it?

If no: Is there another time that would be better to talk to you?

If yes: Great. As I said the survey we're conducting is a national survey about the advertising of foods to children in schools. This survey will allow us to compile a current picture of the kinds of foods that are advertised in elementary, middle/junior high and high schools around the country and to understand how those foods are advertised.

Your school was randomly chosen for participation in the survey. It will take about 15 minutes of your time. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the survey at any time, there will be no penalty of any kind.

The results of the research may be published, but your name will not be used. We would like to retain your name and contact information, however, in case we conduct follow-up interviews. This information will be stored separately from your responses to the survey. All your responses will be held completely confidential.

We are only interviewing 400 schools nationwide and would welcome your participation. Do you think you can help us out with the survey?

If no: thank you very much for your time. Good bye.

If yes: Great. *(Continue with survey questions)*

Appendix B: Survey Items with School Official Responses

The following tables include percentage totals that may not equal 100.0 due to rounding.

1. Thank you for taking the time to participate, I really appreciate it. Let me verify I am speaking with the ...

	Frequency	Percent
Principal	170	43.5
Assistant Principal	90	23.0
District Personnel	23	5.9
Food Service Director	88	22.5
Other	20	5.1
Total	391	100.0

2. How long have you been in your current position?

	Frequency	Percent
0-5 years	216	55.2
6-10 years	82	20.9
11-20 years	72	18.4
21 years or more	16	4.1
No Response	5	1.3
Total	391	99.9

3. Now I'm going to ask you a series of questions about foods of minimal nutritional value or high in fat or sugar content. Foods of minimal nutritional value include carbonated beverages, popsicles, ice cream, and gum. Foods high in fat and sugar content include candy, pastries, cookies, french fries and pizza.

Are any programs of any kind sponsored in your school by corporations or companies? These programs could be as far ranging as sponsoring scholarships or supporting a sports team or a club.

	Frequency	Percent	
Yes	61	15.6	
No	330	84.4	Skip to question 7
Total	391	100.0	

4. How many programs are sponsored by corporations in your school?

Number of Programs	Frequency	Percent
1	40	10.2
2-10	14	3.6
10-20	3	0.8
More than 20	2	0.5
Don't know	2	0.5
Designed Non-Response*	330	84.4
Total	391	100.0

Respondents Only

Number of Programs	Frequency	Percent
1	40	65.6
2-10	14	23.0
10-20	3	5.0
More than 20	2	3.3
Don't know	2	3.3
Total	61	100.2

5. Are any of the programs sponsored by corporations that sell foods of minimal nutritional value or foods high in fat and sugar content?

	Frequency	Percent	
Yes	41	10.5	
No	20	5.1	
Designed non-response*	330	84.4	Skip to question 7
Total	391	100.0	

Respondents Only

	Frequency	Percent	
Yes	41	67.2	
No	20	32.8	Skip to question 7
Total	61	100.0	

6. How many programs are sponsored by corporations that sell foods of minimal nutritional value?

Numbered of Sponsored Programs	Frequency	Percent
1	29	7.4
2-5	7	1.8
6-10	2	0.5
11-20	1	0.3
Don't know	2	0.5
Designed non-response*	350	89.5
Total	391	100.0

Respondents Only

Numbered of Sponsored Programs	Frequency	Percent
1	29	70.7
2-5	7	17.1
6-10	2	4.8
11-20	1	2.4
Don't know	2	4.9
Total	41	99.9

7. Are you currently negotiating with any company that sells foods of minimal nutritional value to sponsor any type of program at your school?

	Frequency	Percent
Yes	6	1.5
No	381	97.4
Don't know	4	1.0
Total	391	99.9

8. Exclusive agreements are legal agreements by which a school district gets revenue from a corporation by agreeing to sell only that corporation's products. For example, a school district may have an exclusive agreement with Coca Cola to sell only Coke products. Does your school have any exclusive agreements with any corporations or companies?

