



The quality of cafeteria services on customer satisfaction at a State University of northern Mindanao, Philippines

Trizha Kyra Feb G Baguio, Sofia C Naelga

Department of Technical and Technology Education (DTTED), College of Science and Technology Education (CSTE),
University of Science and Technology of Southern Philippines (USTP), Philippines

Abstract

The study focuses on determining the correlation of food service attributes on customer satisfaction in cafeteria services at the State University of Northern Mindanao. The respondents of this study were selected based on non-random criteria and from the general community of the university, namely students, teachers, office staff, and other personnel. Among the 126 respondents, 25% were aged between 16-25, 25% were between 26-35, 25% were between 36-45 and 25% were between 46-65 years old. Furthermore, approximately half of the respondents were staff of the cafeteria (50%), 24% were instructors and 26% were students. The study utilized a quantitative descriptive research design in which descriptive analysis with a frequency procedure is employed to summarize categorical variables, providing an overview of participant demographics and preferences for food service attributes categorized by age groups. Also, data from this study underwent a correlation analysis to illustrate the strength of relationships among the variables, and all of these analyses were carried out using SPSS version 20. The findings revealed that food service attributes like quality of food and beverage (mean=28), quality of service (mean=16), quality of setting (mean=17), and price and value (mean=7) have a highly positive correlation with the customers' overall satisfaction (mean=14). Therefore, the hypotheses of this study are accepted. The study made recommendations based on the findings that are highly suggested to the university cafeteria management, concessionaires, and administrators to enhance the overall cafeteria experience and customer satisfaction.

Keywords: Food service attributes, impact, customer satisfaction, cafeteria services

Introduction

Throughout history and across various locations, food and beverages have remained essential human necessities. This has led to the development of diverse food services catering to the ever-changing preferences of customers. This dynamic industry encompasses a wide range of establishments, including restaurants, cafes, fast-food outlets, food trucks, catering companies, and institutional food service providers like schools, hospitals, and prisons. Each of these entities strives to distinguish itself within the evolving global landscape. In accordance with this, Lee *et al.* (2016) ^[6], stated that achieving customer satisfaction emerges as the primary goal in the competitive realm of the hospitality industry. Nonetheless, attaining this goal demands careful consideration of customer needs, preferences, buying behavior, and sensitivity to pricing by food and beverage service providers. However, some cafeterias fall short in this regard. Mensah and Mensah (2018) ^[7] have identified a range of challenges that hinder university food service establishments from delivering exceptional customer service. These challenges encompass factors such as limited space, repetitive menus, uninspiring food options, and deficiencies in overall food quality, service, and facilities. Similarly, Pajantoy (2022) ^[10] and Galabo (2019) ^[4] have also highlighted issues related to food variety, high cafeteria prices, and inadequate kitchen facilities, overcrowding, and limited dining choices. Numerous students and staff members at a particular state university in northern Mindanao have raised the same concerns. Some students and employees opt to dine off-campus or purchase food nearby due to factors like affordability and greater comfort compared to the university cafeteria. These challenges are of particular concern,

especially considering Garg and Kumar (2017) ^[5] observation that the global population of college students continues to rise. As a result, cafeteria services need to exhibit a level of competitiveness that aligns with the expectations of students in terms of food quality, beverage options, service efficiency, setting, price, and overall value. According to Misiran *et al.* (2022) ^[8], it has been highlighted that students may exhibit a reluctance to partake in on-campus dining if they experience dissatisfaction with the quality of cafeteria services. Thus, Tcvetkova, (2017) ^[13] noted that continuous assessment of customer satisfaction is vital for any organization. Given the foregoing challenges, this research determined the impact of food service attributes on customer satisfaction. Notably, there is a lack of published data regarding customer satisfaction in this university's cafeteria services, which created a knowledge gap regarding students' and employees' viewpoints. The study aimed to bridge this gap through the following objectives: assessed satisfaction concerning the quality of food and beverages, quality of service, quality of setting, price and value, and overall cafeteria experience. Furthermore, the study sought to identify potential strategies for enhancing quality practices and implementing interventions to enhance the on-campus dining experience for students and employees. On top of that, studying the correlation of food service attributes on customer satisfaction can have several implications and benefits when applied to education. Firstly, it can enhance the student experience by identifying factors like quality, pricing, and service that affect satisfaction. This knowledge can guide educational institutions in improving student services to ensure students are engaged and satisfied. Moreover, high customer satisfaction leads to loyalty in the business world,

