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# Evaluation of Students' Satisfactions with and Importance of Attributes of Three Unique All-You-Can-Eat University Dining Facilities

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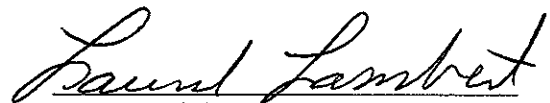
EVALUATION OF STUDENTS' SATISFACTIONS WITH AND IMPORTANCE OF  
ATTRIBUTES OF THREE UNIQUE ALL-YOU-CAN-EAT UNIVERSITY DINING  
FACILITIES

by  
Ruth Zegel

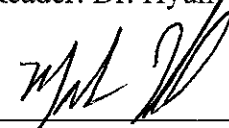
A thesis submitted to the faculty of the University of Mississippi in partial fulfillment of  
the requirements of the Sally McDonnell Honors College.

Oxford  
May 2016

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## ABSTRACT

This study was conducted to evaluate students' satisfaction with and importance of nine attributes of three unique all-you-can-eat university dining facilities at the University of Mississippi, the Grill at 1810, Marketplace at the Residential College, and the Rebel Market. The attributes included food quality, service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, location, atmosphere/environment, and image/reputation. Additionally, the study evaluated students' satisfaction with each university dining facility overall, the students' satisfaction versus importance at each facility. This information was used to determine attributes that may need improving within each university dining facility and areas that are performing well. A survey was distributed to students from October 19 to 25, 2015 during the hours of 11:00AM to 1:00PM. There were 341 surveys returned with 16 being excluded due to incomplete answers, resulting in a total of 325 for the final count. Results showed that student participants were significantly more satisfied overall with the Grill. The Grill was significantly more satisfactory in seven of the nine several attributes (food quality, service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, and image/reputation) compared to both the Rebel Market and Marketplace. The Rebel Market was significantly more satisfactory for two of the attributes (variety of menu items and food quality) compared to Marketplace. Students' ranking of the importance of attributes showed no significant differences. In all three university dining facilities, satisfaction was significantly less than importance for food

quality, service quality, and variety of menu options indicating these are the areas in which management needs to focus the most.

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## INTRODUCTION

University dining is a foodservice venue that has evolved from viewing students as a captive audience to viewing students as customers who need to be satisfied. In previous years, students' only options were to eat at university dining halls; however, in recent years, there is a growing number of restaurants and university foodservices both on and off campus competing for students' business.

Student enrollment on college campuses are growing as more people are pursuing postsecondary education. According to the National Center for Education Statistics, total enrollment in postsecondary degree-granting institutions increased 46 percent from 1996 and 2010, and it is predicted to increase another 15% to 24 million students, by 2021 (Hussar & Bailey, 2011). As the growth of universities continues, the quality of university dining will see the need to keep students dining on campus (Gramling, Byrd, Epps, Keith, Lick, & Tian, 2005). Because of the alternative dining facilities off-campus, many students who are discontent with university dining facilities may decide to leave campus for their meals (Kim, Moreo, & Yeh, 2004). Maintaining student customer loyalty is dependent upon innovation within university dining facilities (Park, Lehto, & Houston, 2013). This study builds upon other studies that have investigated students' satisfaction with and the importance of key attributes within university dining; however, this study evaluates satisfaction and importance of key attributes by comparing three unique dining facilities on the University of Mississippi campus.

## **LITERATURE REVIEW**

### **University Dining**

Studies have been conducted within university dining facilities to determine the success of the facility in meeting students' needs, maintaining managerial effectiveness, and expanding through construction of new facilities (Gramling et al., 2005; Joung, Lee, Kim, & Huffman, 2014; Klassen, Trybus, & Kumar, 2005). The student culture is changing with university dining facilities playing a larger role in the daily life of students and contributing to their overall satisfaction with their university (Kwun, Ellyn, & Choi, 2013). University dining facilities are becoming an essential component of university life. They can greatly contribute to the financial success of universities, which explains the necessity of measuring what makes a university dining facility attractive to students. College students are faced with many food outlet choices throughout their day and their options for where they consume their next meal has grown. Many students are surrounded by choices both on and off campus with a wide variety of places to eat. Often, university dining services are measured to the standard of the surrounding restaurants, which leaves students with high expectations. (Kwun, 2011; Kwun et al., 2013). For university dining facilities to maintain a competitive edge, further research is needed to determine which attributes students value within university dining.

Research has shown that university administrators are now seeing the importance

of offering quality foodservice to their students, both for recruiting and retaining purposes (Andaleeb & Caskey, 2007). Therefore, universities have focused on expanding the number and variety of university dining outlets on their campuses to meet students' needs. One way to know what changes can be made is to survey students on their perceived importance and satisfaction of the varying attributes, such as food and service quality, environment, and image (Joung et al., 2014). Because of the continual connection between students and university dining facilities, it is important for the wants and needs of the students to be assessed periodically (Park et al., 2013).

### **Consumer Satisfaction & Efficiency**

Two very essential components of a successful foodservice operation are meeting customers' satisfaction and revenue goals. One of the greatest challenges facing management is finding the balance and relationship between the two or risk losing customers and therefore profits (Gramling et al., 2005). In university dining, students are the primary customer. Therefore student consumers carry a large weight of the success of university dining facilities, impacting the university as a whole (Gramling et al., 2005). Students who perceive university dining as providing low quality service may look to off campus food outlets for their dining needs. This shows the importance of maintaining customer satisfaction and being as efficient as possible. In a study using DINSERV, a reliable tool for measuring restaurant quality, customer satisfaction was found to be significantly related to intention to return and word-of-mouth endorsement. These findings indicate that customer satisfaction has lasting effects on the university dining facility and the return of customers (Kim, Ng, & Kim, 2009).

## **Food**

Along with being the number one predictor of satisfaction, Kim et al. (2009) found that food quality was the strongest predictor of revisit intention, indicating the overall impact of food quality on the customer. Gramling et al. (2005) interviewed students asking what they would change if they were manager and found the two top changes were improved food quality and increased variety of food available. They also found that students would not “settle” for food that was of a lower quality than they desired, especially with the other non-university foodservice outlets on and off campus.

It is essential to provide quality food because that is one of the foundations of a foodservice organization. The improvement of food quality within the university dining facility will contribute to overall customer satisfaction (Park et al., 2013). Andaleeb and Caskey (2007) found that food quality in university dining facilities was the number one indicator of customer satisfaction and needed more attention. Thus, university dining services need to focus attention on evaluating food quality being served and if it needs to be improved.

Another aspect within the dining setting is the menu. The variety of menu items is an attribute that has been found to be an important part of satisfaction with university dining (Andaleeb & Caskey, 2007; Harrington, Ottenbacher, & Way, 2013; Kim et al., 2004; Kwun et al., 2013). The repetitiveness of a menu in a university dining facility may be viewed as boring and cause dissatisfaction for students. By adding more options and new items to the menu, management can strive to accommodate students’ need for increased customization (Park et al., 2013). Both Kim et al. (2004) and Klassen et al. (2005) found that repetitive menus significantly decrease the overall customer

satisfaction. Due to the importance of menus, management should be attentive to creating menus that appeal to a variety of students.

