

Canteen Service Quality and Customer Satisfaction: A Mixed Method Study

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Abstract

The main objective of the study was to propose a program design to improve the service quality and customer satisfaction of a private school canteen in Davao City, Philippines. The study employed a mixed-method research approach utilizing a sequential explanatory design. The sample population of 371 students and employees of the school was determined using a stratified random sampling technique using Yamane's formula. For the first phase of the study, research instruments were adapted. The data was collected during the 2nd semester of the 2022–2023 school year. Mean, ANOVA, Pearson *r*, linear regression, and thematic analysis were used to treat the gathered data. The results revealed that the level of canteen service quality and customer satisfaction are both high in the school canteen. Also, there is no significant difference on the level of service quality and customer satisfaction when analyzed by sex. Consequently, there is an overall significant difference on the level of service quality and customer satisfaction when analyzed by year level and category. Also, there is a significant relationship between service quality and customer satisfaction, and tangibility, responsiveness, and empathy are found to have a significant influence on customer satisfaction. The quantitative result implies that when the canteen increases its level of service quality, customer satisfaction will also increase. Finally, the thematic analysis results explain why four variables possess a high level. At the same time, an explanation was provided regarding why the availability of food and dining experiences got the lower mean values.

Keywords:

Canteen service quality, customer satisfaction, Davao City, Philippines

1 Introduction

Egeler and Baur (2022) have found that 67.4% of adolescents rarely or never utilized the school canteen in Norway. The same study also found that teens who ate at the school canteen at least twice a week were more likely to buy food or drinks from a nearby store during school breaks or before or after school. These results show that people aren't satisfied with the food available in the school canteen. Additionally, a study by Dei et al. (2018) in a state university and Arpilleda (2018) in a senior high school institution found that the canteen has the lowest satisfaction among the other variables in their study. This demonstrates that canteen customer satisfaction is a prevalent problem among academic institutions.

In this study, service quality in the context of a canteen is imperative to carry out because a study has found that as senior-year students accumulate more experience, they appear to express criticism regarding the service quality of a school canteen. One of the criticisms is the lack of space in the school canteen, which causes long lines and eventually causes dissatisfaction (Htang, 2021). Consequently, Wenjing (2019) argued that the majority of students are pleased with the canteen at a university in China. However, product quality, service quality, and canteen infrastructure are the primary factors affecting canteen customer satisfaction.

Researchers conducted a study in the local setting, and the respondents were only junior high and senior high school students (Galabo et al., 2019; Minguito & Capunan, 2019). Another study was conducted in the local setting by (Sagarino et al., 2016), and it revealed that the respondents are generally satisfied with the canteen; however, there are still concerns about the too-salty food items, limited variety of food choices, limited tables and chairs, insufficient floor area, lack of ventilation, relatively unaffordable prices, and lack of attentiveness and friendliness of the staff.

As mentioned in the preceding paragraph, the researchers encountered three published studies in the local context. In lieu of this, this paper would address the population gap by including junior high, senior high, college, and employee participants in a private school in the Philippines. Due to the inclusion of both qualitative and quantitative data in this study, the methodology gap was also addressed.

2 Literature Review

2.1 Service Quality

Service quality is a critical determinant that significantly impacts customers' decision-making processes for a certain product. It assumes a noteworthy function in both traditional and service sectors (Mensah et al., 2021). However, Barathi and Kumari (2018) have highlighted that despite the widespread utilization of SERVQUAL throughout the service business, there are a few concerns regarding its application to the food service sector. Within the food service business, the area of service quality continues to be a subject of extensive academic investigation (Ji & Ko, 2022).

In addition, Service Quality (SERVQUAL) evaluation has five components that measure the quality of a service before and after it is experienced (Johnson & Karlay, 2018). Over the last few decades, service quality has been an active subject of research, and SERVQUAL in the canteen is not an exception. Moreover, the SERVQUAL model revealed that consumers' overall satisfaction with the hotel's service was a direct result of tangibility, responsiveness, and assurance (Jiayuan et al., 2018).

