

COLLEGE STUDENT'S PERCEPTION AND
PREFERENCE OF BRAND NAME
FOODSERVICES IN UNIVERSITY
DINING OPERATIONS

By

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CHAPTER I

INTRODUCTION

Background

Many of the universities and colleges have foodservice operations that are providing many variety food options and delivering fresh, healthy and tasty ingredients in a way that pleases the students. Some of the university and college have different type of foodservice operations: managed service company concept representing a franchised restaurant brands, or a self-branded restaurant concept. According to the restaurant & institution survey, the survey found that 59% of university operators offered self-created foodservice brands, while 68 % have national brands; 43% operate regional brands and 57% offer manufacturer-branded outlets (Matsumoto, 2002). The managed service companies dominate the on-site food service sector of the hospitality industry, a sector that is now viewed as a mature given in its exponential growth in recent years (Reynolds, 1997). Every managed service company uses branding such as Burger King, Subway, Pizza Hut, and Starbucks coffee. The brand name restaurant may contribute to perceive quality, manufacturer's brands; married with signature and nationally recognized concepts are thought to add quality appeal to menu items (Reynolds, 1997).

The college student market is growing and influencing expansion of university foodservice. According to the National Center for Education statistics, the number of students is expected to swell to 16 million by 2007. According to On-campus Hospitality (2003), with regard to the college market potential, the spending power of

college students is more than \$90 billion, with full-time, four-year students spending \$30 billion. College students have a tendency to desire brand name restaurant food. University foodservice operations are conveniently located with dormitories on campus dining facilities. In addition, on-site food service operations on campus are in student centers, food courts in student unions, and tucked into other university buildings.

The most important factors consumers consider when choosing a restaurant ranking is food quality, service, value, and cleanliness whether their food is prepared the way they desire it or prepared according to the food service quality standard. When customers choose food based on a brand name, the gap is reduced between the customer's expectation of food and the actual food delivered. Also, branded name product foods are preferred because of the reputation of the manufacture related to appearance, quality, fresh ingredients, familiarity, price, and value (Green, 1994). According to Bernstein (1991), brand name food service operations have been successful in increasing sales, improving food quality, assuring customer satisfaction, and increasing profitability. ARAMARK and Marriott services are increasing the numbers of branded products they provide in the college and university segment (Bernstein, 1991).

Many Americans are consuming their meals away from home daily, not so much as for a special occasion or treat, however as a way of life. The brand name restaurant perception has emerged from changes in the sociocultural environment in the United States due to the increased number of women in the workforce and increasing of single parent families which have contributed to increased sales of restaurant from the point of view of the casual dining restaurants or quick service restaurant branding fast food operations such as Taco Bell and Kentucky Fried Chicken, A&W, McDonalds, Burger King, and Carl's Junior have fulfilled the need for convenience for the customers.

In addition, brand name foodservice operations have been creating what has been labeled as “brand loyalty.” Brands can be built with customer service, support and quality and be cemented by personal relationships. According to Rundle-Thiele and Mackay (2001), brand loyalty has been referred to in a variety of market specific contexts such as service, store, and vendor loyalty and the context that reflect the nature of the measure used for customer and brand loyalty. In addition, Mellens, Dekimpe, and Steenkamp (1996) stated that behavioral loyalty measures brand loyalty for actual purchases observed over a time period and attitudinal loyalty measures preferences, commitment or purchase intentions. According to Gale (1992), a power brand such as a “name that means satisfaction, quality and value to the customer.” In addition, this reflects that customer desire to purchase is based on the attributes of the product. Levy (1996) stated that the successful service brands can be developed based on the principles of fast moving consumer goods branding. The principles are product definition, clear product benefit identification, brand differentiation, consumer motivation and measurement of product strength.

Purpose of Study

The purpose of this study was to measure the perception of brand name food service quality in university brand name foodservice among college students who are using the meal plan option or cash in university food service at Big Twelve Schools in Midwestern region (Baylor, Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, Oklahoma State, Texas, Texas A&M, Texas Tech University). The specific objectives were:

1. To assess the university student's perception of the service quality provided by the brand name foodservices in the university foodservices.
2. To identify university student's satisfaction level with brand name foodservices by gender.
3. To identify university student's perceptions between the brand name foodservice and the private brand foodservice in a university dining environment.
4. To assess the profiles of university students who are using brand name foodservice in university dining operations.
5. To explore the determinants of university students joining brand name foodservice in university dining operations again.
6. To identify the brand name foodservice selection criteria which were perceived as important by college students.

Statement of the Problem

Since the branding trends in foodservices have emerged from changes in the sociocultural environment in the United States, more Americans are eating out daily and branded food service operations have been growing in popularity. With this understanding of the perception of brand name foodservice quality, it is helpful to increase revenues of campus dining operations as well as to attract more students, including off-campus students, into the on-campus dining units. However, little studies have been conducted to uncover the impact of brands trends and to identify the student's perceptions of branded food operations and product preferences in university dining setting.

Limitations

This study is limited to students of some universities who are using the school food service operations in the United States. The results of this study cannot be generalized beyond this population.

This study is being conducted during the regular semester between several universities and different type food service operation in each school thus responses may reflect about different circumstance of brand restaurant perception.

Hypotheses

Based on the objectives of this study, the following hypotheses were established:

H₁ = There is a significant difference between the satisfaction level of brand name foodservice and gender.

H₂= There is a significant difference relationship between the perception of service quality factors and satisfaction level.

H₃= There is a significant difference of the perception of service quality dimensions in brand name foodservice in university foodservices and demographics / behavioral characteristics.

H₄= There is a significant difference between the perception of service quality factors and the likelihood of revisiting brand name foodservice operation.

H₅= There is a significant difference of brand preferences between the national brand and private brand as perceived by college students.

Definitions of Terms

For this study, the following terms were defined.

1. Brand: A brand is a collection of perceptions in the mind of the consumer/ a logo, corporate image, or distinct product or service identity that can become firmly rooted in the public's mind.
2. Brand name: the name by which a particular product is sold
3. Brand loyalty: the strength of a buyer's preference for a particular brand, which suggests a refusal to purchase a substitute. Brand loyalty is usually measured in terms of repeat sales and is also reflected in purchases of other items produced by the same company (Rosenberg, 1994).
4. Co-branding: referring to a marketing effort or partnership between companies, either online or offline, to join forces and use the best technology or content of each.
5. Customer loyalty: an individual behavior based on the act of purchasing or choosing to purchase, applying equally to persons (consumers) and institutions (Neal, 1999)
6. National brand: a national brand is a national identity that has been proactively distilled, interpreted, internalized and projected internationally in order to gain international recognition.
7. Regional brand/local brand: a brand found in a limited geographic territory (Rosenberg, 1994).
8. Brand name bias: a person's tendency to respond to a survey by naming widely advertised brands, often for purpose of giving a good impression, rather than naming the brands that are actually purchased (Rosenburg, 1994).

9. On-site foodservice: it can be defined as food outlets in business and industry, school, universities, and colleges, hospitals, skilled-nursing centers. (Reynolds, 1997).
10. Contract management foodservice: managing food and related services in a multiunit environment with a reliance on a trade name (Reynolds, 1997).
11. Perception: the perception is a cognitive impression that is formed of “reality” which in turn influences the individual’s actions and behavior toward that object.
12. Branding: the process by which the qualities and values of a brand are attached, both physically and by association, to the product.
13. Brand franchise: an agreement between wholesaler or retailer and a brand-name manufacturer giving the former an exclusive right to sell the brand manufacturer’s item in a carefully defined location. It permits the wholesaler or retailer to sell item in a noncompetitive market and set price limitations as the traffic will permit (Rosenberg, 1994).
14. National Brand: as a brand owned or controlled by an organization the primary commitment of which is to production rather than distribution; also called a Manufacturer’s Brand
Retrieved March 3, 2003, from
(<http://www.buseco.monash.edu/dept/mkt/dictionary/mmm.html>).
15. Private Brand: as a brand owned by a wholesaler or retailer; also called a private label
Retrieved March 3, 2003, from
(<http://www.buseco.monash.edu/dept/mkt/dictionary/mmm.html>).

CHAPTER II

REVIEW OF LITERATURE

Introduction

The perception of a brand name restaurant has been an essential issue for the food service industry for many years because it has been related with increasing sales, profits, customer satisfaction, and customer loyalty. According to Solomon (1994), the purchasing decision is based on brand loyalty. The brand image can be defined as the perception about a brand and as the cluster of association that consumers connect to the brand name, which reflects it by memory. According to Rambadt (2003), he reported that the Grand Valley State University increased sales after having a contracted dining service provider such as ARAMARK. To be a successful university foodservice, they must have skilled managers, who handle both people and resources with aplomb and treat their department as if it were their own business to get the maximum return on the money spent.

There have been limited attempts to research empirically the factors, which are effected to perceptions of a brand name product foodservice offered by a university environment, particularly from the perspective of a brand name. Also, university food operation revealed a paucity of information on the segmentation of college and university population based on their previous wants and needs. As university campuses offer more food selections for their students such as allowing students the freedom to live and eat where they want, university foodservice needs entity is in competition with

the local foodservice operations (Shoemaker, 1998). Followings are some brand name foodservice perception and university dining segmentation that have been recorded.

Trends of University Foodservice

Contract food management is a popular form of organization in the university food service industry. Most of the franchiser allows a franchisee to use and promote the franchiser's brand name capital in exchange for a mixture of fixed fee and ongoing royalties (Roh, 2002). Franchising has been increasingly important and a flourishing element in the food service industry. According to the Brickley and Dark (1991), franchising is an efficient form of organization when the marginal cost of monitoring company owned store managers is greater than the marginal cost of undertaking a franchising agreement because of the franchising contract is the lower cost of monitoring and governing the actions of employees.

From the point of view of the trending in university food service, branding food service operations have been adapted by university food service operation such as Taco Bell, Burger King, Kentucky Fried chicken, Starbucks Coffee, Crispy Cream Donuts and Subway because they provide a diversified dining service. According to Green (1994), Marriott and ARAMARK services are increasing the numbers of branded products they are providing in the university environment. Many of the food service administrators who look to branding their operation is due to the changing student trend and population which are such as more upgraded food service quality, and importance of desired menu, and awareness of nutrition (Green, 1994). In the case of Tiffin University, they have awarded a 5-year contract valued at \$4 million to Sodexo to provide food services at the school and they are looking forward to bringing new menu concepts and catering opportunities to the Tiffin campus (Reid, 2003). According to

Gioiello (2003), Sodexo at Wright State University features flavorful menu selections prepared right in front of the customer by chefs using the freshest ingredients and provides more variety menu options.

However, although university dining trend is going to adapt a franchise foodservice or contract foodservice, some university foodservices still want to maintain a tradition of providing a high quality dining experience as part of campus life. Buzalka (2002) stated that Notre Dame food service prefers to provide their own traditional food service and catering services for most on-campus functions with high quality food and different menu option. Also, they offer two different meal plan option to students which is a flexible of a 14 meal-a-week plan that also includes flex dollars that can be used at selected campus retail outlets or a flexible or 21-meal-a-week plan, which is used by about 10 percent of the students.