as contented students are more likely to share positive experiences and contribute to the institution's reputation. Lastly, a customer-centric approach to education can improve the alignment of services with students' needs and expectations, leading to more effective educational outcomes. To the program of Master in Technical and Technology Education (MTTE), this study sought to enrich the context of the food service management major so that MTTE students would have a better view of the factors that may affect customer satisfaction in the food and beverage industry. Moreover, having valid and reliable data to support the correlation of food service attributes on customer satisfaction helped students consider and apply comprehensive quality services and continuous assessment in their future employment or entrepreneurial endeavors. Furthermore, as one of the auxiliary services of the university, the cafeteria would serve as a good avenue for the students to be equipped and be able to apply the following competencies in food production management, food and beverage management, and cost control.

Methods

Research Design. This study utilized a descriptive research design. This dealt with quantifying and analyzing variables to get results. It involved the utilization and analysis of numerical data using specific statistical techniques to answer questions like who, how much, what, where, when, how many, and how. It also describes the methods of explaining an issue or phenomenon through gathering data in numerical form (Apuke, 2017) ^[3]. For this study, descriptive statistics, correlation, and regression analysis are utilized.

Research Setting. The study was conducted at one of the state universities and colleges in Cagayan de Oro City, Misamis Oriental in Northern Mindanao.

Respondents of the Study. The overall sample consisted of n=126 in which 64% of the sample were male and 36% were female respondents. Among the 126 respondents, 25% were aged between 16-25, 25% were between 26-35, 25% were between 36-45 and 25% were between 46-65 years old. As shown in the table above, 63% of the surveyed respondents were single, 36% were married and only 1% were widowed and separated. Furthermore, approximately half of the respondents were staff of the cafeteria (50%), 24% were instructors and 26% were students.

Data Gathering Procedure

The data was collected through different phases

Phase 1: Obtained approval. The researcher composed an official request letter addressed to the Campus Vice Chancellor for Finance and Administration (VCFA), which sought authorization to carry out the gathering of data. This action was deemed essential since the cafeteria services were under the jurisdiction of the VCFA. Subsequently, the letter was transmitted to the cafeteria manager to apprise her about the research activity taking place within the cafeteria premises.

Phase 2: Document Preparation. The researcher created a hard copy of an attendance sheet to keep track of the number of participants present during the data collection process. After this, informed consent forms were prepared to provide participants with information about the study's objectives, their option to decline participation, and their

right to withdraw from the study. Participants were also guaranteed anonymity and assured of strict confidentiality. Lastly, printed survey instruments were generated to collect the necessary data, with respondents indicating their satisfaction levels regarding cafeteria service attributes.

Phase 3: Distribution of Survey Instruments for Data Collection. During this stage, the researcher conducted a convenient sampling within the cafeteria premises and initiated the process of identifying potential respondents throughout the day. Students, as well as teaching and non-teaching staff who were present in the cafeteria, were approached and briefed about the study. The researcher asked about the most suitable time for them to answer the printed survey. When the respondents expressed their willingness to participate, they were instructed to proceed to the culinary arts laboratory, which offered a more suitable environment for completing the questionnaire. Before receiving the survey instrument, respondents were required to provide essential information on an attendance sheet. Subsequently, the researcher explained the content of the informed consent document to ensure respondents were well-informed. This document was then provided to those respondents who agreed to participate in the study. Following this, the formal data collection process commenced, with the researcher explaining what the survey entailed and guiding the respondents through the survey until they had completed it.