In the majority of canteens, neither a greeting nor a farewell was used, while service speed and time spent waiting for an order were satisfactory. The attractiveness of canteens, the music, and the availability of seasonings, sugar, and disposable napkins proved limited (Czarniecka-Skubina et al., 2019). In the food service industry, service quality delivery is a vital strategic asset that can be utilized to sustain a competitive advantage (Dei et al., 2018).

The first component of service quality is Tangibility, defined as the physical appearance of facilities, equipment, communication materials, and technology. Additionally, this aspect enhances the company's image. Therefore, the tangibility dimension is crucial for businesses, and they must invest significantly in establishing physical facilities (Ramya et al., 2019). A study by Matthews and Mokoena (2020) found an insignificant association between tangibility and customer satisfaction. Consequently, Nguyen et al. (2018) have argued that the most significant factor influencing customer satisfaction is the domain of tangibility. In other words, tangibility is undeniably a factor that significantly influences customer satisfaction.

Based on the study by Baluyot and Pampolina (2021), the relationship between restaurant tangibles and consumer satisfaction is positive, moderate, and statistically significant. Additionally, a study suggested that the floor area of the school cafeteria must be increased to accommodate more tables and chairs, and ventilation must be sufficient to maintain its cooling, which may result in an improved atmosphere (Sagarino et al., 2016).

The second domain of service quality is assurance. Assurance refers to the extent of knowledge demonstrated by a service provider during the delivery of its services, as well as its capacity to instill trust and confidence in its customers (Johnson & Karlay, 2018). Also, assurance pertains to the possession of knowledge and the display of politeness by employees, enabling them to communicate trust and confidence effectively (Galabo, 2019).

A study by Chai et al. (2018) claimed that the service quality dimensions that have the greatest impact on consumer satisfaction are responsiveness, empathy, and assurance. In addition, it can be defined as the employee's knowledge, courtesy, and the firm's and employees' capacity to instill trust and confidence in their customers (Ramya et al., 2019). On the other hand, Sarsale and Caday (2020) revealed that the highest rating of satisfaction at a Philippine State University is assurance. However, in the University of Cape Coast Campus, Ishmael and Dei (2018) have suggested that the school administration should pay special attention to their employees' responsiveness

and assurance and may provide regular employee training and queue management to help increase responsiveness and assurance.

The third domain of service quality is reliability. Reliability is the capacity to provide the promised service dependably and accurately. In a broad sense, reliability refers to the pledges made by service providers concerning delivery, service provision, problem resolution, and pricing. Customers enjoy doing business with companies that maintain their word (Ramya et al., 2019). A study on service quality, client satisfaction, and firm loyalty in Malaysia revealed that reliability had the second largest service gap (Chai et al., 2018).

A research study has revealed that paying attention to certainty and reliability has the potential to improve the overall quality of service provided by the service industry. Reliability can be demonstrated by the service crew's problem-solving capabilities, talents, professionalism, and error-free, efficient, and effective service (Baluyot & Pampolina, 2021). In addition, reliability can be defined as the service provider's commitment to consistently delivering services to its clients, and the influence of reliability on trust and the overall perception formed in the customer's mind following the consumption of a service is significant (Johnson & Karlay, 2018).

Responsiveness is the fourth domain of service quality. Sagarino et al. (2016) mentioned that the responsiveness of frontline employees has the greatest impact on customer satisfaction, followed by price and food quality. In addition, a study written by Ji and Ko (2022) found that among food quality, reliability, physical design, and price, the results indicate that service responsiveness is the most crucial aspect of customer satisfaction. In addition, Matthews and Mokoena (2020) highlighted a significant positive relationship between reliability and customer satisfaction.