In addition, many of the university foodservices are also trying to renovate or upgrade their dining facilities by following the student's expectation and demand. For example, According to Purdue University, they have a strategic plan to spend \$18 million for a brand new dining court, which is going to be the International Station, Grill station, salad bar, dessert bar, and grab & go items by fall semester in 2003 (Johnson, 2003). This means that the university is going to be stepping up to meet student's demand. Johnson (2003) also stated that students want a less cafeteria-like atmosphere, and desire a chef exhibition-style in front of the customers. According to Western Ontario University, which is in Canada, they upgraded their campus card for students, which act not only as a photo ID and a library card but also can be used on, and off-campus retailing food service, a cashless vending card, and 11 off-campus dining locations. In addition, students can add value to the card at any one of the school's cash foodservice locations (Eldridge and Hassall, 2003).

Even though some universities want to renovate their university foodservice, they mostly struggle with financial problem due to constants in their annual budget. However, there is a success story for dining renovation with a limited budget. Laron (2003) stated that a renovation project occurs under a limited budget at Shepherd College. Shepherd College had inadequate dining facilities and lack of atmosphere and employee morale. They tried to generate the funds from the school administrator's recips by providing ideas and related to the reduction of foodservice expenditures, which is choosing scratch cooking rather than using precut or precooked food, which is including frozen food. Their concept was to replace the dining facility's dual cattle-chute serving line and limited selections with several stations offering diverse cuisines and tastes and modern presentation techniques.

There are six trends in university: 1. "Organic" growth- in case of American University and Yale will be implementing major organic based concepts in their dining operations. 2. Meal plan flexibility- facing a student population demanding maximum choice, schools are building unprecedented flexibility into their meal plans to entice participation without mandating it. 3. "Retail-ization" of board dining halls- ARAMARK's recent rollout of its real food on campus program highlights the growing blur between board and retail dining venues. 4. Cocooning continues- several major universities are planning to construct new single tenant on-campus residences to accommodate the growing number of students wishing to live alone. The targeting cocooning customers especially takeout and heat and serve retail meals for continuing to hold the hot hand. 5. Library foodservice- some universities started to implementing coffee shops and even full-fledged snack stations into a space. 6. Beyond the kid stuff- some schools are looking at providing more adult on campus gathering places such as dance clubs with alcohol service (Buzalka, 2003).

Figure 1

University trends toward university foodservice

Trends	Contents
1. “Organic” growth	With federal labeling standards finally in place, sourcing organic product consistently may be less of a problem.
2. Meal plan flexibility	Meal plans are steadily morphing into generic campus-wide debit systems that encompass not just board cafeterias but retail food court, snack shops and even campus stores.
3. “Retail-ization” of board dining halls	The staid but functional communal dining hall is fast receding into the mists of memory, replaced by vibrant, retail-oriented “marketplaces”.
4. Cocooning continues	Foodservice strategies targeting cocooning customers for takeout and heat and serve retail meals.
5. Library foodservice	Coffee shops and snack station in college libraries.
6. Beyond the kid stuff	Providing “adult” on campus activity such as dance clubs with alcohol service for concerning about student safety off campus.

Sources: adapted from Buzalka (2002).

The Value of Brand Image

A recognizable brand makes it easier for a consumer to buy a particular product, rather than take a chance with a generic commodity (Romano, 1996). The primary role of brand name capital is to convey information about consistent food quality that the consumer might find costly to obtain otherwise (Aaker, 1991). According to Fong (1987), he stated that brand name capitalized contribute more efficiently to the adoption of a franchise system. Brand name food is desired because of their good reputation, nice

appearance, fresh ingredients, better service quality, and value for the price. For example, McDonald's and Wendy's which have both succeeded in building their brands in the minds of consumers and delivering food and dining experiences that meet the consumers' expectation, not only offer their customers consistency (Blackwell, 2001). According to Romano (1996), brand loyal consumers are willing to pay a higher price because they assume that behind that recognizable corporate insignia is a real person who will back the product and that also increased the level of consumer trust and confidence. Furthermore, Howard (2000) stated that the most valuable asset to an organization's corporate image was its brand in the food and drink industry in the U.S. and U.K. According to Lloyd's survey of 51 risk managers in the US and UK, food and drink industry (Howard, 2000), 47% of quality, 35% of product innovation, and 33% of company image and reputation followed the survey. According to Muller (1998), by using the power of the restaurant brand, restaurant companies can have the most opportunity to move beyond the existing traditional simple or monolithic strategies, which seem to have played to their maximum benefit, and into a more complex endorsed one. In case of Pizza Hut, they offer the image and positioning statement of its traditional red-roof sit-down restaurants to the Pizza Hut Express kiosks that is limited to their service store (Muller, 1998).

Building a successfully managed brand is considered to be one of the keys of success in the lodging industry. Some lodging companies have made effective use of the brand-range or corporate-endorsement strategy in the wake of the burst of product tiers that the industry experienced in the 1980s. For an example, Marriott and Sheraton have maintained a collection of lodging brands operating in different industry segments (Muller, 1998). For example, Marriott Hotels and Resorts offered a strong example of the endorsed strategy because it not only offers hotels such as Marriott Hotel, Courtyard, and Fairfield Inns, but it also operates Marriott Resorts and a timeshare firm (Muller,

1998). Consumers sometimes are based on their perception of a certain hotel's brand name when they make decision where they stay. Over 200 hotel brands are competing for business in the U.S., and many of these brands are extensions of existing brand names (Jiang, Dev, and Rao, 2002). In addition, brand extension can influence consumer's brand choices and is an appropriate approach to breaking the entry barriers between product categories though the carryover of a brand's reputation such as DKNY (Donna Karan New York) by Donna Karan, Chaps by Ralph Lauren, Holiday Inn Express by Holiday Inn, and extended-stay Residence Inns by Marriott (Jiang, Dev, and Rao, 2002).

According to Halligan and Davis (2002), brand drives nearly two-thirds of customer purchases and impacts to nearly every function area of the business. For an example, the Martha Steward brand has been successful largely due to the understanding that growing the value the brand represents involves more than extending the brand through the addition of products and services or through maximizing the multitude of delivery channels through which a brand can be built (Halligan and Davis, 2002). Rio, Vazquez, and Iglesias (2001) stated, a brand creates value for both the consumer and the firm and provides value to the firm by generating value for the consumers. Also, brand functions are associations related to intangible attributes or images added to the product brought about from its brand name, that is, they represent benefits that can only be obtained from products with a brand (Rio, Vazquez, & Iglesias, 2001). Therefore, brand implies communicating a certain brand image in such a way that the firm's entire target groups can be connected and such a brand with a set of associations with product attribute.

Brand Preference

Brands play an important informational role for consumers. Low and Fullerton (1994) stated that brands allowed consumers to assign identities to different manufacturer's products. Aaker (1996) indicated that consumers usually do not choose brands randomly, but rather prefer certain brands. In addition, Monroe (1976) stated that brand name was possibly more important than price when customers purchase relatively inexpensive grocery products. McCarthy and Perrault (1994) mentioned that a lot of marketers would like to win brand preference, which means that the targeted consumers are mostly selecting their brand over the other brands, because of habits or outside influences. According to Griffin (1998), the increased in brand preferences could bring cost savings and advantages to a company in at least six fields: reduced marketing costs such as: consumer acquisition costs need more money, reduced consumer turnover expenses such as replacing customers, reduced failure costs such as rework or warranty claims, cross-selling success that leads to a large share of customers, more credibility by word- of- mouth, and reduced transaction costs such as contracting negotiation and processing of orders.

The Perception of National Brand and Private Brand

National Brand is defined in The Electric Marketing Dictionary (2003) as a brand owned or controlled by an organization whose the primary commitment is to engage in production rather than distribution; it is also called a Manufacturer's Brand (<http://www.buseco.monash.edu/dept/mkt/dictionary/mmm.html>, March, 2003). For examples, national brand in foodservice may be Campbell Soup, Subway, Starbucks Coffee, and Burger King. Sethuraman & Cole (1999) found that customers would pay a

higher premium for a national brand and believed that there is a strong perceived quality differential and price/value inference. Private Brand is defined in The Electric Marketing Dictionary (2003) as a brand owned by a wholesaler or retailer; also called a private label (<http://www.buseco.monash.edu/dept/mkt/dictionary/mmm.html>, March, 2003). Quelch and Harding (1996) indicated that the private label's strength generally varies with economic condition, which means that the private brand market share generally goes up when the economy is suffering and declines in stronger economic periods. As strength of private brand, there are inexpensive, easy, and low-risk purchases perceived by consumers relative to national brand (Quelch & Harding, 1996).

In the university foodservice field, there is an advantage when they have adopted self-branded concepts. University foodservice operators found that their flexibility can be a major advantage from self-branded concept such as: the menu can be adjusted and marketing emphasis may be shifted without seeking approval from a franchiser and also profits stay on campus (Matsumoto, 2002). However, some researches found that although the use of branded restaurant concepts on college campuses has been in vogue for several years, over the past several years an increasing number of school foodservice operators and contractors alike have installed major brands such as Pizza Hut Express, Burger King, and Chick-fil-A, in student centers in attempts to revive those building which is on-campus business enterprises (King, 1996).

Customers Perception Toward Strong Brand

Today, many corporate and private companies are spending millions of dollars on branding new and old names in hopes of building their market share and increasing profits probability. A strong brand name is the greatest asset a business can achieve. Goff (2002) indicated that there is number of reasons for a strong brand. First, a strong

brand name has credibility when approaching prospects, especially using the “cold call”(temporary visiting or giving a call to customers to sell goods) method. Second, a strong brand is very helpful in drawing in prospective customers when there is a demand product needed, such as an automobile insurance and brand may not be the final determining factor in making the purchase, but it certainly can help bring people in the door. The third, where brand comes into play is when customers are making the final decision on purchasing an insurance policy. Hence, with commodity-type products, customers are more inclined to purchase from a company that they already have known or heard of before.

In the foodservice industry, a strong branded image takes your services from being viewed as a generic commodity tone your customers must have and a strong umbrella branding program can increase traffic, boost check averages, and bolster staff morale (Watkins, 2001). When the foodservice operations can create a positive image that your customers believe in, everything your business does from opening new serveries to introducing branded concepts and menus that may gain credibility and value in your customer’s minds (Matsumoto, 2002). In addition, Watkins (2001) stated that strong branding is the most important thing you can do to increase your bottom line.

Customer Satisfaction

Customer satisfaction is often used as an indicator in business to see if customers will come back to a restaurant or not. One of the key efforts that the foodservice industry must make is satisfied customers are related to customer retention. Also, determining customer satisfaction is fundamental to providing effective delivery of services, which are applied to hospitality managers is an advantage over competitors via such benefits as product differentiation, increasing customer retention, and positive

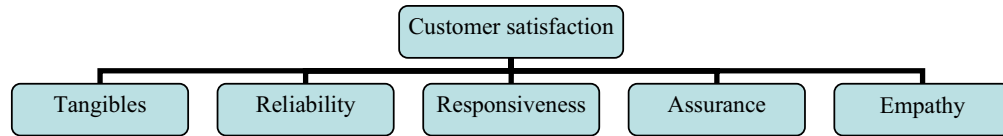
word- of mouth communication by customers (Yuksel & Rimmington, 1998).

