

## Current Status of and Factors Associated With the Use of Brand-Name Fast Foods in Indiana Schools Participating in the National School Lunch Program

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*Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.*

### ABSTRACT

The purpose of this study was to examine the current status of brand-name fast food use and factors associated with its use in Indiana schools participating in the National School Lunch Program (NSLP). Two surveys were conducted. The preliminary survey was sent to all 447 Indiana school food authorities (SFAs) participating in the NSLP and had an 88% response rate. The survey identified 115 SFAs using or planning to use brand-name fast foods in their lunch programs during the 1999-00 school year. The main survey included the 115 SFAs and had a 67% response rate. It found detailed information regarding brand-name fast food use in each school. Secondary data were analyzed, in addition to the figures obtained from the surveys, to examine school and foodservice characteristics associated with using brand-name fast foods.

The percentage of Indiana SFAs using brand-name fast foods increased from 3% to 24% between the 1990-91 and 1998-99 school years. During the 1999-00 school year, 30% of the SFAs used or planned to use brand-name fast foods. The desire to increase students' interest was the primary reasons for using brand-name fast foods, whereas high cost and concerns about nutritional quality were major reasons for not using them. A few SFAs charged premium prices for school lunches including brand-name fast foods; however, most SFAs charged the same price for school lunches that incorporated brand-name fast foods as for regular school lunches. Overall, school foodservice directors and managers perceived a positive impact of brand-name fast food use on their school lunch programs, with respect to a la carte revenue, total profits, and student participation.

The most often reported brand-name fast food was pizza, followed by burritos and sandwiches. Brand-name sandwiches were offered only in middle and high schools. The number of and frequency with which brand-name fast food items were offered varied. Most schools offered only one item once a week or less often. Higher grade-level schools tended to use brand-name fast food items more frequently and were more likely to offer them as a la carte items rather than as part of reimbursable school lunches. Schools with higher lunch prices and lower eligibility rates for free and reduced-price lunches were more likely to use brand-name fast foods.

Findings in this study were used when designing studies regarding the impact of brand-name fast food use on various aspects of the NSLP in Indiana schools. The findings in this study could be useful for school foodservice practitioners and policymakers in Indiana and other states with similar socio-demographic characteristics and school foodservice systems, when making

decisions about the use of brand-name fast food in school lunch programs.

## INTRODUCTION

Branding in foodservice operations is defined as “the use of nationally or locally labeled [branded] products for sale in an existing food service operation” (Payne-Palacio & Theis, 1997, p. 534). Branding emerged in the early 1990s and has gained popularity since then across foodservice operations, particularly in noncommercial foodservice segments (McCool, Smith, & Tucker, 1994; Payne-Palacio & Theis, 1997).

In practice, three major types of branding are identified: manufacturer’s branding, restaurant branding, and in house branding. Manufacturer’s branding, or retail-item branding, refers to the use of nationally recognized manufacturer-branded items in existing foodservice operations. Restaurant branding refers to serving menu items from well-known restaurants in existing foodservice operations. In-house branding, or signature branding, refers to developing and using the operation’s own branded concept and applying it to specific menu items in noncommercial foodservice operations (Payne-Palacio & Theis, 1997).

School foodservice has been relatively slow to adopt branding as a marketing strategy (*Brands Boost Customer Traffic*, 1999). However, the number of schools using branding has continuously increased throughout the 1990s (American School Food Service Association [ASFSA], 1998; McCool, Smith, & Tucker, 1994; Pannell-Martin, 1999; Payne-Palacio & Theis, 1997; Price & Kuhn, 1996), and the trend is expected to continue (ASFSA, 1998; Fitzgerald, 1998; White, 1997).

All three types of branding are used in school foodservice operations. Schools started to provide manufacturer-branded foods (e.g., Kellogg’s cereals, Mott’s fruit juice) earlier than brand-name restaurant fast foods (e.g., Pizza Hut’s pizza, Taco Bell’s burritos). More recently, in-house branding has started to gain popularity among school foodservice operations.