Phase 4: Retrieval of Questionnaires. The researcher personally gathered the survey instruments to guarantee 100% accuracy and retrieval.

The Research Instrument. To gather the data, the researcher utilized the following measures: (1) Demographic data form, this is the first section of the survey form that was used to gather relevant information such as the respondent's gender, age, marital status, and cafeteria user's status. (2) DINESERV Scale, which was an adopted instrument from the study of Serhan and Serhan (2019) ^[11]. This is the second section of the survey form which has five parts. Statements in these parts were adapted from the DINESERV questionnaire, which was created by Barsky (1992) and designed for the food service industry. The first eight statements in the first part of the second section were meant to find out how customers felt about the quality of the food and beverages at the cafeteria. The second part has four statements that were meant to find out how customers felt about the quality of service in the cafeteria. The third part consists of five statements aimed at measuring customers' perceptions regarding the quality of the setting. The fourth part has two statements to measure the customers' perception of price and value, and the last part has five statements aimed at measuring the customers' overall satisfaction in terms of overall satisfaction with the quality of food and beverages, quality of service, quality of setting, price and value. This questionnaire is a 5-point Likert scale, where 5 = very satisfied, 4 = satisfied, 3 = neutral, 2 = unsatisfied, and 1 = very unsatisfied

Instrument Validation. Serhan and Serhan (2019) ^[11], reported a high Cronbach alpha coefficient of 0.960 for this scale, surpassing the standard reliability threshold of 0.7. Item analysis was also conducted to assess item-total correlations and Cronbach's alpha when individual items

were excluded from the survey questionnaire. In terms of construct validity, an exploratory factor analysis (EFA) with promax rotation was carried out. To ensure content validity, a convenience sample of six expert panel members, all professors with expertise in the study's subject matter, reviewed each item in the modified questionnaire. The results confirmed the validity and reliability of the final questionnaire, making it suitable for future studies examining customer satisfaction, as well as perceptions of food and beverage quality and services provided in university cafeterias.

Statistical Treatment of the Data. Descriptive analysis with a frequency procedure was used to summarize categorical variables, providing an overview of participant demographics and preferences for food service attributes categorized by age groups. Also, the data of the study underwent a correlation analysis to illustrate the strength of relationships among the variables. All of these analyses were carried out using SPSS version 20.

Results and Discussion

This part of the paper presents the analysis and interpretation of data gathered from the study. The data are presented in tabular form. Likewise, the details are analyzed and interpreted according to the problems stated in this study.

Problem 1. What is the demographic profile of the respondents in terms of gender, age, marital status, and cafeteria user's status?

Table 1: Demographic Characteristics of the Respondents

	Frequency	Percentage
Gender		
Male	80	64%
Female	46	36%
Age		
16-25	31	25%
26-35	32	25%
36-45	31	25%
46-65	32	25%
	126	100%
Marital Status		
Single	79	63%
Married	45	36%
Widow	1	0.5%
Separated	1	0.5%
Cafeteria User's Status		
Instructor/Professor	30	24%
Staff	63	50%
Student	33	26%

Table 1 shows that 80 of the sample, or 64% of the total population, within the study were recognized as male. In contrast, 46 were female, which makes up 36% of the overall population. Moreover, 50% of the samples were ages 16–25 years old and 36–45 years old, while the other 50% were ages 26–35 years old and 46–65 years old. It is also stated in the table that 79, or 63%, were single, 36% were married, 1 was a widow, and 1 was separated. Subsequently, out of 100%, 24% of instructors/professors, 26% of students, and 50% of university staff were using the cafeteria services.

Problem 2. Is there a significant correlation between customer satisfaction and food service attributes in terms of

quality of food and beverage; quality of service; quality of setting; and price and value?