With some concerns regarding weight gain among students entering college, healthy eating has become an important component of university dining. Two attributes that contribute to healthy eating are the availability of healthy food options and the nutritional content of foods offered. Harrington et al. (2013) asked students to rank in order of importance, 25 attributes of university dining facilities. They found that having healthy food alternatives ranked 15<sup>th</sup> of the 25 dining attributes they tested. Measuring the healthy food alternative attribute served as a way to gauge students' desire for having the option of eating healthy. In a study on how college students identify health foods, results showed that students accessed information on healthy foods through mass media sources and word of mouth from various individuals. This shows that it would be advantageous for university dining service managers to be aware of popular health foods that students may desire on the menu (Lee, Fowler, & Yuan, 2013). Students are wanting healthier options and a wider range of options to improve their satisfaction with university dining facilities (Andaleeb & Caskey, 2007). Lee et al. (2013) found that students were able to identify characteristics of healthy foods and were aware of the technique of selecting a colorful variety of food as a method to gauge healthy eating. This indicates that management could use color within menus to signify healthy choices. By improving the nutritional content of the food, the university dining facilities could meet or exceed the expectations of the students, which would contribute to better satisfaction overall (Kim et al., 2009).

## **Service**

The quality of service at university dining can be very influential in the overall experience and the customer desire to return. Several studies have found that service quality is very important when evaluating satisfaction (Harrington et al., 2013; Joung et al., 2014; Kim et al., 2009; Kim et al., 2004; Kwun, 2011; Kwun et al., 2013). Kim et al. (2009) found service quality to be the second most important indicator of customer satisfaction. The staff of a university dining facility play a key role in impacting the service quality that the customers experience. The politeness, appearance, attentiveness, and knowledge of staff members should be developed in training to maintain quality service. In another study, students reported that the service from the staff was poor, and there was a need to improve the attitudes and behaviors from the staff members. This study indicated that students pay attention to service quality and that it impacts their experiences (Gramling et al., 2005). In another study university students found the staff behavior to be satisfactory but lacking in sincerity and respect. This indicates that students may have felt disregarded as customers, which affects their overall satisfaction (Andaleeb & Caskey, 2007). One study investigated attributes that contribute to university dining facilities being competitive with commercial foodservice operations. They found that friendly service was determined to be one attribute that would enable the university dining facility to gain a competitive edge. Focusing on fostering a culture of friendly service will raise the university dining facility to be above its competitors (Park et al., 2013).

## **Cleanliness**

In several studies, cleanliness was determined to be an attribute within university dining facilities that contributed to decreased satisfaction when it was not maintained (Andaleeb & Caskey, 2007; El-Said & Fathy, 2015; Gramling et al., 2005; Park et al., 2013). Gramling et al (2005) found that students were not satisfied with the cleanliness of the dining hall, dishes, and cutlery. This lack in cleanliness had a negative impact on the likelihood of students returning to the university dining facility and lowered their overall satisfaction. In a different study, cleanliness was found to marginally impact students' evaluation; however, researchers reported improving the cleanliness of the dining facility would still equate to better customer satisfaction (Andaleeb & Caskey, 2007; El-Said & Fathy, 2015). At a university dining facility in the Midwest, cleanliness was reported to be one of the three attributes that needed attention in order to effectively improve customer satisfaction (Park et al., 2013).

## **Environment/Atmosphere**

Joung et al. (2014) included environment as one of the five attributes for measuring perceived satisfaction and performance with university dining facilities. They found that the environment was the attribute that had the highest satisfaction but the lowest perceived importance in contributing to student satisfaction. This allowed management to know that environment was an attribute in which they could continue with their current strategy and could focus on attributes with a higher importance rating. Another study found that a student's choice on where to eat was impacted by the environment of the dining facility (Boek, Bianco-Simeral, Chan, & Goto, 2012). They found that students made their dining choices by choosing the environment of the

university dining facility that they liked the best. Atmosphere is one characteristic of the environment attribute and also contributes to the overall dining experience. University dining facilities' atmospheres described as relaxing or inviting, will positively influence the experience of the customer (Andaleeb & Caskey, 2007; Kim et al., 2009). Cultivating a comfortable atmosphere within university dining facilities attracts and maintains customers, which is key in successful business (Kim et al., 2009). When evaluating the attributes that contribute to gaining a competitive edge in the market, Park et al. (2013) found that atmosphere was an important area to improve within the university dining facility.

### **Location**

The location is another factor that contributes to the dining environment and customer satisfaction. Meiselman (2003) found that the location of the dining facility will influence customer satisfaction because customers may have different expectations at different locations. In a study focused on planning for university dining facilities, Klassen et al. (2005) found that most students desired the university dining facilities to be in close proximity to their residence halls, classrooms, and libraries. The location is important to consider when constructing a new university dining facility because the university dining facility needs to be easily accessible to students on campus. Another study found that students, faculty, and staff often choose the nearest university dining facility due to short lunch breaks, short walking distance, and convenience of location. The location of the university dining facility contributes to the overall satisfaction and intent to return (Kim et al., 2009).



## **Reputation/Image**

Kwun et al (2013) found that image is a “critical component” of having a successful university dining facility. The study found that different attributes like menu variety and service quality affected the image of a university dining facility as well as the word of mouth communication about the facility. In a study examining importance of attributes of a quick service restaurant, the reputation of the restaurant was ranked 12th of 25 and considered to be of moderate importance to the customers, which means it is not one of the top factors drawing customers to the facility (Harrington et al., 2013). Kim et al. (2009) found that improving a university dining facility’s reputation could result in an increase in sales in revenue. The reputation of the university dining facility could be improved by increasing the overall satisfaction, return intention, and word-of-mouth endorsements within the customers.

## **The All-You-Can-Eat Dining Halls**

At the University of Mississippi, there are three dining halls operated by the same contract management company and are classified as all-you-can-eat university dining halls. This means that upon entering the university dining facility, customers are allowed an unlimited number of food servings among the food options during each visit. The university dining facilities operate similarly and are located in different areas of campus. They appear to be created with unique purposes and are described by the Ole Miss Campus Dish website:

1. The Grill at 1810 (Grill): “Located in the Olivia and Archie Manning Performance Center, the Grill at 1810 is a great spot to grab a bite. With a focus

on nutrition, the executive chefs work directly with the University nutrition staff to create menu items. Eat like an Athlete!” (“The Grill at 1810,” n.d.)

2. Marketplace at the Residential College (Marketplace): “Students can eat as much or as little as they want at The Marketplace at The RC. One swipe of the Student ID Card allows students to choose from 7 different dining venues (pizza, home style, international, deli, salad bar, desserts and made-to-order) in a comfortable and social atmosphere.” (“Marketplace at the Residential College,” n.d.)
3. The Rebel Market (Rebel Market): “Students can eat as much or as little as they like at the Rebel Market. The Rebel Market has a seating capacity of over 1,000 including outdoor seating providing a beautiful view of the quad!” (“The Rebel Market,” n.d.)