While the benefits of manufacturer’s and in-house branding have been recognized widely as a marketing strategy of school cafeterias without raising much controversy, fast food restaurant branding in school cafeterias has been the subject of on-going debates due to the presumably negative effects on children’s nutrition and education. Despite these concerns, an increasing number of schools started to serve brand-name fast foods in their cafeterias; the percentage of public schools using brand-name fast foods has increased from an estimated 2% in the 1990-91 school year to about 13% in the 1995-96 school year (U. S. General Accounting Office [USGAO], 1996b).

Schools offer brand-name fast foods as part of reimbursable school lunches, as a la carte items, or both. Brand-name fast food served alone does not qualify as a reimbursable school lunch under the National School Lunch Program (NSLP), but they can be incorporated as part of a reimbursable school lunch with other food items. Fast food items offered as part of a reimbursable school lunch must meet the nutritional requirements of the U.S. Department of Agriculture (USDA) and, as a result, some fast food restaurant companies targeting school markets have introduced modified versions of their products (Price & Kuhn, 1996). No federal regulation currently prohibits the NSLP schools from serving brand-name fast foods; however, state or local authorities can establish rules or regulations regarding brand-name fast food use. At the time of this study, there was no such prohibition at the state level in Indiana. According to a government report (USGAO, 1996b), 40% of the schools not using brand-name fast foods reported the prohibition of serving brand-name fast food at the state or local level as a reason for

not using them.

As the popularity and concerns regarding brand-name fast food in schools has increased, it has been suggested that studies should be conducted to determine the effect of brand-name fast foods on various aspects of school lunch operations (Penka, Ferris, Pickert, & Gould, 1996). This study was conducted to examine the current status of brand-name fast food use and the factors associated with its use in Indiana schools participating in the NSLP.

## **Methodology**

Two statewide surveys were conducted to collect data regarding brand-name fast food use in Indiana schools. Secondary data were analyzed, in addition to data obtained from surveys, to determine the factors associated with brand-name fast food use. The Purdue University Committee on the Use of Human Subjects approved the study.

### **Surveys**

For the preliminary survey, a one-page questionnaire was designed to identify the school food authorities (SFAs) currently using or planning to use brand-name fast foods in their school lunch programs during the 1999-00 school year. The questionnaire also determined reasons for using or not using brand-name fast foods. During the first week of September 1999, the questionnaire was mailed to all 447 Indiana SFAs participating in the NSLP. After two weeks, follow-up questionnaires were sent to non-respondents.

The main survey was conducted with the 115 SFAs identified from the preliminary survey as using or planning to use brand-name fast foods in their lunch programs. This questionnaire asked for detailed information regarding brand-name fast food use at each school, such as what and how often brand-name fast foods were offered and whether they were part of a reimbursable school lunch or offered a la carte. The mailings included an advance letter from the director of the Indiana Department of Education, Division of School and Community Nutrition Programs who requested cooperation (sent the last week of October 1999), a questionnaire (mailed two weeks later), and a postcard reminder to non-respondents (sent five weeks later).

Most questions employed in both surveys were modeled from a questionnaire found in a USGAO study report (USGAO, 1996a). The definition of brand-name fast foods was given in the questionnaire as “fast foods (pizzas, burritos, subs, and sandwiches) prepared under contract with or delivered by fast-food restaurant companies (e.g., Pizza Hut pizza, Taco Bell burrito, Subway Sandwich, but not including brand-name drinks, yogurt, or snacks).”

### **Secondary Data**

Data for all 2,124 Indiana schools participating in the NSLP during the 1999-00 school year were obtained from the Indiana Division of School and Community Nutrition Programs. These data included address; enrollment; grade level; open vs. closed campuses during lunch periods; offer vs. serve availability; kitchen type (onsite, satellite, or no kitchen); number of students eligible for free and reduced-price lunches; number of students served with full-price, reduced-price, or free lunches; number of days of lunch service during October 1999; type of school (public or private); and full lunch prices. Estimated population of the city and town in Indiana was downloaded from a Web Site maintained by the Indiana Business Research Center (“1998 City & Town Population,” 2000).