	Frequency	Percent	
Yes	143	36.6	
No	248	63.4	Skip to question 12
Total	391	100.0	

9. How many exclusive agreements do you have in your school?

Number of Agreements	Frequency	Percent
1	130	33.2
2	9	2.3
3	1	0.3
4	1	0.3
5 or more	1	0.3
Don't know	1	0.3
Designed non-response*	248	63.4
Total	391	100.1

Respondents Only

Number of Agreements	Frequency	Percent
1	130	90.9
2	9	6.3
3	1	0.7
4	1	0.7
5 or more	1	0.7
Don't know	1	0.7
Total	143	100.0

10. Does your school have any exclusive agreements with any corporations that sell foods with high fat and sugar content or foods of minimal nutritional value?

	Frequency	Percent	
Yes	82	21.0	
No	61	15.6	
Designed non-response*	248	63.4	Skip to question 12
Total	391	100.0	

Respondents Only

	Frequency	Percent	
Yes	82	57.3	
No	61	42.7	Skip to question 12
Total	143	100.0	

11. How many?

Number of Exclusive Agreements with Companies that Sell FMNV	Frequency	Percent
1	72	18.4
2	9	2.3
4	1	0.3
Designed non-response*	309	79.0
Total	391	100.0

Respondents Only

Number of Exclusive Agreements with Companies that Sell FMNV	Frequency	Percent
1	72	87.8
2	9	11
4	1	1.2
Total	82	100.0

12. Are you currently negotiating an exclusive agreement with any company that sells foods of minimal nutritional value or foods of high fat and sugar content?

	Frequency	Percent
Yes	4	1.0
No	378	96.7
Don't Know	9	2.3
Total	391	100.0

13. Incentive programs provide rewards for students who achieve goals such as perfect attendance or improving academic performance. One example is Pizza Hut's "Book It" program, in which students receive coupons for free pizza if they read a certain number of books per month. Are there any incentive programs sponsored by corporations or companies in your school?

	Frequency	Percent	
Yes	145	37.1	
No	246	62.9	Skip to question 17
Total	391	100.0	

14. How many?

Number of incentive programs	Frequency	Percent
1	102	26.1
2	24	6.1
3	9	2.3
4	6	1.5
5	3	0.8
Don't know	1	0.3
Designed non-response*	246	62.9
Total	391	100.0

Respondents Only

Number of incentive programs	Frequency	Percent
1	102	70.3
2	24	16.6
3	9	6.2
4	6	4.1
5	3	2.1
Don't know	1	0.7
Total	145	100.0

15. Are any of the incentive programs sponsored by companies or corporations that sell foods of minimal nutritional value or foods high in fat and sugar content?

	Frequency	Percent	
Yes	103	26.3	
No	42	10.7	
Designed non-response*	246	62.9	Skip to question 17
Total	391	99.9	

Respondents Only

	Frequency	Percent	
Yes	103	71.0	
No	42	29.0	Skip to question 17
Total	145	100.0	

16. How many?

Number of incentive programs with companies that sell FMNV	Frequency	Percent
1	72	18.4
2	19	4.9
3	5	1.3
4	5	1.3
5 or more	2	0.6
Designed non-response*	288	73.7
Total	391	100.2

Respondents Only

Number of incentive programs with companies that sell FMNV	Frequency	Percent
1	72	69.9
2	19	18.4
3	5	4.9
4	5	4.9
5 or more	2	2.0
Total	103	100.1

17. Are you currently negotiating with any company that sells foods of minimal nutritional value to have incentive programs at your school?

	Frequency	Percent
Yes	4	1.0
No	373	95.4
Don't Know	14	3.6
Total	391	100.0

18. Corporations sometimes advertise on school property in places like gyms, playing fields or buses. Do any corporations or companies advertise at your school?

	Frequency	Percent	
Yes	60	15.3	
No	331	84.7	Skip to question 22
Total	391	100.0	

19. How many companies advertise at your school?

	Frequency	Percent
0	2	0.5
1	37	9.5
2-19	16	4.1
20 or more	3	0.9
999	2	0.5
Designed non-response*	331	84.7
Total	391	100.2

Respondents Only

	Frequency	Percent
0	2	3.4
1	37	63.8
2-19	16	27.6
20 or more	3	5.2
Total	58	100.0

20. Do any corporations that sell foods of minimal nutritional value or foods high in fat and sugar content advertise at your school?