These descriptions offer a picture of the design and purpose behind each dining facility. The facilities can be used by students, university faculty and staff, and community members. The dining facilities use similar operations with food stations offering a variety of cuisines; however, some of the food stations are unique to individual dining facilities. All three university dining facilities contain the following stations: deli, soup, grill, pasta, pizza, salad, and bakery/dessert. They also have a food station that features home cooked type meals, but are referred to with different names (comfort line, home zone, and service line). The Grill has a station that is referred to as made-to-order, but it serves very similar items as the made-to-order stations at the other two university dining facilities. At the Rebel Market and the Marketplace, there is a Mongolian station, which allows students to customize their selection. The Grill has an international station, but it is not specifically Mongolian. The Grill is the only facility to have a smoothie

station and a lighter fare station. The Rebel Market has three unique stations, not offered by the other two facilities: made without gluten, stir fry, and sushi.

The menus for each facility can be found on the Ole Miss Campus Dish website. There are also tools within the website that allow the user to select items and see the nutritional content and build their meal. This tool is relatively new to the website and allows users to know the nutritional content of the food that they are consuming. In addition, each university dining facility posts nutritional information above selected food offerings at the food stations.

### **Purpose**

The purpose of this study was to evaluate students' satisfaction with and importance of nine dining attributes contributing to overall satisfaction at three unique, all-you-can-eat, dining facilities at the University of Mississippi.

## **METHODS**

### **Participants**

The target population for this study was university students who have eaten at one or more of the three all-you-can-eat university dining facilities at the University of Mississippi: the Grill, the Rebel Market, and the Marketplace.

### **Survey Development**

The survey (APPENDIX A) was a compilation of several surveys from previous research that assessed customer satisfaction with university dining attributes, such as food quality, service quality, and environment, within university dining facilities (Harrington et al., 2013; Joung et al., 2014; Kim et al., 2004; Klassen et al., 2005; Kwun, 2011; Kwun et al., 2013). Another survey not only asked about satisfaction but also asked about customer importance of attributes, which served as the basis for that component within this survey (Joung et al., 2014).

The first page of this survey was a consent form (APPENDIX B) informing students the purpose of this research, who was conducting it, how the information it would be used, details for the raffle, and confidentiality information. The survey was comprised of four different components. First, students were asked which university dining facility they most frequented and how often during the lunch hours. Next, students were asked to indicate their satisfaction on a Likert-type scale of one to six with one

being very dissatisfied to six being very satisfied with the nine attributes (food quality, service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, location, atmosphere/environment, and image/reputation) and overall satisfaction with the university dining facility. Students then indicated the importance of the same attributes on the same Likert-type scale. The final component of the survey was collecting demographics on students, which included gender, classification, student status, age, ethnicity, residence location, athletic status, ownership of meal plan, and membership in a Greek organization.

### **Pilot Test**

Prior to the study, the survey was piloted with a two different groups of students at the University of Mississippi. Students in a Foodservices Systems Management course reviewed the survey for wording and flow. Their input contributed to the words and indicators for each question. An Introductory Foods Course tested the readability, content validity, and time it would take to complete the survey. The thirty-seven students, who completed the survey had eaten at one of the university dining facilities. The responses were coded and entered into Microsoft Excel. The data was analyzed using SPSS statistical software package (SPSS, 2013). A Cronbach's Alpha was used to measure the internal consistency in order to ensure that all questions reliably measured the variable of satisfaction with and importance of the nine attributes.

### **Procedure**

From October 19 to 28, 2015, CITI trained undergraduate students (data collectors) and the primary investigator distributed surveys to students outside of the

three university dining facilities during lunch hours, 11:00 AM to 1:00 PM. As students were entering or leaving the university dining facility, data collectors inquired if they had time to complete a 5 minute survey on their satisfactions with and importance of attributes of university dining experience (APPENDIX C). The student participants received the consent form and survey and completed it near the entrance of the university dining facility. Once the student completed the survey, they were provided with an index card to write their name and email for a chance win a raffle for a gift card. The surveys were kept completely separate from the index cards, so that confidentiality and anonymity could be maintained. Once all surveys were collected, the index cards were shuffled, and three students were randomly selected. The primary researcher contacted the winners via the provided email address and designated a meeting time and place to give the gift card. There were 341 surveys returned, with 16 of surveys being discarded due to incomplete answers or more than one dining facility marked as their most frequented location. The final survey count was 325.

### **Data Analysis**

The data was analyzed using the SPSS statistical software package (SPSS, 2013). Descriptive statistics were used to determine frequencies, means, and standard deviation. A one-way ANOVA was used to determine the significant differences in satisfaction with and importance of the attributes at each university dining facility and to determine the significant differences in satisfaction based on dining frequency. The Tukey Post Hoc test was then completed to determine any patterns among the satisfaction and importance attributes at each university dining facility. A paired t-test was run to measure satisfaction compared to importance of the 9 attributes at each of the university dining facilities. A t-

test was run comparing females to males. This study was approved by the institutional review board at the University of Mississippi.

## RESULTS

### Demographics

The demographic characteristics of the participants are listed in Table 1. The sample size was originally 341 student participants. However, 16 surveys were discounted due to incomplete answers, which lead the final sample size to be 325. Overall, there was a higher percentage of female student participants (53.5%) than males (46.5%) that completed the survey at all three locations. Responses at the Grill showed a higher percentage of males (60.8%) over females (39.2%) completing surveys. However, the Rebel Market and Marketplace had a greater percentage of females (55.6% and 65.3%, respectively) than males (44.6% and 34.7%, respectively) completing surveys. The average age of the student participants was 19.34 years old. The 18 year olds were the largest number of student participants (n = 87), and the number per age decreased as the age increased. As expected, the freshman comprised the highest percent of total student participants with 36.6%, and 93.2% of all student participants were full-time. Ethnicity of student participants showed the largest percentage were Caucasian (59.1%) then African American (24.9%). At the individual university dining facilities, the Grill and Rebel Market also showed the largest percentage of Caucasian student participants (78.8% and 70.4%, respectively), while at the Marketplace, African Americans had the largest percentage at 47.3% compared to Caucasian at 39.8%. At the Grill, there were more students (73.2%) who lived off campus, while the Rebel Market was more evenly distributed at 49.2% living on campus and 50.8% living off campus. Of the student



participants at the Marketplace, 81.6% lived on campus. Of the 40 total student participants who were athletes, 32 were at the Grill. Within the total population, 24% of the people did not have a meal plan.