According to Soriano (2002), the attribute of customer satisfaction should provide clues regarding what action a food service manager should take to increase the likelihood that customers will return. Knowing what the customers want and what makes them come back is important for the foodservice environment. Furthermore, Soriano (2002) stated that most customers have their own reasons to want to revisit any restaurant and are constantly seeking quality, value and desirable environment away from the stress of daily life. It is not enough to attract customers and retain them by providing them with excellent food and service. To obtain a competitive advantage in today's market, foodservice operators must try to offer value/price meals in a favorable ambience. Marketing is also one aspect of food service that we feel that is very important in customer service such as serving special menus for traditional holidays as well as for special occasions (Reuther & Otto, 1987).

Numerous research studies were focused on dimensions of service quality and five factors such as tangibles, reliability, responsiveness, assurance, and empathy can be evaluated for service quality of customer satisfaction (Chen & Ting, 2002). The following Figure 2 shows how the factors are influencing the customer's satisfaction.

Figure2

Customer Satisfaction Attributes



Also, these factors are most useful and applicable components used in models for service quality model (Weng, 1996). According to Humphreys and Williams (1996), customers' focus on what buyers receive (technical product attributes) and on how buyers and sellers interact (interpersonal process attributes), which showed how the salesperson's behaviors could be a significant determinant in optimizing customer value and satisfaction.

According to 1994 National Restaurant Association survey, 25 percent of the restaurateurs surveyed mentioned that service was the most important factors than the quality of food in a restaurant. Customer service is of critical importance to all the restaurant industries e.g., fast food, franchise, or full service restaurants. Outstanding service has always been fundamental to retain restaurant customers (National Restaurant Association, 1992). Foodservice operators must recognize the needs of their customers for a successful business and employees need to have the flexibility and training to react immediately to satisfy customer requests.

Reviews of Service Quality in Hospitality Industry

Service quality is an important determinant of success in attracting repeat business in the hospitality industry. In addition, Service quality is generally measured as the sum of the customer perceptions of the service quality experience. According to Parasuraman, Zeithaml, and Berry (1985), they stated that the service quality measured perception of the performance of the firms, which provided that service. Saleh and Ryan (1991) identified that SERVQUAL has been helping to measure the service quality in the hotel industry such as hotel services, measurement of their quality, and perception of management.

Numerous researchers have studied the area of the service quality measurement and a considerable service quality of relevant literature has existed owing to a clearly defined theory and well-tested questionnaire instrument. Parasuraman, Zeithaml, and Berry (1985) developed a conceptual model of service quality to measure the gap between the service that customers think should be provided and what they think actually has been provided. According to Knutson, Stevens, Wullaert, and patton (1991), SERVQUAL style questionnaire have been used to provide a service quality index for hotels and banqueting. In addition, Barsky (1992) has adopted a similar approach theory to assess customer satisfaction for the lodging industry.

Hunter and Gerbing (1982) defined that the service quality was proposed with five dimensions: (1) reliability; (2) assurance; (3) responsiveness; (4) tangible; and (5) empathy. Steven, Knutson, and Patton (1995) used also the five dimensions to measure the service quality and they found that reliability is the most important of the five dimensions. Zeithaml, Parasuraman, Berry (1985) presented that service quality could be defined through ten general dimensions which is providing criteria by customers to assess delivered service quality: (1) tangibility; (2) reliability; (3) responsiveness; (4)

competence; (5) courtesy; (6) credibility; (7) security; (8) access; (9) communication; and (10) understanding. However, these original ten dimensions were narrowed to five dimensions and resulted in the popular instrument, which is known as SERVQUAL measurement (Parasuraman, Zeithaml, & Berry, 1988). Fu and Parks (2001) mentioned that many researchers in hospitality industry have used the five-dimension SERVQUAL instrument to assess the service quality for various aspects of the hospitality industry. Nevertheless, all the original ten dimensions of SERVQUAL have still been using in the lodging industry in order to explore any potential dimensions (Getty, 2003).

In spite of service quality is good a standard for measuring customer expectation and satisfaction of service quality, some researchers have criticized about a number of methodological problems with the SERVQUAL. According to Sureshchandar, Rahendran, and Anantharaman (2002), the SERVQUAL does not explain particular other important constituents of service quality such as the special feature linked with a service, standardization of service delivery, and the service product so that settle the consistent service in the firm, and the image a service firm could be responsible to the society. Carman (1990) mentioned that the SERVQUAL could not be performed as designed if researchers do not modify the items for providing their new settings. Dube, Renaghan, and Miller (1994) explained that the concept of service quality has been used profitably, however the SERVQUAL still has a problem in the foodservice field. Peter (1993) has argued about the reliability validity of the SERVQUAL methodology. The advantage and disadvantage of SERVQUAL were found to be:

Figure3

Advantage and Disadvantage of the SERVQUAL methodology

Advantage of SERVQUAL	Disadvantage of SERVQUAL
<ul style="list-style-type: none"> • Role of indication which is the relative importance of consumer expectations with respect to the different dimensions of service quality • Allowance of comparisons of the various dimensions of service quality • Consideration of the nature and extent of service quality differences across firms within the same sector 	<ul style="list-style-type: none"> • Associating the problems, which are using a combination of positive and negative new setting scale items • Inability of the seven-point Likert scale to distinguish subtle differences in expectation of perception • Associating the problem, which is using a different scores for calculating a construct • The fact of service quality is presented by SERVQUAL may not be the most valid approach for identifying the service quality concept

Service Quality Attributes in the Foodservice Operations

As the service quality became a major part of foodservice business practices, it is important to be able to measure service quality and to research its effectiveness. Stevens, Knutson, and Patton (1995) have used the DINESERV instrument in order to measure the reality of the service quality and the expectation of customers in the restaurant field. Dube, Renaghan, and Miller (1994) stated that the service quality attributes can be measured by a customer satisfaction and an intention of repeated purchase, which is based on customer's dining experiences.

Applying to the foodservice industry, Zeithaml, Berry, & Parasuraman (1988), defined that perception of restaurant attributes can measure the customer expectations and perception of restaurant managers through the performances of service quality attributes. In addition, Garvin (1987) identified that common attributes of service quality is performance, features, conformance, aesthetics, reliability, durability, serviceability, and perceived quality. According to Pun and Ho (2001), the determinants of service quality are complicated with dynamic business environments which is important for service providers to integrate customer expectations into a quality improvement process and to consider the cause and effect relationship among the results of service quality measures.

Some researchers found that restaurant business is tangible and intangible elements. Restaurants are generally assumed that foodservice business is only selling food, however, customers not only buy meals, but also buy their experiences such as fun, service, ambience, and entertainment (Pun and Ho, 2001). Besides, Shock and Stefanelli (1992) stated that “ the marketing-mix concepts for the design and planning of restaurant services ”. This means that the marketing mix concept addressed the place, product/service, pricing, and promotion, procedure consideration of the restaurant operations. Yuksel (2002) mentioned that what happens between customers and service providers in the interactions (such as the time and place when and where the service providers have an opportunity to provide to the customers service quality) will obviously offer a significant impact on customer evaluations of foodservice organization.

After reviewing of the service quality attributes in the foodservice operations, this study described foodservice attributes, which are applicable to the university foodservice field and reported the relevant restaurant studies.

Figure 4

Service attributes used in measuring service quality in restaurant business and university
 foodservice operation

Foodservice attribute	Stevens, Knutson, & Patton (1995)	Mei, Dean, & White (1999)	Yuksel (2002)	This Study (2003)
Service standard		✓	✓	
Service efficiency	✓	✓	✓	✓
Attentive service	✓	✓	✓	✓
Helpful staff	✓	✓	✓	✓
Competent staff	✓	✓	✓	✓
Staff appearance	✓	✓	✓	
Price/menu shown clearly	✓		✓	✓
Food preparation consistency	✓	✓	✓	✓
Food tastiness	✓	✓	✓	✓
High quality food	✓	✓	✓	✓
Hygienic food preparation	✓	✓	✓	✓
Staff cleanliness	✓	✓	✓	
Adventurous menu	✓	✓	✓	✓
Availability of local dishes			✓	
Availability of interesting food	✓	✓	✓	✓
A place frequented by local			✓	
Reasonable food price	✓		✓	✓
Food value for money	✓		✓	
Hearty portions	✓	✓	✓	
Restaurant atmosphere	✓	✓	✓	
Activity and entertainment	✓		✓	
Healthy food	✓		✓	✓
Nutrition food/information	✓		✓	✓
Attractive exteriors/interior image	✓	✓	✓	✓
Convenient location	✓	✓	✓	
Availability smoking area			✓	
Visibility of food preparation area	✓	✓	✓	
Accurate check	✓			
Feeling safe/comfortable place	✓	✓		✓
Comfortable dining area	✓			✓
Handling problems	✓			✓
Attractive dining area				✓

CHAPTER III

METHODOLOGY

The review of literature indicated that limited information was available regarding the perspective of brand name foodservice in university dining operations and toward trends in the areas of consumers, customer service consumption patterns, menu patterns, marketing, and service quality standard. The purpose of this study was to measure the perception of brand name food service quality in university brand name foodservice among the college students that are using the meal plan option or cash in university foodservice at Big Twelve Schools (Baylor, Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, Oklahoma State, Texas, Texas A&M, and Texas Tech University) in the Midwestern region. This chapter describes the research design; sample population selection; data collection, which includes planning and development, instrumentation and survey procedures; and data analyses used in this study.

Research Design

The descriptive survey involved meeting the objectives and testing hypotheses of this study. According to Gay (1992), “Descriptive research involves collecting data in order to test hypotheses or to answer questions concerning the current status of the subjects of the study.” The main purpose of descriptive research is describing, recording, analyzing and interpreting conditions. Survey research is one method of

conducting descriptive research. Web survey media was used. In this study, the dependent variables were satisfaction level scores from the instrument used to determine the perception of brand name foodservice of university students toward university foodservice trends. The independent variables were selected demographic profiles of the respondent and service quality variables.

Sample Plan

The study participation was limited to university students who are belong to Big Twelve schools in the Midwestern region. The sample consisted of 2,400 university students were randomly selected from freshman to graduate students listed in the Big Twelve school in the Midwestern region during August 24, 2003 to September 30, 2003. College students who are in big twelve schools in the United States were chosen to participate in this survey. In addition, two hundred college students from each school of the big twelve were randomly selected from student e-mail address in each university student directory site were surveyed. A total of 210 questionnaires were collected for this study and 205 usable questionnaires were obtained.

Target Population

The survey questionnaires were distributed to all students from freshman to graduate student who were enrolled in the Big Twelve Universities since spring semester 2003. Target population for this study was all students and the sampling frame was all students who have been enrolled in the Big Twelve Universities in Midwestern region (Baylor, Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, Oklahoma State, Texas, Texas A&M, Texas Tech University).