	Frequency	Percent	
Yes	25	6.4	
No	35	9.0	
Designed non-response*	331	84.7	Skip to question 22
Total	391	100.1	

Respondents Only

	Frequency	Percent	
Yes	25	41.7	
No	35	58.3	Skip to question 22
Total	60	100.0	

21. How many?

Number of FMNV companies advertising at school	Frequency	Percent
1	16	4.1
2-5	6	1.5
6-10	1	0.3
11 or more	1	0.3
Don't know	1	0.3
Designed non-response	366	93.6
Total	391	100.1

Respondents Only

Number of FMNV companies advertising at school	Frequency	Percent
1	16	64.0
2-5	6	24.0
6-10	1	4.0
11 or more	1	4.0
Don't know	1	4.0
Total	25	100.0

22. Are you currently negotiating with any company that sells foods of minimal nutritional value or foods high in fat and sugar content to have advertising at your school?

	Frequency	Percent
Yes	2	0.5
No	381	97.4
Don't know	8	2.0
Total	391	99.9

23. How much of all the advertising in your school is done by corporations that sell foods of minimal nutritional value or foods high in fat and sugar content?

	Frequency	Percent
All or most of it	28	7.2
About half of it	6	1.5
Little or none of it	354	90.5
Don't know	3	0.8
Total	391	100.0

24. Do any corporations or companies have "naming rights" to any facilities including gyms, stages, playing fields or score boards at your school?

	Frequency	Percent	
Yes	20	5.1	
No	371	94.9	Skip to question 28
Total	391	100.0	

25. How many companies have naming rights at your school?

Number of companies with naming rights	Frequency	Percent
1	20	5.1
Designed non-response*	371	94.9
Total	391	100.0

Respondents Only

Number of companies with naming rights	Frequency	Percent
1	20	100.0
Total	20	100.0

26. Do any corporations that sell foods of minimal nutritional value or foods high in fat and sugar content have naming rights to any facilities at your school?

	Frequency	Percent	
Yes	4	1.0	
No	16	4.1	
Designed non-response	371	94.9	Skip to question 28
Total	391	100.0	

Respondents Only

	Frequency	Percent	
Yes	4	20.0	
No	16	80.0	Skip to question 28
Total	20	100.0	

27. How many have naming rights?

Number of FMNV companies with naming rights	Frequency	Percent
1	4	1.0
Designed non-response*	387	99.0
Total	391	100.0

Respondents Only

Number of FMNV companies with naming rights	Frequency	Percent
1	4	100.0
Total	4	100.0

28. Are you currently negotiating with any company that sells foods of minimal nutritional value or foods high in fat and sugar content to have naming rights at your school?

	Frequency	Percent
Yes	2	0.5
No	385	98.5
Don't know	4	1.0
Total	391	100.0

29. Corporations sometimes produce free supplementary curriculum materials used in public schools. For example, McDonalds provides materials for a program called "What's on your Plate?" and Court TV provides materials to schools for a program called "Forensics in the Classroom." Do students at your school use any free supplementary materials provided by a corporation that sells foods of minimal nutritional value or foods high in fat and sugar content?

	Frequency	Percent	
Yes	9	2.3	
No	345	88.2	Skip to question 31
Don't know	37	9.5	Skip to question 32
Total	391	100.0	

30. How many corporations that sell foods of minimal nutritional value or foods high in fat and sugar content provide free supplementary curriculum materials for classes at your school?

Number of FMNV companies that supply supplementary materials	Frequency	Percent
0	1	0.3
1	7	1.8
5	1	0.3
Designed non-response*	382	97.7
Total	391	100.1

Respondents Only

Number of FMNV companies that supply supplementary materials	Frequency	Percent
0	1	11.1
1	7	77.8
5	1	11.1
Total	9	100.0

31. Are you currently negotiating with any corporation that sells foods of minimal nutritional value or foods high in fat and sugar content to use free supplementary materials at your school?