The findings of a study indicate that service responsiveness holds the highest significance in determining customer satisfaction, surpassing other factors such as food quality, reliability, physical design, and price. This only means that intangible benefits, such as responsiveness, courtesy, care, and professional behavior provided by service personnel, are most important to many customers (Ji & Ko, 2022). Another study has affirmed that the majority of customers express satisfaction with several aspects of the responsiveness of the cafeteria services at Sahid University in Jakarta, including the politeness of the waitstaff, the sense of safety, the speed of service, the correctness of orders, and the responsiveness of the sellers (Azni et al., 2019).

The last domain of service quality is empathy. Customers are regarded with empathy if they receive a great deal of attention when they visit the facility to receive services. The relationship between empathy and customer satisfaction is statistically insignificant, and its effect on satisfaction is estimated to be inversely correlated (Mensah et al., 2021). Consequently, the empathy domain has received a very high assessment of the perceived service quality dimension (Baluyot & Pampolina, 2021). In addition, studies have revealed a strong correlation between empathy and customer satisfaction (Murad & Ali, 2015; Omar et al., 2016).

However, a study in the United Kingdom concluded that a positive correlation exists between empathy and customer satisfaction within the fast-food restaurant industry (Nguyen et al., 2018). Moreover, Gebreyohannes (2021) figured out that communal dining, where individuals gather around a shared table, can enhance the principles of hospitality, foster a heightened feeling of empathy, and promote responsible patterns of food consumption. This, in turn, can lead to more effective changes in individuals' food consumption behavior.

Finally, Empathy is nurtured through prioritizing the customer as the focal point of the firm's offerings and ensuring their well-being. In order to ensure customer happiness and loyalty, the organization needs to establish sustainable quality across three key dimensions: empathy, satisfaction, and loyalty (Kocagöz et al., 2020).

2.2 Customer Satisfaction

Customer satisfaction is derived from comparing the anticipated benefit and the actual cost of purchasing (Minguito & Capunan, 2019). Quality and the healthiness of the food and beverage are major concerns when determining if the customer is satisfied (D'Souza et al., 2022; Li et al., 2018). Mensah et al. (2021) have claimed that the important factors determining customer satisfaction are food quality, menu availability, price, environment, facilities, and layout.

A lot of definitions of customer satisfaction exist on the internet. However, there does not appear to be a consensus regarding the optimal way to conceptualize consumer satisfaction, particularly in the school canteen. In addition, the lack of consensus regarding the conceptualization of satisfaction indicates that it remains an enigmatic, vague, and ambiguous concept (Ishmael & Dei, 2018).

The first dimension of customer satisfaction is the quality of the food. Research by D'Souza et al. (2022) revealed that food quality was consistently rated as the most critical factor influencing customer satisfaction. In other words, customers placed high importance on the taste, appearance, freshness, and overall sensory experience of the food they consumed. In addition, hygiene and sanitation were also included in determining the quality of the food (Barathi & Kumari, 2018).

Similarly, the study conducted by Baluyot and Pampolina (2021) emphasized the fundamental role of food quality in determining customer satisfaction. The study highlighted that the availability of high-quality food options significantly influenced customers' overall satisfaction with food services. Moreover, Trymell (2021) emphasized that when evaluating customer satisfaction in a school canteen, the statements from respondents mainly revolved around conventional expectations for food quality and culinary aspects.

The second dimension of customer satisfaction is the healthiness of food. A study by Lindberg et al. (2022) sheds light on the importance of food healthiness and its influence on customer satisfaction. Consequently, D'Souza et al. (2022) revealed that offering healthy-label meals positively influenced the nutritional quality of the food

options provided in New Zealand, and the result of the study has supported the need for stronger national-level policy.

The school environment can enhance children's abilities, knowledge, and habits with regard to offering healthy food through canteens. Nevertheless, in numerous nations, schools frequently offer unhealthy food options, and students may encounter aggressive marketing tactics from the food industry (Reeve et al., 2018). Moreover, most of the people being interviewed thought that the cleanliness of school canteens was the main concern decades ago. However, the recent alarming increase in childhood overweight and obesity and evidence that children eat a lot of unhealthy foods and easy access to unhealthy food in schools made the cleanliness of school food environments a top priority (Babashahi et al., 2021).