Sample Size

For this study, the sample size of 2400 respondents was determined prior to the survey from the Big Twelve School, and the needed information was collected before the data was analyzed. Approximately, 200 samples were drawn from the each university.

Sampling Method

The researcher used a random sampling method to draw the samples. For this study, two stage sampling procedure was administrated to draw the samples. In the first stage, the population name and e-mail address were obtained from the student directory site from the Big Twelve University websites. Since the Big Twelve school did not provide entire e-mail lists from the student directory, the student name and e-mail address were searched by using the search function of the student directory web site from each university.

Procedures

The Institutional Review Board (IRB) at Oklahoma State University (OSU) approved the questionnaires prior to e-mailing to the college student of Big Twelve school (Baylor, Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, Oklahoma State, Texas, Texas A&M, Texas Tech University). With the development of the Internet, using e-mail or web-based survey was very easy to access by clicking on the appropriate buttons to indicate their answers. The college students were sent an e-mail invitation to participate in a web survey on attitudes toward brand name university foodservice and finish the online survey. The questionnaire designed using Microsoft Front Page was posted on the web site. When a participant clicked on

the hyperlink on the e-mail message, the hyperlink was connected into the web survey and then they clicked on the appropriate buttons to indicate their answers. Web-based survey form may increase the response rate.

To draw samples from each university, twenty-six labels, which were A to Z alphabets, were made and then were thoroughly mixed inside of the box to select the samples. In the second stage, four alphabet labeled letters were randomly selected one by one and then the selected letter was replaced into the box so that choose the next letter. It is important that sampling be done with replacement to meet the equal opportunity requirement. The first and second letters were used for finding first name and third and fourth letters were used for finding last name from the search function of the student directory web site. After finding student's name, the researcher could find that person's e-mail address from the student directory. Therefore, the student directory information for each of the Big Twelve University was public domain and no further permission was needed to obtain student's name and e-mail address. The overlapped e-mail address was searched after drawing the sample to avoid duplication problems. When the duplicate e-mail address was found, the first e-mail was adopted as a valid sample and then another duplicated sample was discarded.

To increase the response rate, an incentive method was used. Those students wishing to be included in the drawing for specific prizes voluntarily submitted the student's e-mail address separately. The three e-mail addresses were randomly selected by drawing. The prizes were 1st prize for \$75.00, 2nd prize for \$50.00, and 3rd prize for \$25.00. After the three prizes have been drawn, the researcher was notified the winners by e-mail to get three name and mailing address. When the winners did not reply, the researcher was conducted a subsequent drawing to contact three winners. When the three winners were identified, the prizes were sent to them immediately. The prizes in the form of a money order were sent immediately. Several monetary incentives were

sent to the college students by drawing a prize using their e-mail address's as a gesture of appreciation for their help in collecting data for this research.

Data Collection

Planning and Development

Planning and developing for the research began from August 2003 to September 2003. Prior to finalizing a survey instrument for this study, the pilot study was sent to twenty students at Oklahoma State University to detect potential bias in the instructions or contents of the questionnaire. Data collection procedures and data analysis techniques appropriate to test the research questions will be selected at that time.

Instrumentation

A questionnaire instrument was developed based on reviewing the relevant literature by past studies and the objectives of the study. The research instrument consisted of five parts. The first section of the questionnaire measured general perceptions of brand and fourteen questionnaires. The fourteen questions were identified based on the literature review. The researcher adapted the survey instrument from the 15-items "Richardson's (1992) product and contextual cue effects on private brand attitude" survey, modifying it to suit the university foodservice situation. In the first section of the questionnaire, respondents were asked to indicate the perception of a brand using a six-point Likert-type scale ranging from strongly disagree = (1) to strongly agree = (6).

The second section contained attitudinal statements regarding the brand name foodservice quality perception in university foodservice operations. The foodservice

quality questions for, the second section were selected from “ The DINESERV.Per Interview” survey (Stevens, Knutson, & Patton, 1995). Stevens, Knutson, and Patton (1995) developed the foodservice quality to measure the level of service quality for a restaurant using a simple worded questionnaire. Based on an advice form restaurant managers in university dining services, the researcher adopted 20 items from the DINESERV scale, modifying it to the brand name university foodservice. The 20 quality service attributes were identified. Each food service quality attribute was answered by using a six point Likert scales from 1 = (Strongly Disagree) to 6 = (Strongly Agree).

In the third section, the important selection attributes of brand foodservice operation consisted of thirteen questions. Respondents were asked to answer the attribute of important selection of brand foodservice operation using a five-point Likert-type scale ranging from at (1) = Least Important to (5) = extremely important. In the fourth section, respondents were asked to assess the overall willingness to revisit the foodservice operation at university dining. The fifth section was designed to measure demographic information. The demographic included gender; ethnicity, years in school; status of enrollment; living status; age; expenses of meal; and number of using campus foodservice.

The college students were sent an e-mail invitation to participate in a web survey on attitudes toward brand university foodservice. With the development of the Internet, using e-mail or web-based survey is very easy to access by clicking on the appropriate buttons to indicate their answers. Well-designed the web-based survey form will may increase the response rate and very efficiency. Several monetary incentives were sent to the college students by drawing a prize using e-mail address as a gesture of appreciation for their help researcher in collecting data for this research.

Data Analysis

The returned questionnaires were coded and the collected data was transcribed and processed into the computer using the Statistical Package for Social Sciences (SPSS) 10.0. The SPSS statistical software program was used in the data analysis. Data entry errors corrected by revisiting the actual coded questionnaires.

A standard statistical procedure, which includes t-test, regression analysis, one-way Analysis of variance and factor analysis, was used to test. Percentages and frequencies were determined for the demographic information.

For the descriptive statistics, simple frequency was calculated to display the distribution of respondent's demographic and college student profile. Mean rating of the respondent's brand perception between national brand and private brand was calculated. In addition, mean rating of the respondent's overall importance of restaurant selection in brand name foodservice in university foodservices was computed. The t-test was used for analyzing the differences on gender, which is based on perception of service quality of brand name foodservice in university dining operations. Descriptive statistics were used to tabulate, depict and describe sets of data and serve as a tool for summarizing the properties of an otherwise large mass of data (Glass & Hopkins, 1996). The descriptive statistics of percentage, frequency, charts, and graphs were used where appropriate.

The factor analysis procedure was employed to identify underlying dimensions of the students' perceptions of brand name foodservices. The factor analysis was used for extracting the new factors from the original 19 items for influencing college students' perception for brand foodservice in university dining and to measure the student expectations of service quality. These factors were used to determine their likelihood to satisfy the brand name foodservice operation. To assess the reliability of measure, Crombach's alpha was calculated to test the reliability of variables retained in each factor, and coefficients greater than or equal to 0.50 were considered acceptable and a

good indication of construct reliability. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) and the Bartlett Test of Sphericity and was used to determine the appropriateness of applying factor analysis. After factors were extracted, analysis of variance (ANOVA) was adopted to identify if any difference in the perception factors means between demographic groups.

The regression analysis was used to measure the relative impact of the service quality dimension, or factors that influence college student's overall satisfaction level of service quality as well as their likelihood of revisiting at the brand name food service in the future.

CHAPTER IV

RESULTS

Demographic

Of the 210 questionnaires received (Table 1), 205 were completed and usable, representing a response rate of 8.5 %. As shown in Table 2, among the 205 respondents, 104 respondents (50.7%) were male and 101 respondents (49.3%) were female. More than 90 percent of the respondents were aged between 18 and 23. About 10 percent of the respondents were aged between 24 and 29, and 3 percent of the respondents were aged 30 or above. About 60 percent of the respondents were freshman and sophomore students, about 30 percent of the respondents were junior and senior students, and about 10 percent of the respondents were graduate students. More than 90 percent of the respondents were full-time students and about 3 percent of the respondents were part-time students. Among the 205 respondents, 123 respondents were Caucasian-non-Hispanic, 44 respondents were Asian/pacific Islander, 15 respondents were African American, 4 respondents were Hispanic, 15 respondents were Native American, and 4 respondents were others.

Table 1

Big Twelve School Survey Participants

Name of School	Number of Participants
Baylor	N= 12
Colorado	N= 13
Iowa State University	N= 17
Kansas	N= 19
Kansas State University	N= 21
Missouri	N= 15
Nebraska	N= 9
Oklahoma	N= 18
Oklahoma State University	N= 51
Texas	N= 16
Texas A & M	N= 8
Texas Tech University	N= 11
Total	N= 210

Table 2

Demographic Profile of the Respondents

Variable	Frequency	Percentage (%)
Gender		
Male	104	50.7
Female	101	49.3
Ethnicity		
Caucasian-Non-Hispanic	123	60.0
Asian/Pacific Islander	44	21.5
African American	15	7.3
Hispanic	4	2.3
Native American	15	7.3
Others	4	2.0
Classification		
Freshman	88	42.9
Sophomore	39	19.0
Junior	32	15.6
Senior	23	11.2
Graduate	23	11.2
Status		
Full-time student	198	96.6
Part-time student	7	3.4
Age		
18-20	141	68.8
21-23	50	24.4
24-26	7	3.4
27-29	4	1.5
Over 30	3	1.5

Behavior of Characteristics of Students

The behavior of characteristics of students is described in Table 3. All participants were asked to answer questions about the living status in which they lived, the meal expenditure a day in which they spent money on campus dining, and the number of use campus dining per week in which how many times they used on campus dining. The results indicated that 151 respondents lived on campus and 54 respondents lived off campus. About half of the respondents had average food cost between \$ 6.00

and \$10.00 per day and about one-third of the respondents had average food cost between \$11.00 and \$15.00 per day. Those spending less than \$5.00 per day represented 16.1 percent. About 58 percent of the respondents were using on campus foodservice between 1 and 8 times a week, about 36 percent of the respondents were using on campus foodservice between 9 and 16 times a week, about 3 percent of the respondents were using between 17 and 20 times a week, and 1.5 percent of the respondents were using above 20 times a week. Those not using on campus foodservice per week represented just 1 percent of the total number of the respondents.

Table 3
Behavioral Characteristics of Students

Variable	Frequency	Percentage (%)
Living status		
On campus	151	73.7
Off campus	54	26.3
Meal expenditure per day		
Less than \$5.00	33	16.1
\$6.00-\$10.00	98	47.8
\$11.00-\$15.00	58	28.3
\$16.00-\$20.00	14	6.8
More than \$20.00	2	1.0
Number of visits to campus foodservice per week		
1-4 times	55	26.8
5-8 times	64	31.2
9-12 times	47	22.9
13-16 times	28	13.7
17-20 times	6	2.9
Over 20 times	3	1.5
None	2	1.0

Perception of Brand Name Foodservice

The mean score of perception of brand name foodservice quality in university foodservice operations was presented in Table 4. The mean score of the overall level of perception was 3.86. Perception of brand name foodservices attributes such as ‘easily readable menu’, ‘tasty food’, ‘variety of food options’, ‘visually attractive menu that reflects the dining image’, ‘cleaning area’, ‘comfortable seats’ and ‘dining area that is comfortable and easy to move around in’ were perceived by the respondents as very important. They are mainly in the areas of dining environments and food selections. All of these were rated 4.02 or higher in terms of the level of perception of brand name foodservice.