### **Data Analysis**

Data analyses were conducted using SPSS for Windows, v9.0 (1998). Descriptive statistics

(means and frequencies with percentages) were calculated for the responses to questions regarding brand-name fast food use in the two surveys. Logistic regression analysis was conducted to identify school and foodservice characteristics associated with the likelihood of using brand-name fast foods in the school lunch program. The data set for the analysis included a variable indicating status of brand-name fast food use in schools, as well as variables regarding school and foodservice characteristics. Omitting primary schools serving children in grade three and under, secondary schools serving children in grade six or seven through 12, and any schools with missing data resulted in 1,282 schools out of 2,124 NSLP schools in Indiana. Logistic regression analysis was chosen because the dependent variable, status of brand-name fast food use, is qualitative with two possible outcomes (use or non-use).

Preliminary data analysis revealed that the grade level of schools was significantly associated with other school and foodservice characteristics. Therefore, the relationship between other school and foodservice characteristics and the likelihood of brand-name fast food service is misleading, provided that the model estimate includes the grade level of schools as an explanatory variable. Accordingly, two separate models were estimated for different grade levels of schools: one for elementary schools and one for middle and high schools. All the explanatory variables believed to be associated with the likelihood of using brand-name fast foods were entered in the models at once. Diagnostics for detecting any violations in the assumptions of logistic regression analysis were conducted following a protocol suggested by Menard (1995).

## **Results And Discussion**

### **Preliminary Survey**

The preliminary survey was returned by 391 of the 447 SFAs (88% response rate) and 390 were usable for the analysis. A majority of respondents had the title of director (51%) or manager (29%). Others were supervisors (8%), cooks (2%), or secretaries (2%). Of the 385 SFAs responding to the question regarding the status of brand-name fast food use, 30% were using or planning to use brand-name fast foods in their lunch programs during the 1999-00 school year, 5% were using or planning to use them only as part of reimbursable meals, 14% only as a la carte items, and 11% for both services. Overall, the percentage of SFAs using brand-name fast foods in their lunch programs increased gradually in the 1990s. The percentage of SFAs using brand-name fast foods was 5% in 1991-92, 5% in 1992-93, 6% in 1993-94, 9% in 1994-95, 13% in 1995-96, 16% in 1996-97, 22% in 1997-98, and 24% in 1998 (n=373).

Comparison of these results to a nationwide study (USGAO, 1996b) showed that Indiana schools have experienced the same growth rate as the rest of the nation in using brand-name fast foods. The USGAO study estimated that about 13% of public schools used brand-name fast foods in their lunch programs during the 1995-96 school year, which is the same percentage for the same school year as found in this study.

Another nationwide study, the School Food Purchase Study (Daft, Arcos, Hallawell, Root, & Westfall, 1998), reported that branded foods were offered in about 40% of all public school districts during the 1996-97 school year. This rate is more than double the percentage found in this study for the same school year. However, this difference is expected considering that the definition used for branded foods in the School Food Purchase Study included manufacturer and house-branded foods as well as brand-name fast foods.

The reason most often cited by respondents for using brand-name fast foods was “believed more students would participate” followed by “students asked for them.” The reasons for *not* using brand-name fast foods most frequently included “brand-name fast foods cost too much” and “food currently being served is more nutritious” (Table 1).