The third domain is reasonable pricing. Reasonable pricing is vital in shaping customer satisfaction in the food service industry. Several studies have highlighted the significance of reasonable pricing as a crucial factor in determining customer satisfaction levels (Katoch & Sidhu, 2021; Farooqui & Alwi, 2019; Banerjee & Singhania, 2018). The majority of them may have a limited budget for food, so they anticipate cheaper meals than those offered in adjacent "carenderias."

Customers expect to receive value for the money they spend on food items. When the prices are fair and in line with the perceived value of the products, it positively influences customer satisfaction. A study showed that when customers feel they are receiving reasonable prices for their quality and experience, it enhances their overall satisfaction. On the contrary, if prices are considered too high or inconsistent with the perceived value, it can lead to customer dissatisfaction (Katoch & Sidhu, 2021).

Food product availability is the fourth dimension, which is a crucial factor that strongly influences customer satisfaction. However, the availability of a wide range of food options in a school canteen has been very challenging since children are not into healthier food options. However, school canteens may use approaches to enhance children's exposure to and desire for vegetables within the school setting by providing a wide range of healthy food products (Babashahi et al., 2021; Beelen et al., 2021). In addition, the abundance of food and menu choices outside the school premises, along with the convenience of mobile food ordering and delivery services, makes students likely to lose interest in on-campus dining experiences and promptly go off-campus in search of greater food selections and experiences (Choi et al., 2021).

Customers highly valued having diverse choices that catered to their individual preferences. Customers with access to various food options are more likely to find suitable choices that meet their needs, leading to higher satisfaction levels (Serhan & Serhan, 2019). In other words, limited availability or a lack of variety in food options can lead to customer dissatisfaction. Customers may not find options that align with their tastes or dietary requirements, resulting in a compromised level of satisfaction (Luong & Hussey, 2022).

The last domain used for customer satisfaction is the dining experience. Based on the students' dining experiences and expectations, significant differences exist among the different school canteen outlets (Sarsale & Caday, 2020). Consequently, a study by Rajput and Gahfoor (2020) suggested that to provide a memorable dining experience, the canteen combines both intangible and tangible components.

The overall atmosphere of a canteen or restaurant also plays a crucial role in shaping the dining experience. The way diners are treated at every stage of the dining experience has a significant impact on their overall satisfaction. Customers at the dining establishment should be treated how they would like to be treated (Baluyot & Pampolina, 2021). Finally, students who express satisfaction with the dining experience and services are more inclined to revisit and disseminate their positive experiences to their acquaintances and relatives. In order to achieve long-term success, canteens must prioritize customer satisfaction, as dissatisfied customers are unlikely to return and may even discourage others from dining there (Choi et al., 2021).

2.3 Studies of Differences

The researchers did not come across a very rich open-access journal about studies on significant differences on service quality and customer satisfaction. However, they will cite some of their readings. It has been found by Acilo and Cabal (2021) that concerning school canteen management, instructors, parents, and canteen operators have significantly different perspectives. In addition, D'Souza et al. (2022) highlighted in their study that there are significant differences in the healthiness of the food in school canteen menus and fundraising items.

Also, another study found that gender had no impact on the frequency of utilizing canteen services. Previous research indicates that men have a higher frequency of utilizing food services than women. In addition, the act of not having lunch was more prevalent among those of both genders who lacked access to a cafeteria. Research revealed that insufficient time constraints during the workday compelled individuals to forgo their lunch breaks or consume pre-packaged meals. These variations were additionally attributed to consumer education and socioeconomic status. There is a positive correlation between a higher level of education and income and working in places where there is a canteen (Czarniecka-Skubina et al., 2020).

Moreover, research revealed that consumers had higher expectations than perceptions regarding the quality of food service at the 1% ($p = 0.01$) probability level (Barathi & Kumari, 2018). In addition, individual customer differences such as gender, age, and income are significant predictors of customer satisfaction; gender identity also plays a significant role. Due to these differences, female customers typically provide higher ratings for service efficacy and are more sensitive to relational aspects of service interactions. Therefore, canteens typically devoted more attention to the services of female customers than male ones.