Table 1

*Demographic Characteristics of Student Participants at Each University Dining Facility*

Dining Facility	Total Sample (n=325)		Grill at 1810 (n=97)		Rebel Market (n=130)		Marketplace at the Residential College (n=98)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Gender</b>								
Male	151	46.5	59	60.8	58	44.6	34	34.7
Female	174	53.5	38	39.2	72	55.6	64	65.3
<b>Classification</b>								
Freshman	119	36.6	26	28.3	53	40.8	40	41.2
Sophomore	50	15.4	20	21.7	10	7.7	20	20.6
Junior	78	24.0	15	16.3	34	26.2	29	29.9
Senior	57	17.5	20	21.7	29	22.3	8	8.2
Graduate Student	15	4.6	11	12.0	4	3.1	0	0.0
<b>Student Status</b>								
Full-time	303	93.2	83	96.5	128	100	92	98.9
Part-time	4	1.2	3	3.5	0	0.0	1	1.1
<b>Age</b>								
18	87	26.8	18	19.6	37	28.9	32	32.7
19	68	20.9	21	22.8	21	16.4	26	26.5
20	59	18.2	13	14.1	21	16.4	25	25.5
21	58	17.8	17	18.5	30	23.4	11	11.2
22	26	8.0	11	12.0	13	10.2	2	2.0
23 and older	20	6.1	12	13.1	6	4.7	17	5.4
<b>Ethnicity</b>								
White	192	59.1	67	78.8	88	70.4	37	39.8
Hispanic or Latino	10	3.1	1	1.2	4	3.2	5	5.4
Black or African American	81	24.9	13	15.3	24	19.2	44	47.3
Native American or American Indian	1	0.3	0	0.0	0	0.0	1	1.1
Asian/Pacific Islander	14	4.3	3	3.5	6	4.8	5	5.4
Other	5	1.5	1	1.2	3	2.4	1	1.1
<b>Residence</b>								
On Campus	170	52.3	26	26.8	64	49.2	80	81.6
Off Campus	155	47.7	71	73.2	66	50.8	18	18.4
<b>Student Athlete</b>								
Yes	40	12.3	32	33.0	5	3.8	3	3.1
No	285	87.7	65	67.0	125	96.2	95	96.9
<b>Meal Plan</b>								
Yes	247	76.0	72	74.2	89	68.5	86	87.8
No	78	24.0	25	25.8	41	31.5	12	12.2

## **Satisfaction with Attributes**

The survey asked students to evaluate their satisfaction with nine attributes at the university dining facility they most frequented. Comparisons of satisfaction with attributes at the three university dining facilities are listed in Table 2. In order to compare satisfaction with the attributes among the three university dining facilities, an ANOVA was conducted with a Tukey Post Hoc to examine significant differences. The ANOVA found that food quality ( $F = 13.6, p < .01$ ), service quality ( $F = 9.06, p < .01$ ), variety of menu items ( $F = 27.7, p < .01$ ), cleanliness ( $F = 13.6, p < .01$ ), nutritional content ( $F = 18.6, p < .01$ ), availability of healthy options ( $F = 20.0, p < .01$ ), location ( $F = 11.2, p < 0.1$ ), image/reputation ( $F = 8.74, p < .01$ ), and overall satisfaction ( $F = 8.61, p < .01$ ) were all significant, while atmosphere/environment was not significant ( $F = 2.17, p = .12$ ). The Tukey Post Hoc found that the Grill was evaluated significantly higher in food quality, service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, and image/reputation than the Rebel Market and Marketplace. The food quality and variety of menu items at the Rebel Market was rated significantly higher than at the Marketplace. Service quality, cleanliness, nutritional content, availability of healthy options, location, and image/reputation were not significantly different between the Rebel Market and the Marketplace. The location of the university dining facility was found to be significantly lower in satisfaction at the Grill than at the Rebel Market and the Marketplace. There were no significant differences in satisfaction with atmosphere/environment among all three university dining facilities. When asked about overall satisfaction with the university dining facilities, the Grill was rated significantly more satisfactory than the Rebel Market and Marketplace. There was

no a significant difference between Rebel Market and Marketplace for overall satisfaction.

A one-way ANOVA with a Tukey Post Hoc was conducted to compare satisfaction with attributes to frequency of dining. Results showed that student participants who dined at that the university dining facilities greater than five times per week ( $M = 4.30, SD = 1.52$ ) were significantly more dissatisfied ( $F = 2.93, p < .01$ ) with food quality compared to those who ate five times ( $M = 5.00, SD = 0.99$ ), three times ( $M = 5.04, SD = 0.87$ ), and two times ( $M = 5.00, SD = 0.97$ ). Student participants were also significantly more dissatisfied ( $F = 7.12, p < .01$ ) with the variety of menu items when dining greater than five times per week ( $M = 3.93, SD = 1.48$ ) compared to those who ate five times ( $M = 5.11, SD = 0.97$ ), four times ( $M = 4.66, SD = 1.28$ ), three times ( $M = 4.65, SD = 0.99$ ), two times ( $M = 4.78, SD = 0.95$ ), and one time ( $M = 4.78, SD = 0.90$ ).

Table 2

*Student Satisfaction with Attributes at the University Dining Facilities*

Attribute	Location						F
	Grill at 1810		Rebel Market		Marketplace at the Residential College		
	Mean	SD	Mean	SD	Mean	SD	
Food Quality	5.28 <sup>a</sup>	0.87	4.89 <sup>b</sup>	0.81	4.51 <sup>c</sup>	1.37	13.6 <sup>**</sup>
Service Quality	5.34 <sup>a</sup>	0.84	4.75 <sup>b</sup>	1.06	4.86 <sup>b</sup>	1.26	9.06 <sup>**</sup>
Variety of Menu Items	5.24 <sup>a</sup>	0.82	4.62 <sup>b</sup>	0.93	4.12 <sup>c</sup>	1.35	27.7 <sup>**</sup>
Cleanliness	5.66 <sup>a</sup>	0.69	5.16 <sup>b</sup>	0.81	5.03 <sup>b</sup>	1.13	13.6 <sup>**</sup>
Nutritional Content	5.45 <sup>a</sup>	0.68	4.69 <sup>b</sup>	1.22	4.60 <sup>b</sup>	1.20	18.6 <sup>**</sup>
Availability of Healthy Options	5.49 <sup>a</sup>	0.73	4.72 <sup>b</sup>	1.28	4.52 <sup>b</sup>	1.26	20.0 <sup>**</sup>
Location	4.59 <sup>a</sup>	1.31	5.03 <sup>b</sup>	1.11	5.39 <sup>b</sup>	1.15	11.2 <sup>**</sup>
Atmosphere/ Environment	5.49	0.72	5.27	0.73	5.29	1.02	2.17
Image/ Reputation	5.62 <sup>a</sup>	0.59	5.22 <sup>b</sup>	0.81	5.15 <sup>b</sup>	1.09	8.74 <sup>**</sup>
Satisfaction Overall	5.50 <sup>a</sup>	0.74	5.07 <sup>b</sup>	0.82	4.99 <sup>b</sup>	1.19	8.61 <sup>**</sup>

Note: <sup>\*\*</sup>  $p < .01$ , <sup>a, b, c</sup> Tukey Post Hoc Test

## **Importance**

There was not a significant difference among student participants' ratings of importance of the attributes between the three university dining facilities (*see* Table 3). Students have the same levels of importance of all nine attributes, regardless of their frequented dining facility. Food quality was rated most important at the Grill ( $M = 5.78$ ,  $SD = 0.65$ ) and Rebel Market ( $M = 5.73$ ,  $SD = 0.68$ ), but it was second most important at the Marketplace ( $M = 5.71$ ,  $SD = 0.69$ ). Cleanliness ( $M = 5.74$ ,  $SD = 0.70$ ) was rated highest at the Marketplace. Location, atmosphere/environment, and image/reputation were the lowest rated on importance among all three university dining facilities.