	Frequency	Percent
Yes	2	0.5
No	350	89.5
Don't know	2	0.5
Designed Non-Response	37	9.5
Total	391	100.0

Respondents Only

	Frequency	Percent
Yes	2	0.6
No	350	98.9
Don't know	2	0.6
Total	354	100.1

32. Is "Channel One" shown in any of your classrooms?

	Frequency	Percent
Yes	55	14.1
No	278	71.1
Don't know	58	14.8
Total	391	100.0

33. Are any computers or software provided free to your school by any corporation?

	Frequency	Percent	
Yes	27	6.9	
No	316	80.8	Skip to question 35
Don't know	48	12.3	Skip to question 36
Total	391	100.0	

34. How many computer or software programs are provided to your school by corporations that sell foods of minimal nutritional value or foods high in fat and sugar content?

Number of computer programs from PMNV companies	Frequency	Percent
0	17	4.3
1	5	1.3
2	1	0.3
3	1	0.3
Don't know	3	0.8
Designed non-response	364	93.1
Total	391	100.1

Respondents Only

Number of computer programs from PMNV companies	Frequency	Percent
0	17	63.0
1	5	18.5
2	1	3.7
3	1	3.7
Don't know	3	11.1
Total	27	100.0

35. Are you currently negotiating with any corporation that sells foods of minimal nutritional value or foods high in fat and sugar content for them to provide computers or software at your school?

	Frequency	Percent
Yes	5	1.3
No	331	84.7
Don't know	7	1.8
Designed non-response*	48	12.3
Total	391	100.1

Respondents Only

	Frequency	Percent
Yes	5	1.5
No	331	96.5
Don't know	7	2.0
Total	343	100.0

36. Corporations that sell foods of minimal nutritional value sometimes sponsor fundraising activities at schools. Some return a percentage of sales from a product or a service. Others refund money from mailing in a label, lid or coupon. Does your school participate in any fundraising programs run by these corporations?

	Frequency	Percent	
Yes	156	39.9	
No	207	52.9	Skip to question 38
Don't know	28	7.2	Skip to question 39
Total	391	100.0	

37. How many fundraising programs does your school participate in that are sponsored by corporations that sell foods of minimal nutritional value or foods high in fat content?

Fundraisers with FMNV companies	Frequency	Percent
0	10	2.5
1	87	22.2
2-5	50	12.8
6-10	2	0.5
11-20	3	0.7
20 or more	1	0.3
Don't know	3	0.8
Designed non-response	235	60.1
Total	391	99.9

Respondents Only

Fundraisers with FMNV companies	Frequency	Percent
0	10	6.4
1	87	55.8
2-5	50	32.1
6-10	2	1.3
11-20	3	1.9
20 or more	1	0.6
Don't know	3	1.9
Total	156	100.0

38. Are you currently negotiating with any corporation that sells foods of minimal nutritional value for them do fundraising at your school?

	Frequency	Percent
Yes	11	2.8
No	345	88.2
Don't know	7	1.8
Designed non-response	28	7.2
Total	391	100.0

Respondents Only

	Frequency	Percent
Yes	11	3.0
No	345	95.0
Don't know	7	1.9
Total	363	99.9

39. If more than \$0: What is your estimate of the total amount of money brought into your school this year from all the types of corporate advertising we've discussed?

Estimated income from advertising	Frequency	Percent
\$0	256	65.5
\$1 - \$1,000	26	6.6
\$1,001 - \$5,000	27	7
\$5,001 – \$10,000	18	4.6
\$10,001 – \$20,000	11	2.8
\$20,001 or more	8	2
Don't know	45	11.5
Total	391	100.0

40. Of this amount, how much would you estimate comes from corporations that sell foods of minimal nutritional value or foods high in fat and sugar content?

Estimated income from FMNV companies	Frequency	Percent
\$0	284	72.6
\$1 - \$1,000	23	5.8
\$1,001 - \$5,000	25	6.4
\$5,001 – \$10,000	16	4.1
\$10,001 – \$20,000	5	1.3
\$20,001 or more	7	1.8
Don't know	31	7.9
Total	391	99.9

41. In some schools, food services are contracted to a private company. Are food services at your school provided by a private company?