In addition, generally, boys have a higher tendency to make impulsive, intuitive changes. Conversely, females are more prone to prolonged contemplation of their

decisions, reducing the impact of a visually appealing meal option. A study revealed slight discrepancies across genders, with boys demonstrating a higher frequency of purchasing food and beverages outside of school (Evenhuis et al., 2020).

2.4 Correlation between measures

Many individuals and professionals often use the terms "service quality" and "customer satisfaction" interchangeably, as they are perceived to have the same meaning. Customer satisfaction results from service quality, while service quality is the cause of customer satisfaction. The findings indicated that students expressed contentment with the dependability of the provided services, as seen by the average positive gap score. However, it was observed that other aspects of service quality obtained a negative gap score, indicating that students are dissatisfied with these particular services. Students are dissatisfied with the services due to the below-average overall service quality (Kobero & Swallehe, 2022). However, the impact of different service quality dimensions on customer satisfaction and customer loyalty in various locations, including Asian countries, yielded mixed results in hotels and restaurants (Jiayuan et al., 2018).

A study conducted in Myanmar revealed that Service Quality and Satisfaction have a strong relationship (Htang, 2021). However, a study conducted in Poland showed that the indicators under the variable service quality, which include the layout of seating, the quality of interior design, and the suitability of background music, have no effect on the level of student satisfaction with the cafeteria operators' service quality (Czarniecka-Skubina et al., 2019). In addition, there is a significant correlation between student perception, the school canteen's status, and the school cafeteria practices (Minguito & Capunan, 2019).

Consequently, there was a significant correlation between all parameters of service quality and student overall satisfaction (Htang, 2021), and a strong positive correlation was discovered between customer satisfaction with the quality of food and beverages and customers' willingness to continue dining at a certain dining establishment (Serhan & Serhan, 2019). Hence, another study indicated that customer satisfaction is essential for measuring and enhancing school canteen service quality (Righini, 2019).

Furthermore, Chandra et al. (2018) figured out that, even though many authors have debated the relationship between service quality and customer satisfaction, their study has still emphasized that service quality has a positive effect on student satisfaction, leading to a positive and significant correlation. Moreover, Dam and Dam (2021) discovered that service quality had a beneficial impact on brand image, customer satisfaction, and customer loyalty. In the context of a school canteen, the existing literature suggests that there is a positive relationship between service quality and the level of satisfaction experienced by customers.

2.5 Theory Base

Quality was born as a result of Total Quality Management, a Japanese management strategy. In this study, the SERVQUAL model was the anchor theory. It was originally developed by Parasuraman et al. (1988) and was subsequently refined by Ladhari (2009). Farmer (1988) has described the conceptual model of service quality that would lead to such knowledge and explains how it applies to different sorts of organizations that provide services. The "SERVQUAL" model is a well-known instrument for determining how to measure the quality of the service that is offered. Tangibility is the facilities, equipment, and outward appearance of staff members. Reliability is the ability to deliver the service as promised reliably and correctly. Responsiveness is the willingness to assist consumers and offer service promptly. Assurance is the employees' levels of knowledge and courtesy and their capacity to inspire trust and confidence. Empathy is the thoughtful and individualized care the company gives to its clients (Daniel & Berinyuy, 2010).

The Expectancy-Disconfirmation Theory is a proposed model that shows how consumer satisfaction is related to what they expect and what they don't expect. Satisfaction, in turn, is thought to affect changes in attitude and intention to purchase. It means the expectation or the information they know versus their actual experience (Oliver, 1976).

It was discovered by researchers that service quality has a significant impact on customer satisfaction and provided empirical evidence on the effects of service quality and customer satisfaction on repurchase intention in the context of school canteen (Galabo, 2019; Ishmael & Dei, 2018). This study adopted the above theories because the researchers believed that the theories and propositions presented were useful and gave a further understanding of a school canteen's service quality and customer satisfaction.