Table 3

*Student Importance of Attributes at the University Dining Facilities*

Attribute	Location						<i>F</i>
	Grill at 1810		Rebel Market		Marketplace at the Residential College		
	Mean	SD	Mean	SD	Mean	SD	
Food Quality	5.78	0.65	5.73	0.68	5.71	0.69	0.20
Service Quality	5.53	0.74	5.32	0.86	5.52	0.86	2.29
Variety of Menu Items	5.50	0.79	5.44	0.81	5.49	0.88	0.17
Cleanliness	5.64	0.75	5.62	0.80	5.74	0.70	0.74
Nutritional Content	5.16	1.17	5.23	1.02	5.20	1.02	0.15
Availability of Healthy Options	5.27	1.10	5.17	1.05	5.21	0.97	0.24
Location	4.84	1.24	4.90	1.07	5.19	1.18	2.65
Atmosphere/ Environment	5.12	1.09	4.87	1.08	5.11	1.16	1.98
Image/Reputation	4.91	1.37	4.82	1.20	4.99	1.23	0.50

## Satisfaction Compared to Importance

Paired sample t-tests were used to compare differences between students' satisfaction and level of importance with the nine attributes for the university dining facilities (see Tables 4-6). At all three university dining facilities, the satisfaction was significantly less than importance for the following attributes: food quality ( $t = -5.70, p < .01$  at Grill,  $t = -9.40, p < .01$  at Rebel Market,  $t = -8.33, p < .01$  at Marketplace), service quality ( $t = -1.99, p < .05$  at Grill,  $t = -5.40, p < .01$  at Rebel Market,  $t = -4.92, p < .01$  at Marketplace), and variety menu options ( $t = -2.39, p < .05$  at Grill,  $t = -8.15, p < .01$  at Rebel Market,  $t = -7.93, p < .01$  at Marketplace). At both the Rebel Market and the Marketplace, cleanliness ( $t = -4.46, p < .01$  and  $t = -5.78, p < .01$ , respectively), nutritional content ( $t = -3.93, p < .01$  and  $t = -3.70, p < .01$ , respectively), and availability of healthy options ( $t = -3.18, p < .01$  and  $t = -4.12, p < .01$ , respectively) were significantly lower in satisfaction than importance. However, at the Grill, there was no significant difference in cleanliness ( $t = 0.10, p = 0.92$ ) or availability of healthy options ( $t = 1.65, p = 0.10$ ), but the nutritional content ( $t = 2.12, p < .05$ ) was significantly higher in satisfaction than importance. Satisfaction versus importance with regard to location ( $t = -1.58, p = 0.12$  at Grill,  $t = 0.89, p = 0.34$  at Rebel Market,  $t = 1.25, p = 0.22$  at Marketplace) was not statistically significant at any of the three university dining facilities. At the Grill and the Rebel Market, students rated satisfaction significantly greater than importance for atmosphere/environment ( $t = 2.92, p < .01$  and  $t = 4.17, p < .01$ , respectively) and image/reputation ( $t = 4.96, p < .01$  and  $t = 3.75, p < .01$ , respectively), but the Marketplace was not significant for satisfaction versus importance for atmosphere/environment ( $t = 1.23, p = 0.22$ ) and image/reputation ( $t = 1.07, p = 0.29$ ).



Table 4

*Satisfaction Compared to Importance at the Grill at 1810*

Attribute	Mean	Std. Deviation	<i>t</i>
<b>Food Quality</b>			-5.70*
Satisfaction	5.28	0.87	
Importance	5.78	0.65	
<b>Service Quality</b>			-1.99**
Satisfaction	5.34	0.84	
Importance	5.53	0.74	
<b>Variety of Menu Items</b>			-2.39**
Satisfaction	5.22	0.82	
Importance	5.49	0.79	
<b>Cleanliness</b>			0.10
Satisfaction	5.65	0.70	
Importance	5.64	0.76	
<b>Nutritional Content</b>			2.12**
Satisfaction	5.46	0.66	
Importance	5.19	1.15	
<b>Availability of Healthy Options</b>			1.65
Satisfaction	5.49	0.73	
Importance	5.27	1.11	
<b>Location</b>			-1.58
Satisfaction	4.61	1.29	
Importance	4.84	1.24	
<b>Atmosphere/Environment</b>			2.92*
Satisfaction	5.49	0.72	
Importance	5.13	1.09	
<b>Image/Reputation</b>			4.96*
Satisfaction	5.61	0.59	
Importance	4.92	1.37	

Note: \*  $p < .01$ , \*\*  $p < .05$

Table 5

*Satisfaction Compared to Importance at the Rebel Market*

Attribute	Mean	Std. Deviation	<i>t</i>
<b>Food Quality</b>			-9.40*
Satisfaction	4.88	0.81	
Importance	5.73	0.68	
<b>Service Quality</b>			-5.40*
Satisfaction	4.74	1.06	
Importance	5.32	0.86	
<b>Variety of Menu Items</b>			-8.15*
Satisfaction	4.62	0.92	
Importance	5.43	0.81	
<b>Cleanliness</b>			-4.46*
Satisfaction	5.16	0.82	
Importance	5.61	0.81	
<b>Nutritional Content</b>			-3.93*
Satisfaction	4.66	1.22	
Importance	5.24	1.03	
<b>Availability of Healthy Options</b>			-3.18*
Satisfaction	4.70	1.28	
Importance	5.18	1.05	
<b>Location</b>			0.89
Satisfaction	5.02	1.11	
Importance	4.90	1.08	
<b>Atmosphere/Environment</b>			4.17*
Satisfaction	5.26	0.74	
Importance	4.86	1.08	
<b>Image/Reputation</b>			3.75*
Satisfaction	5.21	0.81	
Importance	4.82	1.21	

Note: \* $p < .01$

Table 6

*Satisfaction Compared to Importance at the Marketplace at the Residential College*

Attribute	Mean	Std. Deviation	<i>t</i>
<b>Food Quality</b>			-8.33*
Satisfaction	4.52	1.37	
Importance	5.72	0.69	
<b>Service Quality</b>			-4.92*
Satisfaction	4.86	1.25	
Importance	5.53	0.86	
<b>Variety of Menu Items</b>			-7.93*
Satisfaction	4.14	1.35	
Importance	5.49	0.88	
<b>Cleanliness</b>			-5.78*
Satisfaction	5.04	1.12	
Importance	5.74	0.69	
<b>Nutritional Content</b>			-3.70*
Satisfaction	4.60	1.20	
Importance	5.21	1.01	
<b>Availability of Healthy Options</b>			-4.12*
Satisfaction	4.54	1.26	
Importance	5.21	0.96	
<b>Location</b>			1.25
Satisfaction	5.39	1.14	
Importance	5.20	1.78	
<b>Atmosphere/Environment</b>			1.23
Satisfaction	5.29	1.01	
Importance	5.12	1.12	
<b>Image/Reputation</b>			1.07
Satisfaction	5.16	1.09	
Importance	4.99	1.22	

Note: \*p&lt;.01

### **Satisfaction with of attributes for Males and Females**

Males and females have similar satisfaction levels for the different attributes. Results showed that there was not a significant difference in satisfaction with eight of the nine attributes rated by males and females (Table 8). Service quality was the only attribute where females ( $M = 5.08, SD = 1.08$ ) were significantly ( $t = -2.15, p < .05$ ) more satisfied than males ( $M = 4.82, SD = 1.10$ ). Additionally, there was not a significant difference between genders for the level of satisfaction of the university dining facilities overall.

