A Study on Student's Satisfaction towards On-Campus Foodservice: A Case of UITM Penang Students

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Abstract

This study was conducted to investigate the relationship among three variables, namely price, quality of food and atmosphere with student satisfaction. The inconsistency of service delivery among on-campus cafeteria operator has become one of the main reasons for this study. Due to that, student satisfaction when dining in at the restaurants is difficult to achieve and maintain if the service delivered does not meet their needs. To overcome this problem, the restaurant needs to understand the positive and negative elements that can affect their business to achieve the maximum level of customer satisfaction. This study focuses on three independent variables namely price, quality of food and atmosphere, to understand their relationship with customer satisfaction. The study was conducted in Universiti Teknologi MARA Pulau Pinang with a total of 360 students were participated for questioning through convenience sampling method. Based on the results, the quality of food has the most impact on student satisfaction, followed by the atmosphere and price. The results indicate that all of the stated variables do have a significant impact on customer satisfaction and the stated objectives were achieved. University's cafeteria should take severe measures to improve the price, quality of food and the atmosphere of the cafeteria for long-term sustainability.

Keywords: University Foodservice, Satisfaction, Price, Food Quality, Atmosphere

Introduction

Foodservice is one of the service sectors in the hospitality industry that showed an increased growth rate. Institutional food service is a service that provides food to their groups of customers in the institutions which can be found in schools, hospital facilities, prisons, child and senior care centers and also catering services. The number of foodservice operator in the university also increases every year. The growing market of a college student is the

enlightenment of the development of foodservice at the university. The study by Kim, Moreo, and Yeoh (2004) found that the increasing number of universities admission has become the determinant of the expanding demands for the on-campus food service.

A statistic from the Malaysian Ministry of Higher Education showed that the number of university students, both in private and public institutions, is increasing from 197,736 students in 2002 to 937,213 students in 2011. The expanding number of enrollment has forced the university's administrator to construct more necessary facilities with the dining hall to cater to on-campus living. According to the Research and Market report, 4.3% of the total Malaysian foodservice industry sales in 2011, grew from MYR1, 769.0 million in 2006 to MYR1, 953.1 million in 2011. In terms of college market potential, Marketing Chart reported that the spending power of college students is more than $90 billion. The positive growth of Malaysian foodservice sales and the increase in spending power of students will drive university food service revenue. To that end, the foodservice operators need to recognize the need and wants of the students to satisfy them.

Many researchers have investigated the importance of customer satisfaction in foodservice (Ng, 2005; Oh, 2000; Yuksel & Yuksel, 2002) because it leads to repeat patronage and invent new customers. Among the factors identified as driving to customer satisfaction in the on-campus foodservice are price, quality of service, quality of food, and atmosphere. To date, there is no published empirical evidence showing the current state of customer satisfaction towards at Universiti Teknologi MARA Pulau Pinang (UiTMPP) foodservice. Thus, this study aims to determine the extent to which price, quality of food and atmosphere influence student's satisfaction towards UiTMPP on-campus food service.

Literature Review and Hypothesis
Customer Satisfaction
 Many researchers have studied customer satisfaction in various aspects over the years. One of them is Yuksel and Yuksel (2002) who discovered the critical element that always monitored by managers is customer satisfaction because it will contribute to business growth and repeat customers. The ability to provide customer satisfaction is a must for all organizations because Oliver (1997) stated that customer satisfaction is a response after they judge all the elements that exist in the product or service, whether it gives satisfaction to them after using it. There are few studies argue that customer satisfaction is not the only attributes to the success of a business (Tam, 2008; Hong & Prybutok, 2009) although there are statements which stated that satisfaction is essential in any business. Other than customer satisfaction, brand familiarity also a significant contributor to the achievement of a business (Tam, 2008). Hong and Prybutok (2009) noted that service quality is a significant contributor to the success of a business. Apart from the customer satisfaction in foodservice, student satisfaction with university foodservice is also one of the topics being studied. There are several studies (Ng, 2005; Xi & Shuai, 2009) showed that customer satisfaction had become an increasingly important issue because it also affects the foodservice sector in university. According to Shanka and Taylor (2005), customer satisfaction is the significant determinant of foodservice provider success which is why many foodservice providers want to understand how consumers develop and evaluate the service relationship and how that relationship affects the overall level of consumer satisfaction Another study conducted by Xi

and Shuai (2009) also stated that student's satisfaction in on-campus foodservice depend on food quality, variety, and price fairness.