‘décor in keeping with its image and price range’, ‘service of food exactly as ordered’, ‘visually attractive building exteriors’, ‘promptness of service’, ‘quick correction of anything wrong’, and ‘visually attractive dining area were rated from 3.97 to 3.82, which indicated that these service areas of augmented services and dining attraction were also perceived by the respondents as important of dining environments and food selections.

‘well trained employees’, ‘knowledge of employees regarding menu items, ingredients and methods of preparation’, reasonable prices’, ‘high quality of food’, ‘provision of nutritional information’, and ‘selection of healthy food items’ were rated from 3.74 to 3.06. These attributes were mainly related to the service areas of training employees and knowledge of menu information.

Table 4

Mean Ratings of Perception of Brand Name Foodservices

Perceptions of brand name dining foodservices (N=205)	Mean	Standard Deviation
Easily readable menu	4.28	1.16
Tasty food	4.27	1.27
Variety of food options	4.11	1.19
Visually attractive menu that reflects the dining image	4.10	1.16
Clean dining area	4.10	1.19
Comfortable seats	4.05	1.17
Dining area that is comfortable and easy to move around in	4.02	1.24
Décor in keeping with its image and price range	3.97	1.04
Service of food exactly as ordered	3.96	1.07
Visually attractive building exteriors	3.94	1.09
Promptness of service	3.93	1.09
Quick correction of anything wrong	3.89	1.21
Visually attractive dining area	3.82	1.21
Well trained employees	3.74	1.18
Knowledge of employees regarding menu items, ingredients, and methods of preparation	3.71	1.27
Reasonable prices	3.59	1.21
High quality of food	3.54	1.24
Provision of nutritional information	3.16	1.30
Selection of healthy food items	3.09	1.42
Overall Mean	3.86	1.20

Service Quality Perception of Brand name foodservices

Factor Analysis

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) and the Bartlett Test of Sphericity was used to determine the appropriateness of applying factor analysis. The value of MSA found in the study was .913, which was marvelous (Kaiser, 1974) and which verified that use of factor analysis was appropriate in the study. Bartlett's Test of Sphericity value (χ^2) was 1745.015, with the overall significance of the correlation matrix of .000. This test showed that the data used in this study did not produce an identity matrix and are thus approximately multivariate normal and acceptable for applying factor analysis.

Principal Component Analysis of factor analysis with a VARIMAX rotation procedure was employed to identify underlying dimensions of the students' perceptions of brand name foodservices (Table 5). The factor analysis identified 19 attributes with meaningful factor loadings. Factor scores were derived from the factor analysis and used as prediction variables in the follow-up multiple regression analysis. All four factors had eigenvalues greater than 1.0, accounting for 61.13% of the total variance. All factor loading of .40 or greater were retained in the analysis.

The first factor was labeled as 'Dining Environment', which explained 39.65% of the total variance with a reliability coefficient of .868. The relatively large proportion of the total variance for that factor might be attributed to the fact that two major parts of brand name foodservices, environment and food selection, were included in the factor. This factor included seven items; clean dining area, visually attractive dining area, comfortable seats, dining area that is comfortable and easy to move around in, selection of healthy food items, visually attractive building exteriors, and high quality of food.

The second factor was labeled as ‘Competency of Employees’, which accounted for 9.03% of the total variance with a reliability coefficient of .86. This factor was identified by five variables; knowledge of employees regarding menu items, ingredients, and methods of preparation, quick correction of anything wrong, promptness of service, well trained employees, and service of food as exactly ordered.

The third factor was labeled as ‘Quality of Menu and Food Selection’ explained 7.06% of the total variance with the reliability coefficient of .77. This factor was based on four variables; tasty food, variety of food options, visually attractive menu that reflects the dining image, and easily readable menu.

Finally, The fourth factor labeled as ‘Price & Nutritional Information’ explained 5.38% of the total variance with a reliability coefficient of .58. This factor included three variables; reasonable prices, provision of nutritional information, and décor in keeping with its image and price range.

Table 5

Factor Analysis Results with Varimax Rotation of College Student's Perceptions of Brand Name Foodservices

Factors and Variables	Factor Loading	Eigenvalue	% of variance	Reliability coefficient	Communality
Factor 1: Dining Environment		7.534	39.654	.868	
Clean dining area	.780				.710
Visually attractive dining area	.756				.705
Comfortable seats	.725				.702
Dining area that is comfortable and easy to move around in	.705				.671
Selection of healthy food items	.623				.518
Visually attractive building exteriors	.484				.506
High quality of food	.475				.410
Factor 2: Competency of Employees		1.715	9.026	.856	
Knowledge of employees regarding menu items, ingredients, and methods of preparation	.851				.750
Quick correction of anything wrong	.770				.680
Promptness of service	.681				.632
Well trained employees	.667				.594
Service of food as exactly ordered	.657				.750
Factor 3: Quality of Menu & Food Selection		1.342	7.062	.768	
Tasty food	.787				.644
Variety of food options	.769				.739
Visually attractive menu that reflects the dining image	.657				.680
Easily readable menu	.603				.529
Factor 4: Price & Nutritional Information		1.023	5.384	.579	
Reasonable prices	.727				.598
Provision of nutritional information	.696				.521
Décor in keeping with its image and price range	.433				.454
Total Variance Explained (%)			61.126		

Note: Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA): .913
 Bartlett's Test of Sphericity: $\chi^2=1745.015$, significance at $p=.000$

Overall Satisfaction Level of Brand Name Foodservice by Gender

As Table 6 shows, to examine how college student perceived overall satisfaction level by gender, independent samples t-test was adopted. The results showed that there

are no significant differences between male and female in overall satisfaction level of brand name foodservice ($p \leq 0.05$). Therefore, hypothesis 1 is not accepted.

Table 6

Overall Satisfaction Level of Brand Name Foodservice by Gender

Variables	Gender		t-value	Sig.
	Male (N=104)	Female (N=101)		
Overall satisfaction level	3.98	4.12	-.859	.391*

* $p \leq 0.05$

Determinants of the Student's Overall Satisfaction Levels

To investigate whether the four perception dimensions could be an influence to the college student's overall satisfaction levels, the overall satisfaction score was regressed against the summated scales of the four-perception dimensions derived from the factor analysis. Table 7 describes the results of the regression analysis of the four factors as independent variables with the overall satisfaction as the dependent variable.

Table 7

Determinants of Dining Satisfaction

Dependent variable: College student’s overall satisfaction with brand name foodservice quality in university dining services

Independent variable: Four dimensions representing the components of perceived service quality

Multiple R= 0.614

R² = 0.377

Adjusted R² = 0.365

Standard Error = 0.916

F = 30.267

Significant F = 0.000

Independent variable in the equation	B	Standardized Beta	t	Sig. t
Constant	.811		2.290	0.023
F1: Dining Environment	.541	.432	5.141	.000*
F2: Competency of Employees	.186	.152	1.954	.052*
F3: Quality of Menu & Food Selection	-0.06826	-.055	-.795	.428
F4: Price & Nutritional Information	.210	.160	2.389	.018*

*p ≤ 0.05

The coefficient of determination (R²) of 0.377 indicated that 38 % of the variance in the overall satisfaction was explained by the four service quality factor. The R of independent variables (four service quality factors) on the dependent variable (college students’ overall level of satisfaction) is 0.614, which presents that the students had positive and high overall satisfaction levels with the four service quality factors. The F- ratio, which has a value of 30.267, suggests that the regression model could not have occurred by chance.

To test whether the four independent variables contributed information to the dependent variable “ overall satisfaction level,” a t-statistic test was utilized. In this study, if the t-value of an independent variable was found to be significant at 0.05 level,

that variable was considered in the model. As shown in Table7, three factors: ‘dining environment,’ ‘competency of employees,’ and ‘price & nutritional information’ were each found to be significant variables in the model (at $p \leq 0.05$), but the third variable, ‘quality of menu & food selection’, was not statistically significant (Sig.=0.428). The model was written as follows:

$$Y_s = 0.811 + (0.541X_1) + (0.186X_2) + (0.210 X_4)$$

Where,

Y_s - College students’ overall level of satisfaction with brand name foodservice quality in university dining service

X_1 - Dining Environment

X_2 - Competency of Employees

X_4 - Price & Nutritional Information

The results of the regression analysis indicated that there was a positive relationship between the three independent variables “Dining Environment,” “Competency of Employees,” and “Price & Nutritional information” and the dependent variable “overall satisfaction level” as the three coefficients carried positive signs. This presented that the overall satisfaction level of college students depended on these three variables. When college students perceived brand name foodservice quality as strongly disagree of satisfaction (1 - strongly disagree), their overall satisfaction level was less than 1 (1 - strongly dissatisfied):

$$\text{When } X_{1,2, \& 4} = 1, \quad Y_s = 1.75$$

When college students perceived brand name foodservice quality as strongly agree of satisfaction (6 - strongly agree), their overall satisfaction level was more than 5 (5 - strongly satisfied):

$$\text{When } X_{1,2, \& 4} = 5, \quad Y_s = 5.50$$

Based on the coefficient of each independent variable, one can assess the impact of each variable on the dependent variable. From Table 5, it could be noted that the variable ' Dining Environment ' was the most important determinant factor in explaining college student's overall satisfaction; it has the highest coefficient value 0.432, as well as the highest *t* value. 'Competency of Employees' (Beta=0.152) and 'Price & Nutritional Information' (Beta=0.160) follows in importance. Since the third variable ' Quality of menu & food selection' did not turn out to be significant, the coefficient's value is of little importance. In addition, it would include that the level of college student's satisfaction level with the service quality dimensions in brand name foodservices has a partial relationship with each other. Therefore, hypothesis 2 is supported with respect to factor 1 -- Dining Environment, factor 2 -- Competency of Employees and factor 4 -- Price and Nutritional Information.

Significant Difference Among Age Group, Ethnicity, and Average of Meal Expenditure in Perception Factors

The study used ANOVA to measure the significant differences in perception of service quality factors by categories of the demographic profile. Table 8 shows the result of this ANOVA. In analyzing the gender, classification of year of school, status of enrollment, status of living place, and the frequency of using campus foodservice with the four perception factors, no significant differences were found. However, the perception of brand name foodservice quality varies significantly by different age group, ethnicity, and average of meal expenditure. First, the results of the ANOVA analysis showed significant differences among respondent's different age groups with the factor 2 and factor 4 but not with the other two factors ($p \leq 0.05$). Second, the results of the

ANOVA analysis indicated significant differences among respondent's different average meal expenditure with the factor 1, Dining environment. This result indicated that average meal expenditure is related with the dining environment and food selection factor. Finally, the study shows that the perception of brand name foodservice differed by the ethnicity for factor 2, Competency of Employees. Ethnicity groups who used the brand name foodservice perceived Competency of Employees, which is important.