	Frequency	Percent	
Yes	71	18.2	
No	316	80.8	Skip to question 43
Don't know	4	1.0	Skip to question 43
Total	391	100.0	

42. Does the company that provides your food services sell foods of minimal nutritional value or foods high in fat and sugar content?

	Frequency	Percent
Yes	43	11.0
No	26	6.6
Don't know	2	0.5
Designed non-response*	320	81.8
Total	391	99.9

Respondents Only

	Frequency	Percent
Yes	43	60.6
No	26	36.6
Don't know	2	2.8
Total	71	100.0

43. Now, to change directions for a moment. Does your state have a law against selling foods of minimal nutritional value in public schools?

	Frequency	Percent
Yes	122	31.2
No	202	51.7
Don't know	67	17.1
Total	391	100.0

44. Do you know if your state is considering prohibiting the sale of foods of minimal nutritional value in public schools?

	Frequency	Percent
Yes	177	45.3
No	105	26.9
Don't know	109	27.9
Total	391	100.1

45. Would you favor increased regulation of advertising, in general, to children in schools?

	Frequency	Percent
Yes	237	60.6
No	115	29.4
Don't know	39	10.0
Total	391	100.0

46. Would you favor increased regulation of advertising of foods of minimal nutritional value and foods high in fat and sugar content to children in schools?

	Frequency	Percent
Yes	268	68.5
No	96	24.6
Don't know	27	6.9
Total	391	100.0

47. Do you know if your district has policies that regulate advertising to students, in general?

	Frequency	Percent
Yes	167	42.7
No	124	31.7
Don't know	100	25.6
Total	391	100.0

48. Does your district have policies that regulate the advertising to students of foods of minimal nutritional value and foods high in fat and sugar content?

	Frequency	Percent	
Yes	155	39.6	
No	151	38.6	Skip To:50
Don't know	85	21.7	Skip To:50
Total	391	99.9	

49. Do you think your district's policies regarding the advertising to students of foods of minimal nutritional value and foods high in fat and sugar content are ...

	Frequency	Percent
About right	141	36.1
Too Strict	0	0
Not strict enough	13	3.3
Don't know/no opinion	1	0.3
Designed non-response*	236	60.4
Total	391	100.1

Respondents Only

	Frequency	Percent
About right	141	91.0
Too Strict	0	0.0
Not strict enough	13	8.4
Don't know/no opinion	1	0.6
Total	155	100.0

50. Do you favor increased regulation by the state of advertising to students, in general?

	Frequency	Percent
Yes	188	48.1
No	167	42.7
Don't know	36	9.2
Total	391	100.0

51. Do you favor increased regulation by the state of advertising of foods of minimal nutritional value and high in fat and sugar content?

	Frequency	Percent
Yes	210	53.7
No	153	39.1
Don't know	28	7.2
Total	391	100.0

52. Do you favor increased regulation by the federal government of advertising to students, in general?

	Frequency	Percent
Yes	145	37.1
No	213	54.5
Don't know	33	8.4
Total	391	100.0

53. Do you favor increased regulation by the federal government of advertising of foods of minimal nutritional value and foods high in fat and sugar content?

	Frequency	Percent
Yes	162	41.4
No	203	51.9
Don't know	26	6.6
Total	391	99.9

54. Next, we're interested in knowing the extent to which schools are dependent on corporate advertising to fund school programs and activities. Examples of such activities might be sports or art programs, transportation, or salary for non-food-service personnel. If you prohibited corporate advertising of foods of minimal nutritional value or foods high in fat and sugar content at your school, is there any program or activity that would have to be reduced?