Price influence customer satisfaction towards on-campus foodservice

Price is one of the factors that draw customers to dine at foodservice. According to Yuksel and Yuksel (2002), customers come to the restaurant because they acquire a value of money expected when they pay for the food prices. They also mentioned that customers might be thought that the value is low price, or any features that function as expected, or it is a definition of quality that is perceived by customers. This means that different customers may see value in a different meaning. Hence, Kaura, Prasad, and Sharma (2014) indicated that in the service context perceived price is playing a significant role in decision making. The strong belief in a price-quality relation has several significant consequences for marketing-related outcomes (Berger, Christandl, Schmidt and Baertsch, 2018). In terms of university foodservice, students also perceive the price as an element to be considered when purchasing food in the cafeteria. A study conducted by Klassen, Trybus, and Kumar (2005) supports this statement. The result showed that 62 percent of respondents chose price as the most critical element when making decisions. Besides, the recent studies by Ng (2005) and Xi and Shuai (2009) did consider price and value in assessing students' service quality in dining hall services.

H1.1   There is a relationship between price with the student's satisfaction towards on-campus foodservice

Food quality influence customer satisfaction towards on-campus foodservice

Vangvanitchyakorn (2000) revealed in his research that quality of food is the most critical factor in consumer's evaluation of different categories of restaurants. The food quality is the characteristic of food that acceptable and meets customer requirements, for example, the food's appearance, smell, taste, and texture (McWilliams, 2000; Kaura, Prasad a& Sharma, 2014). Quality plays a vital role in shaping and influencing customer satisfaction. According to Peri (2006), food quality is an essential element that restaurants must provide to fulfill the customer's needs and satisfaction. Studies conducted by the previous researcher (Petijohn, Petijohn & Luke, 1997; Mensah & Mensah, 2018) found that customers choose food quality as the primary factor in achieving customer satisfaction. They also found that the food quality is a more important attribute than any other identifiable characteristics such as cleanliness, price, value, and convenience. Food quality is also one of the attributes used to measure customer satisfaction in institutional foodservice. This statement is supported by a study conducted by Kim and Kim (2004), in which, the satisfaction of students to on-campus foodservice depending on the quality of meals, food hygiene, environment, and food variety. Ng (2005) conducted a study and founded that quality of food was deemed essential to satisfy students demand. Therefore, this research has applied the quality attributes in a way that can influence the customers' satisfaction towards on-campus food service.

H1.2   There is a relationship between quality of food with the student's satisfaction towards on-campus food service.

Atmosphere influence customer satisfaction towards on-campus foodservice

In service setting, the atmosphere in which the service takes place can be important in influencing perceptions and customer satisfaction (Bitner, 1992). Making the atmosphere more pleasant and innovative is essential for restaurants' success, as customers consciously or unconsciously sense the physical surroundings (décor, artifacts, music, and layout) before, during, and after the meal when dining out in a restaurant (Han & Ryu, 2009). Ibrahim and Fadzil (2013) reinforce that statement by saying that, the physical background can also influence customer's perceptions of the quality of foodservice as described. Yuksel and Yuksel's (2002) study about tourist satisfaction with restaurant service stated that "service environment holds a central role in shaping the nature of customers' behavior, their reactions to places and their social interactions." "Customers are likely to spend their time and money in an establishment where the service environment prompts a feeling of pleasure." In terms of institutional foodservice, Ng (2005) emphasized that the foodservice operators should improve the atmosphere in the food service because it will influence their customer's perception and satisfaction. Thus, the literature on atmosphere attributes provides clear reasoning into why this attribute is a part of the study.

H1.3   There is a relationship between atmosphere with the student's satisfaction towards on-campus food service.

Methodology
Sample and population

The target population for this study is students from UiTM Penang. The university consists of 6779 students (as of January 2015). The student population data for this study were collected through Students Affair Council in UiTM Penang. Thus, a probability sampling, which using a simple random sampling were used. According to Kumar, Talib and Ramayah (2013) simple random sampling is whereby each member of the population has an equal and known chance of being the subject of the sample. In this study, the researchers used a cross-sectional study to measure the relationship between price, food quality and atmosphere with customer satisfaction due to the time frame of the research.

Research Instrumentation

There are a few mechanisms that were used for the data collection method. The researcher used the questionnaire to collect data for primary data collection. As stated by Zahari, Hanafiah, Othman, Jamaluddin, and Zulkifly (2010), a questionnaire is a pre-formulated written set of question used to get an answer or response from the respondents. The questionnaire was adopted based on the past researches that are related to the researcher's topic. For questionnaire, there are four sections in total where the first section is for demographic questions. Section two until four are about the factor influencing student's satisfaction towards on-campus foodservice in particular price, food quality, and atmosphere. The questions in the instrument were adopted from previous studies undertaken by Ng, (2005); Xi and Shuai, (2009); and Kim, Ng, and Kim, (2009). The instrumentation consists of four dimensions which are price, food quality, atmosphere, and customer satisfaction. The instrumentation was tested by using Confirmatory Factor Analysis (CFA) to see whether a specified data of constructs is influencing responses in a predicted way in an intended research setting.