Table 2: Correlation of the Variables

Variables	Mean	Standard Deviation	Quality of Food and Beverage	Quality of Service	Quality of Setting	Price and Value
Quality of Food and Beverage	28	6				
Quality of Service	16	3	.618**			
Quality of Setting	17	4	.744**	.581**		
Price and Value	7	2	.735**	.544**	.610**	
Overall Satisfaction	14	3	.827**	.677**	.787**	.787**

Note: **. Correlation is significant at the 0.01 level (2-tailed). n = 126. *p<0.05; **p<0.01) The table above shows the summary of the findings to test the HO of the study.

HO: There is a significant correlation between food service attributes (Quality of food and beverages, Quality of Service, Quality of Setting, Price, and Value) and Customer Satisfaction.

The data from Table 2. shows the correlation of all variables: quality of food and beverage, quality of service, quality of setting, price and value, and overall satisfaction. The results showed that food service attributes such as quality of food and beverage (r=.827**), quality of service (r=.677**), quality of setting (r=.787**), and price and value (r=.787**) highly positively correlated with students' overall satisfaction in the university cafeteria. This implies that an increase in the quality of food and beverage, quality of service, quality of setting, and price and value also increases the customers' overall satisfaction. The means of score were computed. Moreover, customers' perceptions of the quality of food and beverages presented in the cafeteria were above average (M=28). It means that a high percentage of customers were satisfied with the quality of food and beverages in the cafeteria.

The study by Garg and Kumar (2017) [5] noted that taste, smell, freshness, appearance, size, shape, color, gloss, consistency, and texture play a higher role in accomplishing or surpassing customer satisfaction and expectation to return. Consequently, Osman *et al.* 2018 [1] stated that the highest correlation is observed between food quality and student satisfaction followed by ambiance, staff, and price fairness, respectively. Similarly, to the result of the first attribute, quality of service (M= 16) and quality of setting (M= 17) also showed above average. Some of the students were also satisfied with the ambiance and the service provided by the cafeteria staff. Hence, it is highly positively correlated with students' overall satisfaction in the university cafeteria. Even though students' expectation regarding the quality of service varies from one student to another, previous studies mentioned the importance of quality of service in influencing customers' satisfaction. According to Suciptawati *et al.* 2019 [12], high-quality service is anticipated to lead to customer satisfaction, ultimately resulting in increased customer retention and loyalty. As for the quality of the setting, this study corresponds to the result of Akter *et al.* (2020) [2] which

discovered that ambiance significantly and positively influences student satisfaction. Furthermore, the price they paid compared to the value they received. As the table presented, the quantity of food and beverage items, given the price paid was perceived to be neutral ($M= 7$). Price is the student's first concern in university students due to limited funds (Nadzirah *et al.*, 2013) ^[9]. They also indicated that if the prices of the on-campus food services are too high, the students tend to look for alternatives or get cheaper prices from off-campus food services. Likewise, Misiran *et al.*, (2022) ^[8] found that pricing and value for money affect student satisfaction with campus cafeterias. Students are less likely to eat on campus if there are issues with food, service, or pricing. Moreover, Nadzirah *et al.*, (2013) ^[9], also added that the paid price should be appropriate for the food quality and quantity served so that the customer would feel that the money they paid was worth the price which results in satisfaction. Nonetheless, based on the presented results, customers were explicitly satisfied with the overall performance of the university cafeteria ($M= 14$). This implies that all four food service attributes in this study showed a highly positive correlation with customer satisfaction. Therefore, hypothesis of this study is accepted.

Conclusion

The result showed that customers' satisfaction with the university cafeteria has a positive relationship with the different food service attributes. This was supported by the previous studies. Additionally, one of the significant implications of this study is that food and beverage quality and price and value are the critical components that must be considered regardless of whether students, staff, teachers, or the general public, who visit and dine at the university cafeteria. Furthermore, this study also evaluates the paid price of the customer and the total value they received from the university cafeteria. The results indicated that price is an essential factor to measure the general fulfillment and expectations of the customer. Findings also stated that all the food service attributes were satisfactory however they can be enhanced further.