<b>Table 1: Reasons for Using (n = 136 School Food Authorities) and Not Using (n = 309 School Food Authorities) Brand-Name Fast Foods</b>		
	<b>n<sup>a</sup></b>	<b>%<sup>b</sup></b>
<b>Reason for Using Brand-Name Fast Foods</b>		
Believed more students would participate	100	73.5
Students asked for them	74	54.4
Wanted to reduce plate waste	24	17.6
School Food Authority or district decided	23	16.9
Vendor did a good job of selling idea	15	11
Wanted to reduce program costs	8	5.9
Parents suggested it	7	5.1
Did not have on-site cooking facilities	2	1.5
Others <sup>c</sup>	8	5.9
<b>Reason for Not Using Brand-Name Fast Foods</b>		
Brand-name fast foods cost too much	201	65
Food currently being served is more nutritious	168	54.4
School food authority or district prohibits	34	11
Believe we are doing a good/better job without fast foods <sup>d</sup>	22	7.1

School(s) is/are located rural/remote area/fast foods are unavailable <sup>d</sup>	17	5.5
Most parents are opposed	16	5.2
Like to cook in own facility <sup>d</sup>	8	2.6
School(s) is/are small <sup>d</sup>	8	2.6
Don't have enough information <sup>d</sup>	6	1.9
Delivery problems with respect to time, quality, quantity, etc. <sup>d</sup>	6	1.9
Enough fast foods outside schools <sup>d</sup>	4	1.3
Others <sup>e</sup>	12	3.9
<b><sup>a</sup> Total frequency values of reasons for using and not using exceed 136 and 309, respectively, due to multiple responses.</b>		
<b><sup>b</sup> Total percentage values exceed 100 due to multiple responses.</b>		
<b><sup>c</sup> Others include "last day treat," "cook absent," "when café used for art fair," "special occasion," etc.</b>		
<b><sup>d</sup> Summarized items from open-ended responses.</b>		
<b><sup>e</sup> Others include "kosher facility," "not interested," "didn't raise counts [students' school lunch participation]," "students lost interest," etc.</b>		

## Main Survey

Of the 115 mailed questionnaires, 74 (67% response rate) were returned. Responses from 56 SFAs were used for the analysis after excluding SFAs providing unusable information or indicating no use of brand-name fast foods during the fall semester of 1999.

The average cost of brand-name sandwiches (n=14; \$1.40) was about twice as high as for other brand-name fast foods such as pizza (n=32; \$0.74) and burritos (n=3; \$0.51). The cost of the same brand-name fast foods varied slightly among the reporting SFAs. The prices of brand-name fast foods were compared with the prices charged for the school's main dishes sold a la carte. Brand-name pizza and burritos were likely to be sold at the same price as that of school entrees, while brand-name sandwiches were sold at higher prices than school entrees.

Three out of 23 respondents answered affirmatively to the question, "Do you charge higher prices for reimbursable school lunches including brand-name fast foods than other lunches?" Upon further communication with the SFAs, it was found that they also were serving regular-priced school lunches whenever they were serving higher-priced "premium" school lunches.

The majority of responding SFAs answered that a la carte revenue (32 of 42 respondents), total profits (22 of 34), and student satisfaction (36 of 43) went up as a result of brand-name fast food use. Among the 47 respondents to the question regarding the effect of brand-name fast foods on

students' school lunch participation, 21 reported a positive effect, 12 reported no effect, and eight reported a negative effect. Decreased plate waste after using brand-name fast food was reported by 16 of 42 respondents, while a larger proportion of respondents (20 of 42) were either not sure about the effect or reported no change. Most of the respondents (34 of 38) reported no change when responding to the question about the change in the number of foodservice workers.

The responding SFAs provided detailed information regarding brand-name fast food use at each school, and the summary is shown in Table 2. Pizza was the most readily available brand-name fast food, followed by sandwiches and burritos. Brand-name sandwiches were served in middle and high schools, but in none of the elementary schools. It was thought that the relatively high cost of brand-name sandwiches made it difficult for elementary schools to incorporate them in their lunch programs.