	Frequency	Percent
Yes	49	12.5
No	342	87.5
Total	391	100.0

Skip To:56

55. How many programs at your school would have to be reduced?

	Frequency	Percent
1-10	27	6.3
135	1	0.3
5%	1	0.3
50%	1	0.3
Activities	1	0.3
Activities in each building	1	0.3
Athletic programs	1	0.3
Not too many	1	0.3
Several	1	0.3
Don't know	14	3.6
Designed non-response*	342	87.5
Total	391	99.8

Respondents Only

	Frequency	Percent
1	8	2.0
135	1	0.3
2	8	2.0
3	4	1.0
5	1	0.3
5%	1	0.3
50%	1	0.3
6	2	0.5
7	2	0.5
Activities	1	0.3
Activities in each building	1	0.3
At least two	1	0.3
Athletic programs	1	0.3
Not too many	1	0.3
Several	1	0.3
Maybe at least one	1	0.3
Don't know	14	3.6
Designed non-response*	342	87.5
Total	391	100.4

56. That is all of my questions. I appreciate your time. It is possible that we will conduct follow-up interviews based on the current research. May we contact you at a later date for a follow-up interview?

	Frequency	Percent
Yes	332	84.9
No	59	15.1
Total	391	100.0

57. If yes to follow up record name of follow up. If no to follow up, leave blank.

Appendix C: Unique Combinations of Advertising Activities

Advertising Activities	Number of Activities	Percentage of All Schools
No Advertising Activities	0	17.4%
Incentive and Fundraising	2	11.5%
Fundraising	1	10.0%
Incentive	1	8.7%
Exclusive	1	7.9%
Electronic Marketing	1	3.8%
Exclusive and Appropriation of Space	2	2.8%
Exclusive and Incentive	2	2.6%
Sponsorship, Exclusive, and Appropriation of Space	3	2.6%
Exclusive and Fundraising	2	2.3%
Appropriation of Space	1	1.5%
Exclusive and Electronic Marketing	2	1.5%
Exclusive, Incentive, and Fundraising	3	1.5%
Exclusive, Incentive, and Electronic Marketing	3	1.5%
Sponsorship and Exclusive	2	1.3%
Fundraising and Electronic Marketing	2	1.0%

Advertising Activities	Number of Categories	Percentage of All Schools
Sponsorship, Exclusive, and Fundraising	3	1.0%
Exclusive, Appropriation of Space and Electronic Marketing	3	1.0%
Incentive, Fundraising, and Electronic Marketing	3	1.0%
Sponsorship, Exclusive, Fundraising, Appropriation of Space, and Electronic Marketing	5	1.0%
Sponsorship	1	0.7%
Sponsorship, Exclusive, and Incentive	3	0.7%
Exclusive, Fundraising, and Electronic Marketing	3	0.7%
Incentive, Supplemental Materials, and Fundraising	3	0.7%
Exclusive, Fundraising, Appropriation of Space, and Electronic Marketing	4	0.7%
Incentive, Fundraising, Appropriation of Space, and Electronic Marketing	4	0.7%
Sponsorship and Incentive	2	0.5%
Incentive and Electronic Marketing	2	0.5%
Appropriation of Space and Electronic Marketing	2	0.5%
Sponsorship and Fundraising	2	0.5%
Incentive, Appropriation of Space, and Electronic Marketing	3	0.5%
Sponsorship, Incentive, and Fundraising	3	0.5%
Sponsorship, Fundraising, and Electronic Marketing	3	0.5%

Advertising Activities	Number of Categories	Percentage of All Schools
Exclusive, Fundraising, and Appropriation of Space	3	0.5%
Sponsorship, Exclusive, and Electronic Marketing	3	0.5%
Sponsorship, Exclusive, and Incentive; Fundraising	4	0.5%
Sponsorship, Exclusive, Incentive, and Electronic Marketing	4	0.5%
Sponsorship, Exclusive, Fundraising, and Appropriation of Space	4	0.5%
Exclusive, Incentive, Fundraising, and Appropriation of Space	4	0.5%
Sponsorship, Exclusive, Incentive, Fundraising, and Appropriation of Space	5	0.5%
Sponsorship, Exclusive, Incentive, Appropriation of Space, and Electronic Marketing	5	0.5%
Fundraising and Appropriation of Space	2	0.3%
Supplemental Materials and Fundraising	2	0.3%
Sponsorship and Electronic Marketing	2	0.3%
Sponsorship and Appropriation of Space	2	0.3%
Incentive, Fundraising, and Appropriation of Space	3	0.3%
Sponsorship, Incentive, and Electronic Marketing	3	0.3%
Sponsorship, Fundraising, and Appropriation of Space	3	0.3%
Fundraising, Appropriation of Space, and Electronic Marketing	3	0.3%
Exclusive, Incentive, and Appropriation of Space	3	0.3%