Table 7

*Satisfaction with Attributes for Males and Females at University Dining Facilities Overall*

Attribute	Gender	N	Mean	Std. Deviation	<i>t</i>
Food Quality	Male	151	4.85	1.04	-0.70
	Female	174	4.93	1.09	
Service Quality	Male	150	4.82	1.10	-2.15**
	Female	174	5.08	1.08	
Variety of Menu Items	Male	149	4.71	1.04	0.81
	Female	174	4.61	1.20	
Cleanliness	Male	150	5.31	0.93	0.81
	Female	174	5.23	0.92	
Nutritional Content	Male	150	4.92	1.11	0.51
	Female	174	4.86	1.16	
Availability of Healthy Options	Male	151	4.92	1.16	0.43
	Female	174	4.87	1.24	
Location	Male	151	4.96	1.22	-0.63
	Female	174	5.05	1.23	
Atmosphere/Environment	Male	151	5.25	0.81	-1.90
	Female	174	5.42	0.84	
Image	Male	151	5.24	0.81	-1.58
	Female	174	5.40	0.92	
Satisfaction Overall	Male	151	5.07	0.92	-1.89
	Female	174	5.26	0.96	

Note: \*\*  $p < .05$

### **Importance of Attributes for Males and Females**

In the importance of attributes, females significantly rated six attributes higher than males (Table 9). Results showed that females have significantly higher values than males for importance of the following attributes: service quality ( $t = -3.12, p < .01$ ), variety of menu items ( $t = -4.32, p < .01$ ), cleanliness ( $t = -3.66, p < .01$ ), nutritional content ( $t = -3.17, p < .01$ ), availability of healthy options ( $t = -3.49, p < .01$ ), and image/reputation ( $t = -2.29, p < .05$ ). There was not a significant difference of importance between males and females for food quality ( $t = 1.41, p = 0.16$ ), location ( $t = -1.62, p = .11$ ), and atmosphere/environment ( $t = -1.89, p = .06$ )

Table 8

*Importance of Attributes for Males and Females at University Dining Facilities Overall*

Attribute	Gender	N	Mean	Std. Deviation	<i>t</i>
Food Quality	Male	151	5.68	0.85	-1.41
	Female	174	5.79	0.48	
Service Quality	Male	151	5.29	1.01	-3.12*
	Female	174	5.58	0.60	
Variety of Menu Items	Male	151	5.27	1.01	-4.32*
	Female	174	5.65	0.56	
Cleanliness	Male	151	5.50	0.99	-3.66*
	Female	174	5.80	0.42	
Nutritional Content	Male	150	5.00	1.12	-3.17*
	Female	173	5.37	0.98	
Availability of Healthy Options	Male	150	5.00	1.06	-3.49*
	Female	174	5.37	0.99	
Location	Male	149	4.86	1.18	-1.62
	Female	173	5.07	1.14	
Atmosphere/Environment	Male	150	4.89	1.09	-1.89
	Female	174	5.13	1.12	
Image	Male	150	4.73	1.31	-2.29*
	Female	174	5.05	1.21	

Note: \*  $p < .01$ , \*\*  $p < .05$

## DISCUSSION

### Demographics

The higher percentage of female student participants over male student participants correlates to the current demographic of the University of Mississippi with a greater female population. At the Grill, there were more male student participants, which could be due to the fact that the Grill is more sports oriented by design and may attract more men to this university dining facility. The greater percentage of freshman completing the survey was to be expected because freshman at the University of Mississippi are required to have a meal plan and live on campus. Almost all students participants (93.2%) were full-time students, which mirrors the University of Mississippi who reports 94.2% of students are enrolled full time (Office of Institutional Research, Effectiveness, and Planning, n.d.). The ethnic demographics slightly follow the pattern of demographics at the University of Mississippi, which explains the higher percentage of Caucasian students who completed the survey. The difference of residence of the student participants indicates that location and accessibility may be a factor in deciding which university dining facility to frequent. The Grill is located on the edge of campus and is near commuter parking lots, which may explain the higher percentage of students who completed the survey living off campus. The Rebel Market is essentially close to the “heart” of campus, and is close to residential halls and commuter parking. So, it can be expected that the residence of student participants at the Rebel Market was an almost



evenly split between on and off campus residence. The Marketplace is located in the basement of the resident hall, so it was expected that a large percentage of the surveys would be completed by students who live on campus. More students at the Grill were athletes compared to Rebel Market and Marketplace which indicates that the Grill may be reaching their target market.

### **Overall Satisfaction**

The Grill received the highest rating for overall satisfaction compared to the Rebel Market and the Marketplace, which is reflective in the Grill also receiving the highest rating for satisfaction in 7 of the 9 attributes. The Rebel Market and Marketplace at the Residential College were similarly rated in their overall satisfaction, which indicates that there is room in which management can improve the facilities. By addressing each of the attributes that were significantly lower in satisfaction when compared to the Grill, the overall satisfaction with the Rebel Market and Marketplace could improve.

### **Satisfaction with and Importance of Attributes**

#### **Food Quality**

Overall, food quality was found to be important when evaluating overall satisfaction, especially in students who frequent the university dining facilities more than five times per week. These students are important to satisfy because as returning customers, they play a crucial role in the success of a university dining facility. The student participants were most satisfied with the food quality at the Grill when compared to the Rebel Market and Marketplace. Several factors could contribute to this outcome

and need investigation, such as lack of consistency among the university dining facilities in menus and foods offered, quality of food items ordered and served, and food preparation methods and skills of foodservice employees. Efforts to establish quality control and comparison of similar menu items may assist in establishing any inconsistencies in food quality at the different university dining facilities. The increased satisfaction at the Grill could be due to the employment of a Registered Dietitian as the Executive Chef, which supports a study suggesting that hiring executive chefs improves food taste (Park et al., 2013). Studies on university dining found that food quality was one of the top indicators of customer satisfaction (Andaleeb & Caskey, 2007; Gramling et al., 2005; Harrington et al., 2013; Joung et al., 2014; Kim et al., 2004; Kwun, 2011). By improving the food quality at the Rebel Market and Marketplace, management could better satisfy student customers.

### **Service Quality**

At the Grill, the students were more satisfied with the service quality than at the other two university dining facilities. The staff at the Rebel Market and Marketplace could be evaluated for their performance more frequently and undergo training to improve performance. Student participants evaluated service quality as important to very important for all three university dining facilities. In several studies, service quality was one of the main attributes to contribute to customer satisfaction, so it is an important attribute to improve (Harrington et al., 2013; Joung et al., 2014; Kim et al., 2004; Kwun, 2011; Kwun et al., 2013).