<b>Table 2: Current Status of Brand-Name Fast Food Use in Indiana Schools Participating in the National School Lunch Program</b>						
	Elementary (n=48)	Middle (n=26)	High (n=52)	Others (n=10)	Total (n=136)	
	n	n	n	n	n	%
<b>Type of Foods<sup>b</sup></b>						
Pizza	41	18	42	10	111	81.6
Sandwich	0	5	18	2	25	18.4
Burrito	6	5	7	1	19	14
Others	1	0	1	0	2	1.5
<b>Number of Brands</b>						
One	48	23	35	7	113	83.1
Two	0	3	9	2	14	10.3
Three	0	0	4	1	5	3.7
Four	0	0	4	0	4	2.9
<b>How Often Per Month</b>						
Less than once	16	3	3	0	22	16.2
Once to twice	19	11	15	3	48	35.3
Three to four times	7	7	18	3	35	25.7
More than four times but not	0	0	6	1	7	5.1

every day						
Every day	6	5	10	3	24	17.6
<b>Type of Service<sup>c</sup></b>						
Solely as reimbursable lunches	24	3	3	3	33	24.3
Solely as a la carte items	3	9	29	4	45	33.1
Both	21	14	20	3	58	42.6
<sup>a</sup> <b>"Others" includes 4 primary schools serving children in grade three and under and 6 secondary schools serving children in grade six or seven through 12.</b>						
<sup>b</sup> <b>"Sandwich" includes roast beef, chicken, submarines, gyro sandwiches, and cheeseburgers. "Others" include chicken nuggets and cinnamon twists. Total percentage values exceed 100 due to multiple responses.</b>						
<sup>c</sup> <b>"Solely as reimbursable lunches" = solely as part of reimbursable school lunches; "Both" = both as part of reimbursable school lunches and as a la carte items</b>						

The number of brand-name fast food items offered by these schools ranged from one to four, with a mean of 1.3. Most schools offered only one brand-name fast food item. Ten percent of the schools used two brand-name fast food items. There were a few schools using three or four items. All elementary schools in this study offered only one brand-name fast food item. The higher grade-level schools were more likely to offer more than one brand-name fast food item. Most schools offered brand-name fast foods four times a month or less. However, there were schools serving brand-name fast foods every day. The frequency of brand-name fast food used rose as school grade levels increased (Table 2).

About 43% of the schools offered brand-name fast foods as part of both reimbursable school lunches and a la carte. About one-fourth of the schools offered them only as part of reimbursable meals. The remaining one-third of the schools offered them solely as a la carte items. Elementary schools were more likely to offer brand-name fast foods solely as part of reimbursable meals, whereas higher grade-level schools were more likely to offer them only as a la carte items (Table 2).

All schools serving pizza (n=111) were found to be serving varieties delivered by local fast food restaurants as ready-to-serve products. Only one school serving sandwiches purchased them as a frozen item and the rest of the schools (n=24) served them as a product delivered by local restaurants. All the schools serving burritos (n=19) purchased them as frozen products.

### **Characteristics Associated With Brand-Name Fast Food Use**

Table 3 summarizes characteristics of schools and their foodservice programs included in the logistic regression models. Table 4 presents the two estimated models: one with elementary



schools and one with middle and high schools. Both models were statistically significant, as shown by the model chi-square values and the Hosmer and Lemeshow's Goodness-of-Fit Indexes (Hosmer & Lemeshow, 1989).

<b>Table 3: Description of Independent Variables Included in Logistic Regression Models</b>						
	Elementary Schools		Middle/High Schools		All Schools	
Variables	Use (n=43)	Non-use (n=839)	Use (n=63)	Non-use (n=337)	Use (n=106)	Non-use (n=1176)
	%	%	%	%	%	%
<b>Brand-Name Fast Food</b>						
<b>Area Population</b>						
Less than 2,500 (Reference)	25.6	14.5	15.9	10.4	19.8	13.4
2,500 - 49,999	67.4	50.1	54	54.6	59.4	51.4
More than or equal to 50,000	7	35.4	30.2	35	20.8	35.3
<b>Student Enrollment</b>						
Less than 300 (Reference)	23.3	28.4	3.2	5.3	11.3	21.8
300 - 999	76.7	71.3	66.7	73	70.8	71.8
More than or equal to 1,000	0	0.4	30.2	21.7	17.9	6.5
<b>School Type</b>						
Public	83.7	94.2	95.2	99.1	90.6	95.6
Private (Reference)	16.3	5.8	4.8	0.9	9.4	4.4
<b>Kitchen Type</b>						
On-site	88.4	65.9	98.4	90.5	94.3	73