Data Analysis

The techniques that were used included Confirmatory Factor Analysis, frequency distribution, reliability analysis, and correlation analysis. Confirmatory Factor Analysis (CFA) examines whether a specified data of constructs is influencing responses in a predicted way. Frequencies refer to the number of times various categories of a particular phenomenon occur, from which the percentage and the cumulative percentage of their occurrence can be easily calculated. Descriptive analysis is used to describe the essential features of the data in a study. It provides simple summaries about the sample and the measures. With descriptive statistic, the researcher is merely describing what is or what the data shows. The most commonly used statistics associated with frequencies is the measure of central tendency and dispersion (mean, median and mode). Cronbach alpha is one of the most frequently reported reliability estimates in the language testing literature. It is used to estimate the proportion of variance that is systematic or consistent in a set of a test score. Correlation analysis is conducted to see the relationship between the independent and dependent variable.

Result

Sampling Profile

A total of 360 responses were gathered with 50%(180) male, and 50%(180) are female. 135 of the respondents were from the faculty of Hotel and Tourism Management. Faculty of Civil Engineering and Faculty of Electrical Engineering contributed 68 and 69 respondents respectively. The respondents from the Faculty of Mechanical Engineering are 66, and only 22 respondents were from other faculties. In terms of their source of income of the respondents, the highest response was from the student loans with 224 (62.2%) respondents followed by 104 (28%) respondents who sourced their income from their parents and lastly, 32 (8.9%) utilized their scholarship fund. Most of the respondents spent – on average – RM6-RM10 with 208 recorded respondents and only 14 respondents spent an average of RM16 and above on their dining expenses. For the range of "less than RM5" and "RM11-RM15", both recorded 112 (31.1%) and 26 (7.2%) respondents respectively. The majority (82.8%, 298) of the respondents patronizes the cafeteria daily, while 17.2% (62) patronizes the cafeteria 3-5 times per week.

Hypothesis Testing

Table 1 shows the results of the analysis from the research conducted on the relationship between all variables with customer satisfaction. As a result, quality of food shown a strongest positive relationship with customer satisfaction (r = 0.847), followed by the atmosphere (r = 0.783) and price (r = 0.636). Based on these results which are in accordance with previous research (Xi & Shuai, 2009), the quality of food is the attributes that affect customer satisfaction the most. In a nutshell, all three attributes had a strong positive linear relationship with customer satisfaction. This shows that these factors must be managed properly to achieve customer satisfaction and have a positive perception from the customers.

Table 1
Result of Analysis

Correlations

		Price	Quality of Food	Atmosphere	Customer Satisfaction
Price	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	360			
Quality of Food	Pearson Correlation	.392**	1		
	Sig. (2-tailed)	.000			
	N	360	360		
Atmosphere	Pearson Correlation	.230**	.493**	1	
	Sig. (2-tailed)	.000	.000		
	N	360	360	360	
Customer Satisfaction	Pearson Correlation	.636**	.847**	.783**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	360	360	360	360

**. Correlation is significant at the 0.01 level (2-tailed).

Discussion

H1.1: There is a relationship between price with the student's satisfaction towards on-campus foodservice

Hypotheses 1 were established to examine the respondents' overall satisfaction scores with regards to price variable. In term of price, a reliability analysis (Cronbach's alpha) was performed to test the reliability and internal consistency of 4 attributes measured. The results showed that the alpha coefficients for the attributes are high (r = 0.860) which mean that there is a good association between price and customer satisfaction. This signifies that the variable is considered acceptable as an indication of reliability.

H 1.1 was accepted after Pearson correlation testing was performed. From the positive results (r = .636), this pointed out that there is a positive relationship between price and customer satisfaction. This means that, when customers have a good perception on food prices, they will achieve high satisfaction and vice versa. Regarding hypothesis 1, the result describes that students' satisfaction with the university cafeteria is affected by price. This proves that to ensure that students of UiTMPP are satisfied with the on-campus food service, the operators need to ensure that this factor is well managed and get a positive perception of the customer.

In general, it shows that there is a clear relationship between price and customer satisfaction among the student of UiTM Penang. Therefore, the researcher concludes to accept this hypothesis. This is resemblance with prior findings (Klassen et al., 2005; Ng, 2005; Xi & Shuai, 2009) implying price plays a role in giving satisfaction to students regarding on-campus foodservice.

H1.2: There is a relationship between qualities of food with the student's satisfaction towards on- campus foodservice

Hypotheses 2 were established to examine the respondents' overall satisfaction scores with regards to food quality variable. The coefficient alpha of reliability was computed for this variable factor to see the dimension's internal consistency. The results showed that the alpha coefficients for the attributes are high (r = 0.870), indicating that it met acceptable standard of validity analysis. It also suggests that there is a good association between the quality of food and customer satisfaction.