## **Variety of Menu Items**

Overall, variety of menu items is especially important when addressing overall satisfaction of students who frequent the university dining facilities more than five times per week because returning customers play a crucial role in the success of a university dining facility. The variety of menu items was different among all the university dining facilities, with students most satisfied at the Grill and least at the Marketplace. This indicates that students are either bored with the menu items or do not know all of the options that are available within the university dining facility. Student results at the Grill were between very satisfied and satisfied. The Rebel Market received a mean score ( $M = 4.62$ ) that was between satisfied and slightly satisfied, which indicates more effort may be needed for improvement. The Rebel Market offers a wide variety of stations, but students might be unaware of the options that they have. Including daily suggestions or highlighting food options could bring awareness among students. Improving satisfaction within the variety of menu items can be done by developing the menu to be more extensive or have more options. At the Marketplace, the satisfaction score for variety of menu items was closer to slightly satisfied ( $M = 4.12$ ), which indicates that management could focus their attention on the ways to improve the variety of menu items available. By adding more options to the menu or implementing new food items and cuisines, the students' satisfaction could increase. This finding correlates to research finding that have shown that having a wide variety of menu items available positively impacts customer satisfaction (Andaleeb & Caskey, 2007; Harrington et al., 2013; Kim et al., 2004; Kwun et al., 2013).

## **Cleanliness**

Cleanliness was another attribute in which the Grill had significantly higher satisfaction than both the Rebel Market and the Marketplace, which were not significantly different from each other. This was surprising because the Rebel Market is the newest facility and opened during the 2014 – 2015 academic year. The Rebel Market has primarily blue, red, and grey interior colors with many rooms for dining, which do not lend to as seemingly clean of an appearance. The Grill is still a relatively new facility; it opened in January of 2014, so it is understandable to still be rated with high satisfaction. The Grill has greater natural lighting with large windows, has a modern décor with primarily white walls and floors, and has a very open dining room, which might contribute to it seeming to be cleaner. The Marketplace is a more traditional style university dining facility and is in the basement of a residential hall. Cleanliness is an important attribute for management to pay attention to because it has been shown to contribute to overall satisfaction and impact students' frequency in dining at a facility (Andaleeb & Caskey, 2007; El-Said & Fathy, 2015; Gramling et al., 2005). It is also a component of the university dining facility that can be fixed without high cost by completing more thorough cleanings and being sure to monitor that the staff is fulfilling their duties.

## **Nutritional Content and Availability of Healthy Options**

The student participants at the Grill were significantly more satisfied with the nutritional content and availability of healthy options than the students who completed the survey at either the Rebel Market or the Marketplace, which were not significantly different from each other. Again this result shows that the emphasis placed on and

marketing of nutritional content and healthy foods available, specifically at the Grill, is working. At the Grill, two registered dietitians are on staff, one as the sports nutritionist and the other as the head chef, so the specific objectives set for the Grill seem to be met. However, according to the Facebook page for Ole Miss Dining, a registered dietitian is employed at the Rebel Market to help with nutritional questions students may have. On the campus dish website, anyone can access the menus and see the nutritional content of each item available. Students can select all the items for their meal and see the nutritional content of their entire meal, which is a helpful feature when determining nutritional intake. This feature is something students may not be aware of, so they may not be fully taking advantage of it. Efforts have been made by all three university dining facilities to post nutritional information on many food items.

The Rebel Market, attempts to bring attention to foods that are considered healthy through nutrition labeling of those foods. The lower student satisfaction at the Rebel Market and Marketplace at the Residential could be a result of students not recognizing all the healthy foods available. With the increase in demand of healthier food options among students, it is important for the university dining facilities to stay current in the food trends and offer foods high in nutritional value. As with this study, other studies on university dining, have shown that the nutritional content and availability of healthy options are attributes that students consider to be important with regards to their satisfaction (Andaleeb & Caskey, 2007; Harrington et al., 2013).

### **Location**

Location is the one attribute that was consistently lower among all three university dining facilities in satisfaction when compared to the other eight attributes.

This was not surprising because the Grill is located at the edge of campus away from classrooms, student traffic, and residential halls. The Marketplace had the highest satisfaction for location, which is likely due to its location within the Residential Hall. Location is an attribute of university dining facilities that can contribute to satisfaction because customers can develop specific expectations based on the location (Meiselman, 2003). Even though the satisfaction rating at all the university dining facilities was lower than other attributes, the importance rating was also lower compared to other attributes. Therefore, the location may not impact overall satisfaction like the attributes that received higher importance.

### **Atmosphere/Environment**

Atmosphere/environment was an attribute where students overall were satisfied but placed among the three lowest of importance at all three university dining facilities. Within other research, the atmosphere/environment of a university dining facility contributed to the overall satisfaction, but it was not as essential or important to the customers (Andaleeb & Caskey, 2007; Boek et al., 2012; Joung et al., 2014; Kim et al., 2004; Kwun, 2011). Because the atmosphere/environment of the university dining facilities were rated as satisfied or very satisfied by student participants the management may be better served to focus their attention on other attributes at the present time when addressing overall satisfaction.

### **Image/Reputation**

Similar to atmosphere/environment, student participants rated the image/reputation low in importance for all the university dining facilities. However, the Grill was significantly higher in satisfaction with image/reputation than the Rebel Market

and the Marketplace. It may be that the athletic marketing focus by the Grill is successfully contributing to a higher satisfaction with image/reputation. The Grill was designed for the purpose of meeting college athletes' nutritional needs and is adjacent to the Olivia and Archie Manning Performance Center, which is used by a variety of athletic teams. Other students may feel excitement to eat among the athletes dining at the Grill. In a study on university dining, it was found that image/reputation contributes to the overall satisfaction and to the frequency on return of customers (Kwun et al., 2013). In order to improve image/reputation, management could strategize with their marketing team and create promotions and events at the Rebel Market and the Marketplace at the Residential College to improve and further develop the image.

### **Importance of Attributes**

There was not a significant difference among the level of importance of the attributes among student participants at all three university dining facilities. These results indicate that students are placing similar importance on each attribute regardless of their frequented university dining facility.

### **Satisfaction Compared to Importance**

Using a paired t-test, students' rating of satisfaction with attributes was compared to the level of importance given that attribute. For all three university dining facilities, student participants rated food quality, service quality, and variety of menu items significantly lower in satisfaction than importance. These results can assist management in making decisions on which attributes to address first in efforts to improve overall satisfaction.

While nutritional content showed significant differences among all three university dining facilities, the Grill showed higher satisfaction than importance, while Rebel Market and Marketplace showed lower satisfaction than importance. This is of interest because the Grill had stronger focus on nutrition compared to Rebel Market and Marketplace. Rebel Market and Marketplace have opportunities to improve satisfaction with this attribute by employing similar procedures and activities as the Grill and educating students on foods that have high nutritional content and how to access this information located on the Campus Dish website. Management also needs to ensure that foods offered are of high nutritional content and are identifiable by the students. This is also shown in the results for the availability of healthy options attribute where student participants had lower satisfaction than importance at the Rebel Market and Marketplace. The Grill showed no significant difference between level of importance and satisfaction with availability of healthy options.

Cleanliness is another attribute that showed higher importance than satisfaction for the Rebel Market and Marketplace, but not the Grill. This may simply be a matter of training the employees and establishing cleaning standards in efforts to improve satisfaction. The lower importance and higher satisfaction placed on atmosphere/environment and image/reputation at the Grill and Rebel Market may reflect that these attributes are being met. This could be due to efforts made in marketing of these facilities and the fact that the facilities are less than three years old.