Post-Hoc Analysis was conducted in order to assess which age group showed the significant differences. Tukey's post-hoc test (Table 9) was used for the significant factors. The results of Tukey's post hoc analysis showed that respondent's age, average of meal expenditure, and ethnicity provide differences of each mean. First, the respondents at age group 18-20 rated significantly higher perception service quality of level of the reliability of employee than at age group over 30. Second, the respondents at age group 21-23 rated significantly higher perception service quality level of the price & nutritional information than age group 27-29. Third, the respondents at an average of meal expenditure Less than \$5.00 rated significantly higher perception service quality level of the dining environment than an average of meal expenditure \$16.00-\$20.00. Finally, the respondents at Caucasian groups rated significantly higher perception level of the reliability of employee than those at African American group. Therefore, hypothesis 3 is supported relative to factor 2 -- Competency of employees, factor 4-- Price and Nutritional Information, and factor 1 -- Dining Environment.

Table 8

Analysis of Variance of Demographic Valuable and Factor Dimensions

Characteristics	Factors	Categories					F value	P-value
Age		18-20	21-23	24-26	27-29	Over 30		
	F2: Competency of Employee	141	50	7	4	3		
	Mean	3.9262	3.7240	3.6286	4.3000	2.2667	3.052	.018
	SD	.8946	.9663	1.2079	.3464	.9018		
	F4: Price & Nutritional Information	141	50	7	4	3		
	Mean	3.6194	3.3333	3.9524	4.5000	3.3333	2.619	.036
	SD	.8429	.9160	1.0789	.4303	.5774		
Average of meal expenditure		Less than \$5.00	\$6.00-\$10.00	\$11.00-\$15.00	\$16.00-\$20.00	More than \$20.00		
	F1: Dining Environment	33	98	58	14	2		
	Mean	4.1818	3.7536	3.6536	3.1484	3.0714	2.509	.043
	SD	.8952	.8402	1.0481	.7273	.3030		
Ethnicity		Caucasian	Asian	African American	Hispanic	Native American	Others	
	F2: Competency of Employee	123	44	15	4	15	4	
	Mean	3.7350	3.8818	4.4800	3.3500	3.9333	4.8500	3.051
	SD	.8780	.9324	1.0080	.9849	.9155	1.3892	.011

Note: Only significant factors at P<0.05 are shown.

Table 9
 Tukey's Post-Hoc Test
Age

* $p \leq 0.05$

		N	F	Sig.	
F2: Competency of Employees		205	3.052	.018	
Age	Independent variable age group	Mean difference	Standard error	Sig.	
18-20	21-23	.2022	.1511	.667	
	24-26	.2977	.3555	.919	
	27-29	-.3738	.4654	.930	
	Over 30	1.6596	.5356	.017*	

Table 9
 Tukey's Post-Hoc Test
Age

		N	F	Sig.	
F4: Price & Nutritional Information		205	2.619	.036	
Age	Independent variable age group	Mean difference	Standard error	Sig.	
21-23	18-20	-.2861	.1420	.259	
	24-26	-.6190	.3481	.386	
	27-29	-1.1667	.4482	.070*	
	Over 30	-.0004409	.5127	1.000	

* $p \leq 0.10$

Table 9

Tukey's Post-Hoc Test
Average of meal expenditure

		N	F	Sig.	
F1: Dining Environment		205	2.509	.043	
Average of meal expenditure	Independent variable average of meal expenditure group	Mean difference	Standard error	Sig.	
Less than \$5.00	\$6.00-\$10.00	.4282	.1821	.129	
	\$11.00-\$15.00	.4232	.1973	.201	
	\$16.00-\$20.00	.7635	.2886	.062*	
	More than \$20.00	1.1104	.6589	.443	

* $p \leq 0.10$

Table 9

Tukey's Post-Hoc Test
Ethnicity

		N	F	Sig.	
F2: Reliability of Employees		205	3.051	.011	
Ethnicity	Independent variable ethnicity group	Mean difference	Standard error	Sig.	
Caucasian	Caucasian-Non-Hispanic	.1469	.1605	.943	
	African American	-.5982	.2731	.034*	
	Hispanic	.5318	.4771	.962	
	Native American	-.0051515	.2731	.969	
	Others	-.9682	.4771	.155	

* $p \leq 0.05$

Likelihood of Revisiting Brand Name Foodservice

As shown in Table 10, to find the likelihood of revisiting brand name foodservice, independent samples t-test was employed. The results of independent samples t-test showed with regarding to intention to revisit brand name foodservice in university dining operations. Significant difference factors were found toward “ dining environment & food quality (t= 3.856, p=0.000),” “ Competency of employee (t=4.281, p=0.000),” and “ quality of menu & food selection (t=3.487, p=0.001).” Therefore, hypothesis 4 is supported relative to factor1 -- Dining Environment, factor 2 -- Competency of Employees, and factor 3 -- Quality of Menu & Food Selection.

Table 10

T-test of service quality of brand name foodservice with regard to intention to revisit

Variables	Revisit		t-value	Sig.
	Yes (N=190)	No (N=15)		
Factor1: Dining Environment	3.8617	2.9429	3.856	.000*
Factor2: Competency of Employees	3.9253	2.8933	4.281	.000*
Factor3: Quality of Menu & Food Selection	4.2526	3.4167	3.487	.001*
Factor4: Price & Nutritional Information	3.6000	3.2444	1.518	.131

* p ≤ 0.001

Ranking of the Important Elements of Brand Name Foodservice Selection

Respondents were asked to indicate the most important elements used to determine the selection of the brand name foodservice. As can be readily seen in Table 11, respondents chose that the 'cleanliness' is the most important element to select a brand name foodservice. The second choice was 'quality of food.' This factor shows how important quality of food is to the brand name foodservice business. The third choice was 'Prompt handling of complaints,' and 'Competent waiting staff.' These are also important factors in influencing the selection in brand name foodservice. The fourth choice was 'Friendliness of waiting staff,' and 'Type of food.' The fifth choice was 'comfort level' which indicated capability of offering pleasantness in the brand name foodservice business. The sixth choice was 'cost of food.' The respondents were moderately concerned about prices when selecting the brand name foodservice. The seventh choice was 'speed of service.' The eighth choice was 'restaurant atmosphere,' and 'menu variety.' Respondents considered availability of convivial dining atmosphere, availability of health choice food, and availability of variety of food choices. The ninth choice was 'prestige.' Finally, the least important choice was 'new experience' which indicates that respondents do not consider new experience when making selection of brand name foodservice decision.

Table 11

Ranking of the Important Elements of Brand Name Foodservice Selection

Considered Important Elements (Choice variables)	Response Percentage Ranking Variables
Cleanliness	88%
Quality of Food	87%
Prompt Handling of Complaints	79%
Competent Waiting Staff	79%
Friendliness of Waiting Staff	78%
Type of Food	78%
Comfort Level	77%
Cost of Food	76%
Speed of Service	75%
Restaurant Atmosphere	73%
Menu Item Variety	73%
Prestige	63%
New Experience	62%

The Mean score and rank of National Brand and Private Brand

The mean score of the perception of national brand and private brand in foodservice were presented in Table 12. The mean score of the overall level of perception was 3.80. Perception of attribute such as ‘importance of my own preference which is not based on national and private brand,’ ‘finding the lowest prices which is not based on national and private brand,’ and ‘concerning of habitation’ indicated that respondents consider more their preferences and habitation than price or brand, and

concern to find the lowest price in foodservice rather than consider national and private brand. All of these attributes were rated from 4.06 to 4.44.

The perception of attribute such as 'high value of private brand,' and 'quality of private and national brand' presented that the respondents perceive private brand is better than national brand or quality of private is just as good as the quality of national brand in foodservice. These attributes were rated from 3.93 to 3.94.

'High value of national brand' indicated that mean score was 3.91. 'Concerning the lowest price between national private brand,' and 'no differences between brands of food,' were rated 3.78 to 3.87. These attribute presented that the respondents watch the lowest price when utilizing a foodservice. Also, they indicated that there are no differences between brands of food in the foodservice.

The perceptions of attribute 'high quality of national brand,' and 'trying popular brand' were rated from 3.67 to 3.69. 'Perception of national brand advertising of food,' choice of brand by advertisement,' 'interesting of brand advertisement' and 'concerning of brand' were rated from 3.07 to 3.59. The respondents indicated that national brand advertising does not have a benefit for a customer. In addition, they do not pay attention the national brand advertisement and national brand does not appear to be important consideration for choosing food product.

Table 12

The Mean Score and Rank of National Brand and Private Brand

The perception of National brand and private brand	Mean	Std. Deviation	Rank
Importance of my own preference which is not based on national/private brand	4.44	1.22	1
Importance of finding lowest prices which is not based on national/private brand	4.18	1.36	2
Concerning of habitation	4.06	1.13	3
High value of private brand	3.94	1.13	4
Quality of private and national brand	3.93	1.13	5
High value of national brand	3.91	1.28	6
Concerning of the lowest price between national and private brand	3.87	1.38	7
No differences between brands of food	3.78	1.31	8
High quality of national brand	3.69	1.40	9
Trying popular brand	3.67	1.28	10
Perception of national brand advertising of food	3.59	1.27	11
Choice of brand by advertisement	3.57	1.34	12
Interesting of brand advertisement	3.50	1.35	13
Concerning of brand	3.07	1.25	14
Overall	3.80	1.36	

The Perception of the National Brand and Private Brand

As shown in Table 13, an exploratory factor analysis using principal component with varimax rotation was to determine the underlying dimensions used by college students in evaluating the perception of national brand and private brand in university foodservices. From the varimax rotated factor matrix, four factors with eigenvalues greater than 1.0 were extracted, and they explained 57.7 percent of the overall variance. The four dimensions with 12 variables from the original 14 variables, which were abstracted for interpretation of the scale. These four factors were named as “Worth of national brand,” “importance of the lowest prices,” “little concerning of popular brand,” and “Worth of private brand/ importance of personal taste.” The Bartlett test of Sphericity showed a value of 614.733 at a significance level of 0.000, which showed a

significant correlation among some of variables. The Measure of Sampling Adequacy (MSA) of 0.679 was middling. The scale reliability of each image factor was tested for internal consistency with the use of Cronbach Alpha for each factor. The alpha coefficients of perception of national and private brand ranged from 0.51 to 0.80 for four factors. Since 0.50 is the minimum value for accepting the reliability test, the results of factor analysis in the study are reliable (Nunnally, 1967).

The four factors underlying college student's perceptions of national and private brand in university dining services are as follow:

First, factor one contains three items and was named as "worth of national brand." These factors explained 22.15 percent of the variance with an eigenvalues of 2.89. It included items related to the reliability of the national brand, including, "high value of national brand," "high quality of national brand," and "concerning of national/popular brand."

Second, factor two contains two items and was labeled as "importance of the lowest price." These factors explained 15.33 percent of the variance with an eigenvalues of 1.99. It contained items related to the concerning of the lowest prices, which is not based on national and private brand. The items are "watching the lowest prices", and "checking the lowest prices."

Third, factor three was named as "little concerning of popular brand." It loaded with three factors and explained 10.67 percent of the variance, with an eigenvalues of 1.39. This contains items related to no advantage of popular/national brand, which are "Not interested in popular brand advertisement," "little considering of popular brand," and "little or no benefit of popular brand."