Advertising Activities	Number of Categories	Percentage of All Schools
Sponsorship, Incentive, Fundraising, and Electronic Marketing	4	0.3%
Exclusive, Incentive, Supplemental Materials, and Appropriation of Space	4	0.3%
Exclusive, Incentive, Fundraising, and Electronic Marketing	4	0.3%
Exclusive, Incentive, Appropriation of Space, and Electronic Marketing	4	0.3%
Sponsorship, Exclusive, Appropriation of Space, and Electronic Marketing	4	0.3%
Sponsorship, Exclusive, Incentive, and Appropriation of Space	4	0.3%
Sponsorship, Exclusive, Supplemental Materials, and Electronic Marketing	4	0.3%
Sponsorship, Exclusive, Fundraising, and Electronic Marketing	4	0.3%
Sponsorship, Incentive, Fundraising, and Appropriation of Space	4	0.3%
Exclusive, Incentive, Supplemental Materials, Fundraising, and Appropriation of Space	5	0.3%
Sponsorship, Exclusive, Incentive, Fundraising, Appropriation of Space, and Electronic Marketing	6	0.3%
Exclusive, Incentive, Supplemental Materials, Fundraising, Appropriation of Space, and Electronic Marketing	6	0.3%
Sponsorship, Exclusive, Incentive, Supplemental Materials, Fundraising, Appropriation of Space, and Electronic Marketing	7	0.3%
Total	n/a	100.2%

Appendix D: Cross-tabulations of Responses to Items Measuring School Officials' Attitudes Toward Increased Regulation of Advertising in Schools

Table 12: Comparison of School Officials' Attitudes Toward Increased Regulation in the General and Increased Regulation of FMNV and FHFS

		Would you favor increased regulation of advertising, in general, to children in schools?				
		Yes	No	Don't Know	Total	Percent of Total
Would you favor increased regulation of advertising of foods of minimal nutritional value and foods high in fat and sugar content to children in schools?	Yes	228	30	10	268	68.5%
	No	8	83	5	96	24.6%
	Don't Know	1	2	24	27	6.9%
	Total	237	115	39	391	100.0%
	Percent of Total	60.6%	29.4%	10.0%	100.0%	

Table 13: Comparison of School Officials' Attitudes Toward Increased Regulation in the General and Increased Regulation of FMNV and FHFS (State Level)

		Would you favor increased regulation of advertising, in general, to children in schools?				
		Yes	No	Don't Know	Total	Percent of Total
Do you favor increased regulation by the state of advertising of foods of minimal nutritional value and high in fat and sugar content?	Yes	181	23	6	210	53.7%
	No	6	144	3	153	39.1%
	Don't Know	1	0	27	28	7.2%
	Total	188	167	36	391	100.0%
	Percent of Total	48.1%	42.7%	9.2%	100.0%	

Table 14: Comparison of School Officials' Attitudes Toward Increased Regulation in the General and Increased Regulation of FMNV and FHFS (Federal Level)

		Would you favor increased regulation of advertising, in general, to children in schools?				
		Yes	No	Don't Know	Total	Percent of Total
Do you favor increased regulation by the federal government of advertising of foods of minimal nutritional value and high in fat and sugar content?	Yes	140	19	3	162	41.4%
	No	4	194	5	203	51.9%
	Don't Know	1	0	25	26	6.6%
	Total	145	213	33	391	100.0%
	Percent of Total	37.1%	54.5%	8.4%	100.0%	

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same dependent variable. In this study, such tests are not possible because most measurements are at the nominal level.

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