### **Males Compared to Females**

With regards to satisfaction at the university dining facilities as a whole, males and females were significantly different for only one of the nine attributes, service



quality. More research is needed to see what characteristics are perceived by females and males to contribute to service quality.

Females evaluated service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, and image/reputation to be significantly more important compared to males. This indicates that females have different views towards food and the overall dining experience. More in depth research is needed in efforts to have a better understanding of the characteristics contributing to these attributes.

## CONCLUSION

This study evaluated overall satisfaction of three unique all-you-can-eat university dining facilities by investigating satisfaction with and importance of nine attributes contributing to the overall satisfaction. The three all-you-can-eat university dining facilities were on the same campus in different locations. The results showed that the Grill was rated overall as significantly more satisfactory than the Rebel Market and Marketplace. Seven of the nine attributes (food quality, service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, and image/reputation) were evaluated to be significantly more satisfactory at the Grill than the Rebel Market and Marketplace. These results can guide management decision on where to place valuable resources toward efforts in improving overall satisfaction. Variety of menu items contributed to dissatisfaction for student participants who frequented the university dining facility more than five times per week. Attributes that will have the greatest impact for improving overall satisfaction for all three university dining facilities have been identified as food quality, service quality, and variety of menu items. Location, atmosphere/environment, and image/reputation were found to be the least important attributes at all three university dining facilities. While these attributes contribute to overall satisfaction, they may be viewed as ones that need to be maintained rather than improved. Results also showed that female students rated six of the nine attributes (service quality, variety of menu items, cleanliness, nutritional content, availability of healthy options, and image/reputation) as more important than male

students. This indicates that it may be of interest for more research to be conducted on the characteristics contributing to dining attributes as perceived by female students and male students.

Student participants were not as satisfied with nutritional content and availability of healthy options at the Rebel Market and Marketplace compared to the Grill. In efforts to improve overall satisfaction at the Rebel Market and Marketplace, it may be advantageous for management to implement some of same the menu strategies and nutritional focuses that have been placed on meals served at the Grill.

### **Limitations**

A limitation within this study is the inability to generalize the findings to all universities because the research was conducted on only one campus in the state of Mississippi. The study also focused only on the lunch meal rather than collecting data for all three meals. Another limitation is that participants were not randomized but were a purposive sample selection. Even though survey questions were pilot tested by students similar to participants in the study, attributes may not have been similarly interpreted by all student participants. Finally, the survey only asked about nine attributes contributing to overall satisfaction. There could be additional attributes that have an impact on overall satisfaction that need to be investigated.

### **Further Research**

In future research on satisfaction and importance of attributes at university dining facilities, surveys should include a greater sample size to ensure a representation of the population. More research also can be conducted on other university campuses in order to

generalize an overall student satisfaction with and importance of attributes of university dining facilities. Additionally, a more in depth investigation should be conducted on characteristics that contribute to individual attributes such as food quality and service quality. Another aspect that can be included in future research is to analyze each demographic group to see more specifically which population is eating where and if there is a lack of satisfaction within different demographic groupings.

## **APPENDICES**

## APPENDIX A

### Evaluation of College Students' Level of Importance of and Satisfaction with Non-Commercial University Dining Facilities

*□ By completing this survey I am over 18 years of age and consent to participate in this study.  
(Please check) If under 18 years of age please return survey to researcher.*

**1. Please indicate your most frequently visited dining facility:**

- Grill (IPF)     
  Rebel Market (JC)     
  Residential College (Luckday)

**2. On average, how many times per week do you eat LUNCH at your most frequently visited dining facility?**

- < 1     
  1     
  2     
  3     
  4     
  5     
  > 5

**3. Please indicate your satisfaction with the following characteristics of your most frequently visited dining facility.**

Statements	Very Dissatisfied	Dissatisfied	Slightly Dissatisfied	Slightly Satisfied	Satisfied	Very Satisfied
Food quality	1	2	3	4	5	6
Service quality	1	2	3	4	5	6
Variety of menu items	1	2	3	4	5	6
Cleanliness	1	2	3	4	5	6
Nutritional content	1	2	3	4	5	6
Availability of healthy options	1	2	3	4	5	6
Location	1	2	3	4	5	6
Atmosphere/ Environment	1	2	3	4	5	6
Image/Reputation	1	2	3	4	5	6
Dining facility overall	1	2	3	4	5	6

**4. Please indicate the importance of the following characteristics of your most frequently visited dining facility.**

Statements	Very		Slightly	Slightly		Very
	Unimportant	Unimportant	Unimportant	Important	Important	Important
Food quality	1	2	3	4	5	6
Service quality	1	2	3	4	5	6
Variety of menu items	1	2	3	4	5	6
Cleanliness	1	2	3	4	5	6
Nutritional content	1	2	3	4	5	6
Availability of healthy options	1	2	3	4	5	6
Location	1	2	3	4	5	6
Atmosphere/Environment	1	2	3	4	5	6
Image/Reputation	1	2	3	4	5	6

**5. Tell us a little bit about yourself:**

**Gender:**  Male  Female

**Classification:**  Freshman (0 – 29 academic hours)  Sophomore (30 – 59 academic hours)  
 Junior (60 – 89 academic hours)  Senior (90 or more academic hours)  
 Graduate Student

**Student Status:**  Full-time (enrolled in 12 or more hours)  Part-time (less than 12 hours)

**Age:**  18  19  20  21  22  
 23  24  25  26 or older

**Ethnicity:**     White             Hispanic or Latino             Black or African American  
                   Native American or American Indian     Asian / Pacific Islander             Other

**6. Where do you live?**

On Campus                             Off Campus

**7. Are you a student athlete?**

Yes                                       No

**8. Do you have a meal plan?**

Yes                                       No

**9. Are you a member of a Greek organization?**

Yes                                       No

**10. Is there anything that you would like to tell the management?**

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## APPENDIX B

# INFORMATION SHEET

**Title:** Students' importance of and satisfactions with the attributes of three unique university dining services

**Primary Investigator**

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**Description**

We would like to identify students' satisfaction levels with the university dining facilities. The results of the study will allow management to strategically allocate resources to maximize market impact and will draw connections among the student perceptions of the dining facilities.

It will take you approximately **five minutes** to complete this survey. You will be able to enter your name and email or cell number on an index card to win a raffle of a \$25 gift card after completing the survey. This card will be put in a separate container from the surveys, so there will be no chance of connecting you and your survey. This will maintain confidentiality of your survey responses.

**IRB Approval**

**\*\*\*must be included as written\*\*\***

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or [irb@olemiss.edu](mailto:irb@olemiss.edu).

**Right to Withdraw**

You do not have to take part in this study and you may stop participation at any time.

**Risks and Benefits**

We do not think that there are any risks in completing this survey.

**Statement of Consent**

I have read and understand the above information. By completing the survey/interview I consent to participate in the study.

## APPENDIX C

Hi, my name is \_\_\_\_\_ and I am conducting research for an honors college thesis. Would you please take five minutes to fill out this survey on your satisfaction and perception of the university dining facilities? Once you complete the survey, you may enter your name to win a drawing of \$25 dollar gift card. Thank you

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