Finally, factor four was labeled as "Worth of private brand/ importance of personal taste" and which were included four items. The factor four is related with the private brand value and personal taste. This factor had an eigenvalues of 1.24 and

represented 9.54 percent of variance. These were “ Importance of my own like and dislike,” “ concerning of my habit,” “ better value of private brand,” and “ high quality of private brand.”

Table 13

Perception of Private and National Brand in Foodservice

Factors and Variables	Factor Loading	Eigenvalue	% of variance	Reliability coefficient	Communality
Factor 1: Worth of national brand		2.880	22.153	.690	
High value of national brand	.860				.758
High quality of national brand	.817				.724
Concerning of national/popular brand	.584				.545
Factor 2: importance of the lowest prices		1.992	15.327	.806	
Watching the lowest prices	.867				.766
Checking the lowest prices	.864				.796
Factor 3: Little concerning of popular brand		1.387	10.665	.609	
Not interested in popular brand advertisement	.827				.684
Little considering of popular brand	.662				.548
Little or no benefit of popular brand	.625				.432
Factor 4: Worth of private brand/ importance of personal taste (not based on price and brand)		1.240	9.542	.531	
Importance of my own like and dislike	.711				.535
Concerning of my habit	.597				.415
Better value of private brand	.546				.503
High quality of private brand	.518				.441
Total Variance Explained (%)			57.687		

Note: Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA): .679
Bartlett's Test of Sphericity: $\chi^2=614.733$, significance at $p=.000$

The Perception of the National and Private Brand by Gender

As shown Table 14, to investigate preference of the national and private brand by gender, independent samples t-test was adopted. The results showed that there are significant differences between male and female in importance of the lowest prices

($p < 0.05$). These results interpret that female college students were concerned more than male college students about the lowest prices, which is not based on national and private brand. Therefore, hypothesis 5 is supported with respect to factor 2 -- Importance of the Lowest Prices.

Table 14

Results of the Independent Sample t-test for Perception of the National and Private Brand by Gender

Variables	Gender		t-value	Sig.
	Male (N=104)	Female (N=101)		
Factor1: Worth of National Brand	6.0502	6.2940	.881	.379
Factor2: Importance of the lowest prices	.14567	.15149	.214	.034*
Factor3: Little concerning of popular brand	2.1402	2.2290	.311	.756
Factor4: Worth of private brand/ Importance of personal taste	7.1202	7.4070	.104	.301

* $p \leq 0.05$

CHAPTER V

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This study determined the college student's perception of brand name food service quality, the overall satisfaction level of college students, and the perception of brand name foodservices in university brand name foodservices at Big Twelve Schools in Midwestern region at the limited states (Baylor, Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, Oklahoma State, Texas, Texas A&M, Texas Tech University). Questionnaires were asked to complete the DINESERV. Per Interview" survey (Stevens, Knutson, & Patton, 1995) instrument to measure the perception of service quality and satisfaction of university brand name foodservices at Big Twelve Schools. In addition, the college student characteristics such as gender, age, status, living status, dining frequency, meal expenditure a day, and dining occasions also were asked in the questionnaire.

Discussion of Findings

As the result of descriptive statistics, the age group was mainly 18-20 year of age (68.6%), and the majority of the college students were Caucasian. The gender distribution was almost equally distributed to between male (50.7%) and female (49.3%). About 60 percent of the college students were freshman and sophomore. More

than 90 % of college students lived on campus and they usually spent between \$6.00 and \$10.00 per day for their meals. The student dining on campus was mainly between 1 and 8 times a week.

The finding showed that the college student rated perception level of brand name foodservices. This implied that how the college students perceived the high service quality of the brand name foodservice in the university facilities. The mean score of the overall level of perception was 3.86. The perception of brand name foodservices attributes such as (1) “easily readable menu,” (2) “tasty food,” (3) “variety of food options,” (4) “visually attractive menu that reflects the dining image,” (5) “cleaning area,” (6) “comfortable seats,” and (7) “dining area that is comfortable and easy to move around in” were perceived by the college students as very important. However, the perception of the brand name foodservice attributes such as (1) “reasonable prices,” (2) “high quality of food,” (3) “provision of nutritional information,” and (4) “selection of healthy food items” were perceived by college students as not very important. Thus, the university dining managers must understand how the college students perceived about brand name foodservices.

As a result of Principal factor analysis with Varimax rotation, the nineteen college students’ perception of brand name foodservices attributes were grouped into four factor dimensions. The four factors were (1) “dining environment,” (2) “competency of employee,” (3) “quality of menu and food selection,” and (4) “price and nutritional information.”

The finding of the overall satisfaction level of brand name foodservice by gender indicated that there were no significant difference between the overall satisfaction level of brand name foodservice between male and female college students.

In this study, the results of the regression analysis showed that the four dimensions of service quality relative to brand name foodservice in university dining

services have had an influence on the college students' overall satisfaction level partially. The four dimensions included (1) "dining environment," (2) "competency of employee," (3) "quality of menu & food selection," and (4) "price & nutritional information." "Dining environment" were the most influential dimension in determining college students' overall satisfaction levels. "Price and nutritional information" was the second important dimension that affected the college students' overall satisfaction level toward brand name foodservice in university dining service quality. "Competency of employees" was the third important determinant dimension affecting college students' satisfaction levels. However, "quality of menu and food selection" was not influential dimension in determining college students' overall satisfaction level towards brand name foodservice in university dining service quality.

The finding of intention to revisit a brand name foodservice in a university dining service indicated that the first influential dimension was "dining environment," and "competency of employees." The components of dining environment and food quality factors were (1) "cleaning dining area," (2) "visually attractive dining area," (3) "comfortable seats," (4) "dining area that is comfortable and easy to move around in", (5) "selection of healthy food items," (6) "visually attractive building exteriors" and (7) "high quality of food". The second influential dimension was 'quality of menu & food selection'. Lastly, 'price & nutritional information was not influential dimension related to the likelihood of revisiting brand name foodservice in a university dining services. Steven et. al (1995) indicated that high customer satisfaction level of service quality leads to the propensity to revisit the dining unit.

The results of the ANOVA showed that over 30 years or over age group of college students were less perceived with the 'reliability of employee' than early twenties of college students. In addition, late twenties age group were less perceived with the 'price & nutritional information' than early twenties of college students. In

terms of average of meal expenditure, people who spend \$16.00-\$20.00 less perceived with 'dining environment & food selection' than people who spend less than \$5.00. In addition, college students who were in African Americans were less impressed with the 'reliability of employees' than Caucasian ethnic group.

The finding showed the important elements of brand name foodservice selection indicated that 'cleanliness', and 'quality of food', were most important selection elements when they choose brand name foodservice.

Finally, the finding of the perception of the national and private brand in foodservice indicated that college students perceptions about national and private brand in foodservice. As a result of Principal component analysis with Varimax rotation, the fourteen attributes were grouped to four orthogonal factor dimensions. The four factors were (1) "worth of national brand," (2) "importance of the lowest prices," (3) "little concerning of popular brand," and (4) "worth of private brand/ importance of personal taste." In addition, female and male college students considered that the 'importance of the lowest prices' dimension was the most influential factor.

Conclusions

The objectives of this study were to assess the college students' perception of service quality, to identify university students' satisfaction level of brand name foodservice in university dining services, to identify student's perception between brand name and private brand foodservice in university dining services, to explore the determinants of university students' revisiting university dining service, and to identify the brand name foodservice selection criteria. This study identified four underlying service quality factors in university brand name dining services that college students used in evaluating brand name foodservice. These four factors were (1) dining

environment, (2) competency of employees, (3) quality of menu and food selection, and (4) price and nutritional information. As the results of service quality perception of brand name foodservice in university dining service, college students perceived that dining environment, employee competency, and price & nutritional information were influential factors in determining the college students' satisfaction levels. However, the satisfaction level factors did not coincide with the likelihood revisiting factors. In terms of the likelihood to revisit, the brand name foodservice, dining environment, competency of employee, and quality of menu & food selection were influential factors in revisiting toward brand name foodservice in university dining service.

As the results of the perception of brand name and private brand in foodservice, the researcher found that four factors which were worthy of having a national brand, (1) importance of the lowest prices, (2) little concerning of popular brand, and (3) worth of private brand/importance related to personal taste. Moreover, the college students' perceptions indicated that the lowest price is an important factor.

This study provided valuable brand foodservice information to managers of university dining services related to the insight concerning the perception of service quality for brand name foodservices. In addition, understanding the service quality factors and satisfaction of college students relative to a brand name foodservice is important to the foodservice managers in colleges and universities. University dining managers must understand that the important service quality factors of dining services are the key to successful business and customer retention.

Recommendations

These findings suggest some important institutional foodservice marketing implications and challenges both to the college and university foodservice operators. First, the college and university foodservice managers should use the college students' perceptions for their brand name foodservice segments to improve their menu entrée offerings. More efforts should be made to find out what motivate the college students perceive from the brand name foodservice entities. From the four service quality dimensions, the dining environment was extremely important factor to the students since this factor influence their dining experiences. The foodservice managers should seek to improve these service qualities. Moreover, the campus foodservice operators should develop a comprehensive employee training program, sanitation management programs, and foodservice guiding principles and best practices in order to maintain high food quality, and a clean and attractive dining area. Second, a recommendation is that management should seek reasonable prices and nutritional information as they represent key issues for increasing the college students spending patterns in the campus brand name foodservice operations. Another suggestion is how to motivate the college students to return to the dining university dining operations. As Haksever, Render, Russell, and Murdick (2000) indicated that a reduction in price may lead to an increase in demand. Thus, a recommendation is that to compete with an off-campus commercial foodservice enterprise. Furthermore, when offering an affordable reasonable price for on-campus brand name foodservices may be incorporated into their promotion strategies such as providing a coupon, or advertising a new menu item with an introductory price. Moreover, foodservice managers should provide the nutritional information to the students to meet their expectations and needs. A recommendation is to encourage the students to consume healthy food entrées. Third, campus operators and

administrators need to understand the overall satisfaction based on the brand name foodservice quality perception dimensions that could be an influencing factor to enhance the customers' satisfaction level. These managers may be constantly aware of whether the service quality attributes meet the students' satisfaction level through a customer survey. It is particularly important to generate revenue through management's efforts, because it may lead to an increase in repeat customers by enhancing the foodservice operations' reputation. In addition, the customers who are satisfied with their foodservice experience are more likely to become repeat customers, and to provide favorable word-of-mouth endorsements. Lastly, the college and university dining managers should recognize the college students' characteristics such as age, ethnicity, and behavioral characteristics have an impact on campus dining. For example, the average meal expenditure may increase on the basis of perception factor that one may have regarding the college and university foodservice operations. Moreover, these are the important elements to improve and develop the college and university dining segments, because of the changing students' trends and new campus foodservice environments.