2.6 Conceptual Framework

Presented in Figure 1 is the conceptual framework showing the phases of the study towards the interpretation of the result. The conceptual framework of the study emphasizes the use of an explanatory sequential mixed-method research design. This design combines both quantitative and qualitative research approaches to gain a thorough understanding of the school's canteen service quality and customer satisfaction. This methodology employs a two-step approach, from gathering and examining quantitative data and proceeding to collecting and analyzing qualitative data to elucidate, elaborate upon, or enhance the initial quantitative findings. The sequential structure of this strategy enables researchers to examine the broader patterns and linkages using quantitative methods and then further investigate the underlying reasons or contextual details using qualitative investigation. This strategy aims to improve the overall validity and dependability of research findings by combining the benefits of both methods. It provides a more detailed and comprehensive view of the study's variables.

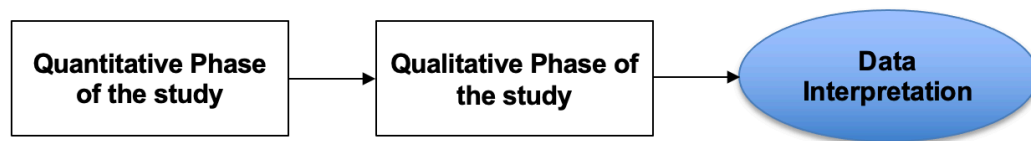


Figure 1: Conceptual Framework of the Study

3 Methodology

3.1 Research Design

This study has employed a mixed-methods research design utilizing the Sequential Explanatory approach. This research design is appropriate in this study for the reason that the utilization of a mixed-method research design is often seen as appropriate for multiple types of investigations due to its incorporation of both quantitative and qualitative methodologies. This facilitates researchers in acquiring a more comprehensive grasp of complex issues. Mixed-methods research is a valuable approach for comprehending contradictions that may arise between quantitative outcomes and qualitative discoveries. This methodological approach effectively leverages data that captures the unique experiences of individuals (Naing et al., 2022).

An explanatory design has two steps, and the quantitative step comes first. More specifically, Phase 1 is about gathering enough quantitative data to be useful in explaining the concerns through the second phase. During phase 2, the researchers added more depth and meaning to the numbers by collecting qualitative data through Focus-Group Discussion (Leedy et al., 2016)

3.2 Population and Sample

The population in the research locale during the conduct of the study was a total of 4,498 and this includes the students, faculty, and staff. The sample was derived from a population consisting of basic education students, college students, as well as teaching and non-teaching personnel. The study employed an approach known as the stratified sampling technique. In determining the sample size, the researchers have utilized Yamane's formula $n = N / (1 + N(e)^2)$. The researchers have chosen Yamane's formula based on a literature review, there does not appear to be a Slovin who proposed the formula. It appears that Yamane (1967) is the earliest source containing the formula (Tejada & Punzalan, 2012).

Participation in this research was optional. It is believed that all respondents, regardless of their professional standing, are fluent in English. The respondents are diverse in terms of gender, grade/year level (for learners), and employee category (for workers).

3.3 Instrumentation and procedure

In order to gather data, the researchers used the quantitative phase of the study the questionnaire adapted from Galabo (2019), which was modified based on the school's context. The researchers have secured approval from the author for them to adapt the questionnaire. The quantitative questionnaire consists of three parts. The first part contains questions about the demographic profile of the respondents. The second part contains questions about service quality, and the last part contains questions about customer satisfaction authored by Parasuraman et al. (1988). This instrument was presented to the research panelists and validated by the research experts. The comments of the experts were properly taken and incorporated into the finalization of the said instrument.