In terms of Pearson correlation testing, the results (r = .847) indicated that there is a positive relationship between the quality of food and customer satisfaction. Thus, the finding was strongly supported hypothesis 2. Therefore, it can be concluded that customer satisfaction can be achieved through the excellent quality of food. Regarding hypothesis 2, the result describes that students' satisfaction with the university cafeteria is affected by the quality of food. The foodservice operator needs to improve their food quality to capture the students of UiTMPP satisfaction toward university foodservice.

Taken as a whole, it shows that there is an obvious relationship between the quality of food and customer satisfaction among the student of UiTM Penang. Therefore, the researcher concludes to accept this hypothesis. This result is a resemblance to prior findings (Petijohn et al., 1997; Qu, 1997; Ng, 2005) found that customers choose food quality as the primary factor in achieving customer satisfaction.

H1.3 : There is a relationship between atmosphere with the student's satisfaction towards on- campus foodservice

Hypotheses 3 were established to examine the respondents' overall satisfaction scores with regards to atmosphere variable. In term of atmosphere, a reliability analysis (Cronbach's alpha) was performed to test the reliability and internal consistency of 6 attributes measured. The results showed that the alpha coefficients for the attributes are high (r = 0.820), indicating that it met an acceptable standard of validity analysis. This signifies that there is a good association between the atmosphere and customer satisfaction.

H 1.3 was accepted after Pearson correlation testing was conducted. The results (r = .783) indicated that there is a positive relationship between atmosphere and customer satisfaction. It is specified that a pleasant dining atmosphere can give an impact on customer satisfaction. With regard to hypothesis 3, the result describes that students' satisfaction with the university cafeteria is highly affected by the dining atmosphere. In other words, a restaurants operator should not neglect the atmosphere factor as it would affect the UiTMPP student's satisfaction. Overall, it shows that there is an apparent relationship between atmosphere and customer satisfaction among the student of UiTM Penang. Therefore, the researcher concludes to accept this hypothesis. This is resemblance with prior findings (Kim & Kim, 2004; Ng, 2005) indicated that quality of food was deemed essential to satisfy students demand.

Implication of study

Concerning all types of business organization, customer satisfaction is the most critical issue and believed as most reliable feedback for the business organization. For measuring customer satisfaction, this study was conducted to determine the extent to which quality of food, atmosphere, and price of food factors influence a student's satisfaction towards on-campus food service. This study can bring obvious benefits to the restaurant operators as it helps them to identify what is the element that influences the student's satisfaction. They can use the result of this study to comprehend the students' satisfaction factor and implement them in their restaurant operations. From the research, it is found that food quality plays the most influencing role on customer satisfaction. Therefore, foodservice operators must continuously provide higher quality foods to their customers regarding offering meals with fresh ingredients. Moreover, the food preparing process must be kept monitored and controlled from time to time to ensure the food quality standard is able meets customer satisfaction. Atmosphere and price of food might not be the elements that give the most impact, but they also have their importance on students' satisfaction toward on-campus food service. Hence, the university cafeteria should invest in these issues by providing an eye-catching and comfy ambiance and chose suitable furniture for the university cafeteria. Furthermore, they should also offer an attractive menu at a reasonable price because price also plays the role in student satisfaction.

Limitation of study

One university findings is the research limitations in the study because there are many other universities across the country. Therefore, the result obtained was not representing the student satisfaction for overall students in Malaysia. In this paper, the researcher has a somewhat limited number of samples. Only 360 questionnaires were successfully distributed to students in UiTM Penang. An enlarged sample would increase the representativeness of the target population and improve research precision. Besides, this study stated that three variables affect students satisfaction. However, there are other variables, apart from these three factors that could also lead to customer satisfaction. This indicates that this research cannot be conducted thoroughly and deeper because the researcher only focused on a limited number of variables. Thus, the student satisfaction towards on-campus foodservice is not investigated thoroughly.

Conclusion

The results showed that the quality of food has the most impact on the students' satisfaction, followed by atmosphere and price respectively. Thus, it is reasonable enough to accept the stated hypothesis. The dominant variable that has the strongest relationship with customer satisfaction is the quality of food which means that it has the most impact on customer satisfaction among UiTM Penang students. It is therefore important for university cafeteria operators to keep on improving the quality of food serves to the customers to maximize their satisfaction level. Next, the result describes that students' satisfaction with the university cafeteria is highly affected by dining atmosphere after food quality attributes. In other words, a restaurants operator should not neglect the atmosphere factor as it would affect the UiTMPP student's satisfaction. Other than that, it shows that there is a clear relationship between price and customer satisfaction among the student of UiTM Penang. In

a nutshell, this research project has fulfilled its objective to identify the relationship between the variables towards customer satisfaction towards university foodservice.

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