Limitations and Future Research

In this study, the following limitations are provided for the future studies. First, this research did not examine the service quality of certain brand name foodservice categories such as fast food, casual dining, and fine dining groups because there was a limited sample size with the Big Twelve Universities. Second, even though the researcher used a monetary incentive to increase the response rate, it was not sufficient

to encourage respondent to complete the survey. Also, this study was limited to the Big Twelve School.

Further research is needed to find out specific perceptions of university dining in different settings. Future research may explore how the college students perceive the service quality of specified brand name foodservices in the university dining services when using larger sample. Differences of brand name foodservices could offer more useful information to the researcher. Therefore, future research needs to be carried out to validate the findings of this research. Since the response rate was low, future research may better use a large sample, and another method to survey. For future research, the researcher may use another method of incentives. Future research may use entire populations who are attending universities in the United States to get more generalized.

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APPENDIXES

APPENDIX A- INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

Oklahoma State University
Institutional Review Board

Protocol Expires: 8/21/2004

Date: Friday, August 22, 2003

IRB Application No HE046

Proposal Title: COLLEGE STUDENT'S PERCEPTION OF BRAND FOODSERVICE AND TREND IN
UNIVERSITY FOODSERVICES

Principal
Investigator(s):

Seungsuk Lee
92 S. University PL #1
Stillwater, OK 74075

Jerrold Leong
210 HESW
Stillwater, OK 74078

Reviewed and
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

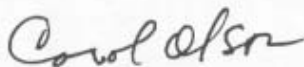
Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 415 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,



Carol Olson, Chair
Institutional Review Board

APPENDIX B- COVER LETTER

Seungsuk Lee
210 HES HRAD
Oklahoma State University
Stillwater, OK 74075
405-332-2836
E-mail: seung@okstate.edu

Dear Participants:

May I take a few minutes of your time? I am Seungsuk Lee, Master of Science student in the College of Human Environmental Science at Oklahoma State University majoring in Hospitality Administration. This survey is designed to evaluate the university student's perception of brand name dining services in a university foodservice system. This survey will enable to researcher make suggestion to enhance dining services in a university foodservice environment. Would you be kind enough to take ten minutes to complete the questionnaire and submit it from the website (<http://fp.okstate.edu/leong>) by 30 September 2003? Your voluntary participation in this survey is greatly appreciated. Your opinions and comments will be of great value to me. The completion of this survey implies consent to all conditions.

The data collected will be kept strictly confidential and anonymous. At no time will your name be reported along with any of your responses. All of the responses will be aggregated, summarized, and analyzed for all university foodservices. This survey is voluntary and you will be entered into a drawing for the possibility of receiving one of the following prizes when you send me your email address after you have completed web survey on the website: 1st prize \$75.00, 2nd prize \$50.00 and 3rd prize \$25.00. If you have any questions regarding this research, please feel free to contact me, Seungsuk Lee at 405-332-2836 or 405-744-4530. Also, you may contact Sharon Bacher with Institutional Review Board (IRB) concerns at 405-744-5700. Your participation and cooperation are sincerely appreciated. In addition, if you desire a summary of the finding, I shall be happy to fulfill your request.

Please, go to <http://fp.okstate.edu/leong> to complete the survey.

Sincerely,

Seungsuk Lee
Graduate Student
Oklahoma State University
College of Human Environmental
Sciences
School of Hotel and Restaurant
Administration
Email: Seung@okstate.edu
Phone: 405-332-5340

Jerrold Leong, Ph.D,
Associate professor
Oklahoma State University
College of Human Environmental
Sciences
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Administration
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APPENDIX C- THE QUESTIONNAIRE

Part I. In this section, we would like you to indicate the extent of your agreement with the statement listed below by clicking a number. The higher the number the more you tend to agree with the statement.

** National brand: a brand owned or controlled by an organization the primary commitment of which is to production rather than distribution (Examples: Burger king, Subway, Starbucks Coffee... etc).

** Private brand/self- brand: a brand owned by a wholesaler or retailer

1= Strongly Disagree	4= Some Agree
2= Disagree	5= Agree
3=Some Disagree	6= Strongly Agree

Questions	1 (SD)	2 (D)	3 (SD)	4 (SA)	5 (A)	6 (SA)
1. National brand foodservices are higher quality than private or self-brand.						
2. Even though they cost a little more, national brand foodservices are still worth it.						
3. I think that the quality of private or self-brands is just as good as the quality of national brand food products.						
4. Generally, private or self-brand food products are a better value than national brands.						
5. I find myself checking the lowest and prices in the foodservice						
6. I usually watch for the lowest possible prices when I go to foodservice.						
7. I think that national advertising of most food products has little or no benefit for the average consumer.						
8. I do not think there is much difference between brands of food in the foodservice.						
9. My choice of brands for many food products is influenced by the advertising I see or hear about those products.						
10. I do not pay much attention to radio/ or television advertising.						
11. For most food products, it is of little concern to me how popular the brands are.						
12. For most food items, I try the brands that are most popular.						
13. I feel that most of the having the food in school I do is based on habit.						
14. In having the meals in school, my own like and dislike are more important than price or brand.						

Part 2. The following items are about **your general opinion of brand name dining service experiences.** (Ex. **Burger King, Krispy Kream Doughnuts, Subway, Campbell Soup, Freshen, or Starbucks Coffee...**) Please, circle your answers.

1=Strongly Disagree
4=Some agree

2=Disagree
5=Agree

3=Some Disagree
6=Strongly Agree

<i>Brand foodservice in university dining ...</i> (Ex. Burger King, Krispy Kream Doughnuts, Subway, Campbell Soup, Freshen or Starbucks Coffee...)	1	2	3	4	5	6
1. ...has tasty food.						
2. ...has a variety of food options.						
3. ...has a very healthy food selection.						
4. ... has a menu that is easily readable.						
5. ... has a visually attractive menu that reflects the dining image.						
6. ... has reasonable prices.						
7. ... has a décor in keeping with its image and price range.						
8. ... offers nutritional information about the food.						
9. ... offers excellent food quality every order.						
10. ... has a visually attractive dining area.						
11. ... has a dining area that is comfortable and easy to move around in.						
12. ... has dining area that are clean.						
13. ... has comfortable seats in the dining.						
14. ... has visually attractive building exteriors.						
15. ... has well-trained staff member.						
16. ... provides prompt and quick service.						
17. ... has employees who are knowledgeable about menu items, ingredients, and methods of preparation and can provide that information.						
18. ... corrects quickly anything that is wrong.						
19. ... serves your food exactly as you ordered it.						
20. ... You satisfied with the overall university foodservice quality.						

Part 3. In this section, we would like to ask you a few general questions about selection of brand name foodservice. Please, respond to each question by clicking numbers according to instruction provided.

1= Least Important	4= Very Important
2= Slightly Important	5= Extremely Important
3= Moderately Important	

Attributes	1	2	3	4	5
1. Quality of food					
2. Type of food					
3. Cost of food					
4. New experience					
5. Menu item variety					
6. Speed of service					
7. Restaurant Atmosphere					
8. Comfort level					
9. Cleanliness					
10. Prestige					
11. Competent waiting staff					
12. Prompt handling of complaints					
13. Friendliness of waiting staff					

Part 4. Overall evaluation.

Are you willing to revisit brand foodservice in university later?
 Yes () No ()

Part 5. Please, tell us about yourself.

1. Gender ①Male ②Female
2. Ethnicity
 - ①Caucasian-Non-Hispanic
 - ②Asian/Pacific Islander
 - ③African American
 - ④Hispanic
 - ⑤Native American
 - ⑥Others
3. Classification
 - ①Freshman
 - ②Sophomore
 - ③Junior
 - ④Senior
 - ⑤Graduate
4. Status of enrollment
 - ①Full-time student
 - ②Part-time student
5. Where do you live?
 - ① On Campus
 - ② off Campus
6. Age
 - ①18-20
 - ②21-23
 - ③24-26
 - ④27-29
 - ⑤Over 30
7. Average meal expenditure a day
 - ① Less than \$5.00
 - ② \$6.00-\$10.00
 - ③ \$11.00-\$15.00
 - ④ 16.00-\$20.00
 - ⑤ More than \$20.00
8. How often do you go to campus foodservice in a week?
 - ①1-4 times
 - ②5-8 times
 - ③9-12 time
 - ④13-16 times
 - ⑤17-20times
 - ⑥ Over 20 times

Thank you for your participation!

If you want to enter into a drawing for the possibility of receiving one of the following prizes: 1st prize \$75.00, 2nd prize \$50.00, 3rd prize \$25.00, please, type your email address and click the submit button.

Email:

VITA

Seungsuk Lee

Candidate for the Degree of

Master of Science

Thesis: College student's perception and preference of brand name foodservice in university dining operations

Major Field: Hospitality Administration

Biographical:

Personal Data: Born May 15, 1973 in Seoul, Korea, the daughter of Kuk-ho Lee and Ji-bae Kim.

Education: Received Bachelor of Science degree in Hotel and Restaurant Administration and minor from business, Oklahoma State University, Stillwater, Oklahoma, May 2000. Completed requirements for Master of Science degree, Oklahoma State University, July 2004.

Professional Experience: 2002 to present- the Residential Life at Oklahoma State University (Blair Dining): Dining Graduate Assistant. Menu development, Inventory control through appropriate forecasting, ordering storage, Daily operational management, catering and Special events, training and staff development, production management, and maintenance of health and safety standards. 2001 to 2002- Aggie Bread Company: Student Supervisor. Production management, Menu development, Supervise preparation of all food for menu, training new employees, and service management. 2000 to 2001- The Broadmoor Hotel: Relief Cook. Prepared a variety of hot food, Plate presentations, Inventory control, and menu planning. 1999-The Broadmoor Hotel: Internship. Practiced management skills and worked in various culinary departments

Certificate: ServSafe Certified on Food Safety, National Restaurant Associations (2003)

Name: Seung suk Lee

Date of Degree: July, 2004

Institution: Oklahoma State University

Title of Study: COLLEGE STUDENT'S PERCEPTION AND PREFERENCE OF
BRAND NAME FOODSERVICES IN UNIVERSITY DINING
OPERATIONS

Pages in Study: 80

Candidate for the Degree of Master of Science

Major Field: Hospitality Administration

Scope and Method of Study: The purpose of this study was to measure the perception of brand name food service quality in university brand name foodservice among college students who are using the meal plan option or cash in university food service at Big Twelve Schools in Midwestern region (Baylor, Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, Oklahoma State, Texas, Texas A&M, Texas Tech University).

Findings and Conclusions: This study identified four underlying service quality factors in university brand name dining services that college students used in evaluating brand name foodservice. These four factors were (1) dining environment, (2) competency of employee, (3) quality of menu and food selection, and (4) price and nutritional information. As the results of service quality perception of brand name foodservice in university dining service, college students perceived that dining environment, competency of employee, and price & nutritional information were influential factors in determining the college students' satisfaction levels. However, the satisfaction level factors did not coincide with the likelihood revisiting factors. In terms of the likelihood to revisit, the brand name foodservice, dining environment, competency of employee, and quality of menu & food selection were influential factors in revisiting toward brand name foodservice in university dining service.

ADVISER'S APPROVAL:

J.K. Leong