During the qualitative of this study, the researchers utilized semistructured interviews to ensure thorough interpretation and gather significant information. Also, to achieve clarity, the researchers followed the instructions provided by Sumarjan, et. al. (2023) and took steps to ensure that the informants fully understood the meaning of each question, thus reducing the possibility of confusion. The interview tool was created in the English language. Assent and informed consent were obtained to record the focus-group discussion. Thoughtful inquiries were carefully used to probe deeper and obtain comprehensive answers. To increase reliability, the interview methodology underwent thorough examination by three experts.

3.4 Data Collection

Following the approval of the panel of experts, the researchers took the following steps and measures to obtain study data: During phase 1, the researchers wrote a letter addressed to the concerned office heads seeking permission to conduct the study.

Soon after acceptance, the researchers immediately set a timetable for the conduct of the study with the students, teaching personnel, and non-teaching personnel. Upon the conduct of the survey, good rapport with respondents was established by giving an introduction about the objectives of the study, the importance of their cooperation, and their sincere responses before the distribution of the questionnaires. They were also informed that the confidentiality of the information they would be giving would be strictly confidential. The respondents were instructed very clearly about the pattern of answering the questionnaire.

Finally, after retrieving all the survey questionnaires, the researchers took time to encrypt all the responses in spreadsheet format and apply them for statistical analysis. Then, the results were analysed and interpreted according to the research objectives. With the findings, conclusions were drawn, and recommendations were formulated based on the results of the first phase.

The researchers scheduled a focus group discussion for the second phase of their study. To qualify for participation in the focus group discussion, the researchers ensured that the respondents completed the pen-and-paper survey questionnaire and were contacted at a reasonable time.

3.5 Data Analysis

The following statistical tools were employed in the analysis of the data. First, the Mean was used to determine the level of service quality and customer satisfaction. Second, the Standard Deviation was used to measure the spread of scores within a set of data. Third, an ANOVA (Analysis of Variance) was used to test the significant difference on the level of service quality and customer satisfaction when analysed by year level (for students) and employee category (for workers). Fourth, the Pearson-r was used to ascertain if there is a significant relationship between service quality and customer satisfaction. Finally, after coding the transcribed data, a thematic analysis was used to discover the reasons for the quantitative results on the level of service quality and customer satisfaction in the SCHOOL canteen.

4 Findings and Discussion

4.1 Profile of the respondents and participants

During the quantitative phase of the study, a total of one hundred sixty (160) males and two hundred eleven (211) females participated in the study. Among all the respondents, gender representation and category were diverse. The number of respondents was randomly picked based on the sampling technique. Diners in the canteen were represented from grade school (n=31), junior high school (n=37), senior high school (n=129), college (n=97), modified work and study program (n=44), and the employees was also represented (n=33).

In addition, the profile of the participants during the qualitative phase of the study was represented by one (1) female personnel, two (2) male and female senior high school students, one (1) female modified work and study program student, two (2) male and female college students, and one (1) male junior high school student. The next section depicts the level of service quality and its indicators.

4.2 Level of Service Quality in a School Canteen

The information presented in Table 1 depicts the overall level of service quality in the SCHOOL canteen, which got an overall mean rating of 4.11 with a high descriptive level. This means that service quality is often manifested in the SCHOOL canteen. Noticeably, the mean of all the indicators in the table ranged from 4.01 to 4.25. The highest mean of 4.25 was the domain tangibility, with a high descriptive level, meaning it is often manifested. The indicators empathy and assurance got the same 4.09 mean, which is verbally interpreted as high, and the domain that got the lowest mean of 4.01 was reliability, which is described as high, which means it is often manifested.

As seen in the table, the overall standard deviation is 0.51, which means that the population of college students as respondents to this study is low and homogeneous. This indicates that the data are less spread out, signifying that the responses are clustered around the mean, thus showing a consistent response. Among the indicators are course learning with a standard deviation of 0.58 described as a low standard

deviation, which means data are clustered around the regression line; tangibility, with a standard deviation of 0.67 described as low; assurance, with a standard deviation of 0.70 described as low; reliability, with a standard deviation of 0.69 described as low; responsiveness, with a standard deviation of 0.66 described as low; and empathy, with a standard deviation of 0.73 described as low.