Satellite (Reference)	11.6	34.1	1.6	9.5	5.7	27
<b>Open vs. Closed Campus</b>						
Closed	69.8	90	92.1	96.1	83	91.8
Open (Reference)	30.2	10	7.9	3.9	17	8.2
<b>Offer vs. Serve</b>						
Yes	58.1	60.9	100	98.8	83	71.8
No (Reference)	41.9	39.1	0	1.2	17	28.2
<b>School Lunch Participation Rate, %</b>						
Mean	59.4	67	40.7	51.7	48.3	62.6
Standard Deviation	13.6	11.9	18.1	20.2	18.8	16.3
<b>Free and Reduced-Price Lunch Eligibility Rate, %</b>						
Mean	19.9	36.4	18.1	28.1	18.8	34
Standard Deviation	16.7	23	11.3	20.2	13.7	22.6
<b>Full Lunch Price, cents</b>						
Mean	154	135	162	146	159	138
Standard Deviation	17	18	17	21	17	19

<b>Table 4: School and Foodservice Characteristics Associated with Using Brand-Name Fast Foods—Logistic Regression Models</b>		
	Estimated Coefficient (Odds Ratio) <sup>a</sup>	
Independent Variables	Elementary Schools (n=882)	Middle and High Schools (n=400)
Population 2,500 - 49,999	-0.7935* (0.45)	-0.8488* (0.43)

Population more than or equal to 50,000	-2.6390*** (0.07)	0.0048 (1.00)
Enrollment 300 - 999	1.3106** (3.7)	-0.0616 (0.94)
Enrollment more than or equal to 1,000	-3.6018 (0.03)	-0.0794 (0.92)
Public School	-1.9481*** (0.14)	-0.0799 (0.92)
On-site kitchen	1.7235*** (5.60)	0.9758 (2.65)
Closed campus	- 2.1239***** (0.12)	-0.2636 (0.77)
Offer vs. serve available	-0.6743* (0.51)	5.7384 (310.56)
School lunch participation rate, %	-0.0160 (0.98)	-0.0191* (0.98)
Free/reduced-price lunch eligibility rate, %	-0.0303** (0.97)	-0.0258* (0.97)
Full lunch price, cents	0.0727***** (1.08)	0.0420***** (1.04)
Model $\chi^2$	112.534 ( $p < 0.0001$ )	58.464 ( $p < 0.0001$ )
Hosmer and Lemeshow's Goodness-of-Fit Index	7.4755 ( $p = 0.4863$ )	12.0613 ( $p = 0.1485$ )

\* <0.1; \*\*<0.05; \*\*\*<0.01; \*\*\*\*\*<0.01

<sup>a</sup> An odds ratio "1" means there is no association between the dependent variable (brand-name fast food use) and the independent variable (school characteristics). The size of any association is measured by the difference (in either direction) from 1. An odds ratio less than 1 indicates a negative relation; an odds ratio greater than 1.0 indicates a positive relation. For example, in case of elementary schools, the odds ratio for "closed campus" is 0.12, indicating a negative relation of closed campus to brand-name fast food use; the odds that an elementary school with closed campus serves brand-name fast foods in the school lunch program is 12% of the odds for elementary schools with open campus.

Across the models, schools with lower eligibility rates for free and reduced-price lunches and schools with higher lunch prices were more likely to offer brand-name fast foods in their lunch services. This also seemed aligned with higher lunch prices and schools located in relatively affluent areas. Lower school lunch participation rates were associated with an increased likelihood of serving brand-name fast foods in middle and high schools, but not in elementary schools.