Recommendation

After a thorough analysis, the study came up with the following recommendations

First and foremost, the university cafeteria management should conduct regular customer satisfaction assessments to uphold the overall quality of cafeteria services. Furthermore, a keen focus on the quality of food, including taste and portion size, is also essential to be reviewed. Equally important is providing retraining to all cafeteria employees and concessionaires in food safety and hygiene to ensure the cleanliness and safety of the food they serve.

It is also forwarded that collaboration with concessionaires, covering both internal and those managed by the cooperative, should prioritize offering more nutritious foods and beverages, contributing to the promotion of healthier student lifestyles. Furthermore, they should take into consideration the purchasing power, specifically the prices of goods and commodities, given their customers' limited budgets.

Another recommendation is for the school administration to create a comfortable atmosphere through proper ventilation and the provision of a convenient restroom facility for

customers. These measures collectively aim to enhance the overall cafeteria experience and customer satisfaction.

References

1. Abu Rashed Osman, Tazkia Hossain, James Bakul Sarkar. Investigating university students' satisfaction with on-campus cafeteria services: an empirical study in perspective of private university. *Asian Journal of Empirical Research*,2018;8(6):225-237.
2. Akter M, Sadekin MN, Patwary AK. An empirical study on students' satisfaction from Mawlana Bhashani Science & Technology University, Bangladesh. *Review of Economics and Development Studies*,2020;6(2):463-479. <https://doi.org/10.47067/reads.v6i2.215>
3. Apuke OD. Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business and Management Review*,2017;6(11):40-47. <https://doi.org/10.12816/0040336>
4. Galabo NR. (PDF) Canteen Service Quality and student satisfaction - researchgateResea. ResearchGate. Retrieved April 7, 2023, from, 2019. https://www.researchgate.net/publication/333836421_Canteen_Service_Quality_And_Student_Satisfaction
5. Garg A, Kumar J. kalim. *European Journal of Tourism, Hospitality and Recreation*,2017;8(2):96-106. <https://doi.org/10.1515/ejthr-2017-0009>
6. Lee YC, Wang YC, Lu SC, Hsieh YF, Chien CH, Tsai SB, *et al.* An empirical research on customer satisfaction study: A consideration of different levels of performance. *SpringerPlus*, 2016, 5(1). <https://doi.org/10.1186/s40064-016-3208-z>
7. Mensah I, Mensah RD. Effects of service quality and customer satisfaction on repurchase. Retrieved March 21, 2023, from, 2018. https://www.researchgate.net/publication/326989754_Effects_of_Service_Quality_and_Customer_Satisfaction_on_Repurchase_Intention_in_Restaurants_on_University_of_Cape_Coast_Campus
8. Misiran M, Md Yusof Z, Sapiri H, Abdullah I. Students satisfaction towards cafeteria in university campus – A case study. *Journal of Statistical Modelling and Analytics*,2022;4(2):14-27. <https://doi.org/10.22452/josma.vol4no2.2>
9. Nadzirah S, Ab Karim Muhammad, Ghazali Hazrina, Othman Mohhidin. University foodservice: An overview of factors influencing the customers' dining choice. *International Food Research Journal*,2013;20:1459-1468.
10. Pajantoy AJC, Ubane SC. Assessment on the canteen services in all central schools of Catarman: Basis in the design of a model canteen. *Journal of Positive School Psychology*. Retrieved April 9, 2023, from, 2022. <https://journalppw.com/index.php/jpsp/article/view/11244>
11. Serhan M, Serhan C. The impact of Food Service attributes on customer satisfaction in a rural university campus environment. *International Journal of Food Science*, 2019, 1-12. <https://doi.org/10.1155/2019/2154548>
12. Suciptawati NL, Paramita NL, Aristayasa IP. Customer satisfaction analysis based on service quality: Case of local credit provider in Bali. *Journal of Physics:*

Conference Series,2019:1321(2):022055.
<https://doi.org/10.1088/1742-6596/1321/2/022055>

13. Tcvetkova D. Customer satisfaction and service quality at Fafa's Restaurant. Theseus. Retrieved March 22, 2023, from, 2017.
<https://www.theseus.fi/handle/10024/131670>