Several characteristics were associated with the likelihood of using brand-name fast foods in elementary schools, but not in middle and high schools. In the case of elementary schools, private schools, schools with on-site kitchens, schools with open campuses, and schools without an offer-versus-serve option were more likely to offer brand-name fast foods than were their counterparts. Elementary schools located in larger population areas (populations of 2,500 or more) tended to offer brand-name fast foods. Elementary schools with student enrollments of 300 to 999 were more likely to serve brand-name fast foods than were schools with student enrollments of less than 300. Having a student enrollment of 1,000 or more was not shown to be associated with the likelihood of brand-name fast food use. As there were only three elementary schools with a student enrollment of more than 1,000, this lack of significance is thought to have resulted from the small sample size.

### **Conclusions And Applications**

This study concluded that brand-name fast food use has been increasing in NSLP schools in Indiana for the last decade, but the use was still limited at the time of the study. Several school and foodservice characteristics were found to be associated with brand-name fast food use. Findings in this study have been applied to the design of additional studies regarding the impact of brand-name fast food use by various aspects of the NSLP in Indiana (Yoon, 2001). School foodservice practitioners and policy-makers in Indiana, as well as in other states with similar socio-demographic characteristics and school foodservice systems, should find the information in this study useful when reviewing issues associated with brand-name fast food use in their school lunch programs.

As evident in this study, the move toward including brand-name fast foods in school lunch programs is a trend. School foodservice operators should investigate all potential variables, such as market demand, regulations, parental reactions, and costs before deciding whether to embrace this trend. Once a decision is made, schools should determine how to maximize the program's potential within financial, legal, and other constraints while, at the same time, learn how to minimize negative impacts. For schools deciding not to use brand-name fast foods, in house branding might be an alternate way to benefit from the branding effect and avoid the possible negative impacts of brand-name fast foods.

Schools can offer brand-name fast foods as part of a reimbursable school lunch, as a la carte items, or both. In this study, it was found that middle and high schools tended to offer them as a la carte, rather than as part of reimbursable meals. It has been known that a la carte foods are the most common alternative to a USDA reimbursable meal and an inverse relationship exists between a la carte revenues and students' school lunch participation (Fox, Crepinsek, Connor, & Battaglia, 2001). In addition, growing concerns have been voiced about brand-name foods with

respect to secondary students' low participation in the NSLP (Brown, Hutchinson, & Gilmore, 1998; Gleason, 1995). Therefore, based on federal regulations regarding competitive foodservice in the NSLP (National School Lunch Program, 2000), it might be necessary for state agencies or SFAs to establish regulations or guidelines about the use of brand-name fast foods.

Fast food restaurant companies trying to reach the school foodservice market will benefit from knowing these findings. Such companies need to address these issues in order to reach school markets successfully. They especially need to accommodate possible barriers that schools might face with regard to starting or expanding brand-name fast food use. For example, companies should be able and willing to adjust their product recipes to accommodate nutritional regulations or concerns. This study also suggests that the likelihood of using brand-name fast foods depends on school and foodservice characteristics involved. The use of these results in choosing target markets will help fast food restaurant companies ensure that their marketing efforts are effective.

To the knowledge of these authors, this is the fourth published research study on brand-name fast food use in school meal programs. The three previous studies — *School Lunch Program: Roles and Impacts of Private Food Service Companies* (USGAO, 1996b), *School Food Purchase Study: Final Report* (Daft et al., 1998), and *School Foodservice & Nutrition Operations Study* (ASFSA, 1999) — reported findings regarding the use of branding in school foodservice operations. Findings from these three reports are neither comparable nor combinable due to their differing use of terms and definitions regarding branding types in the survey instrument. However, the study protocol used in this study can be applied to other states to access the current status of brand-name fast food use in school lunch programs. Furthermore, this study can serve as a model for assessing other emerging trends in school foodservice operations on a state or national level.

Results presented in this report should be evaluated in relation to the regional size and limited time frame of the study. This study was conducted in the state of Indiana using data for the 1999-00 school year. Accordingly, Indiana schools would be the most legitimate scope to which study results could be generalized. However, considering the study finding that Indiana schools have been in the same phase as the rest of the nation in using brand-name fast foods, the generalization and application of the study results may be extended beyond the state.

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