Table 1: Level of Service Quality

Indicators	Std. Deviation	Mean	Descriptive Level
Tangibility	.67	4.25	Very High
Assurance	.70	4.09	High
Reliability	.69	4.01	High
Responsiveness	.66	4.10	High
Empathy	.73	4.09	High
Overall	.58	4.11	High

Generally, the level of service quality in a canteen is satisfactory (Azni et al., 2019; Galabo, 2019). The related literature also affirms the result of this study that the level of service quality is high. The attractiveness of the canteens, the music, and the availability of the seasoning proved to be quite sufficient (Czarniecka-Skubina, et al., 2019). However, some of the interviewees during the focus-group-discussion have emphasized that:

“Then ang champorado kulang ug asukal, Condiments wala. Kana pud mga suka paminta kanang naka butang gud sa kuan . usahay mawala kay isa lang man gud.” (Then the champorado lacks sugar, condiments are not present, same with vinegar and pepper, sometimes it is difficult to find, maybe because there is only one.) Participant 1, personnel, female

This indicates that the result of this study does not affirm the study of Czarniecka-Skubina et al. (2019). Another study by Chai et al. (2018) in Malaysia revealed that empathy had the largest service gap, followed by reliability. Consequently, the empathy dimension of perceived service quality has garnered a very high rating (Baluyot & Pampolina, 2021). Moreover, according to Mensah et al. (2021), the relationship between empathy and customer satisfaction is insignificant, and its effect on satisfaction is estimated to be negatively correlated. On the other hand, Kocagöz et al. (2020) have emphasized that empathy is one of the key dimensions of sustaining service quality. Hence, this study confirms the study of Kocagöz et al. (2020).

In the same way, the qualitative data also revealed that, generally, the service quality is high. However, as mentioned in the results, specific items were quite in the lower bound of the range in the Likert scale. A respondent has highlighted an important issue regarding responsiveness, specifically concerning the canteen staff's ability to promptly address customer requests. This issue can be compared to responsiveness-specific items, which focus on keeping canteen staff available to promptly respond to customer requests:

"Na ang service sa canteen kay kulang jud sa manpower with the given number of students," (The canteen service is lacking in manpower considering the number of students.) *Participant 2, senior high school student, male*

"Dili kaayu siya maka cater sa tanan na need," meaning that due to the shortage of staff, the canteen is unable to adequately fulfill all the students' needs. *Participant 1, personnel, female*

During the course of the discussion, Participant 2 contributed substantial support for the aforementioned argument.

"Crowded kaayo atong time, busy kaayo tanan na I wasn't able to tell them kay busy so nipasi nako," indicating that because the canteen staff were overwhelmed with work, they were unable to address concerns, causing some students to leave without having their issues resolved. *Participant 2, senior high school student, male*

This study can confirm that even in the context of a school canteen the SERVQUAL model by Parasuraman et al., (1988) which was subsequently written by (Galabo, 2019) has affirmed the five domains are significant in measuring the service quality of a canteen.

4.3 Level of Customer Satisfaction

The representation of the result on the level of customer satisfaction in the SCHOOL canteen is reflected in Table 2. The means ranged from 3.75 to 4.10, described as high, with an overall mean of 3.94, which means the indicators of customer satisfaction are often manifested, and a standard deviation of 0.69, which was described as low. Among the indicators, the healthiness of food, with a standard deviation of 0.82 and a mean rating of 4.10, described as high, got the highest mean, food quality with a standard deviation of .90 and a mean rating of 3.85, which was described as high, followed by dining experience with a standard deviation of 0.76 and a mean rating of 4.07, described as high, reasonable price with a standard deviation of 0.91 and a mean rating of 3.91, described as high, and availability of food and beverage with a standard deviation of 0.92 and a mean rating of 3.75, described as high.

Table 2: Level of Customer Satisfaction

Indicators	Std. Deviation	Mean	Descriptive Level
Food Quality	.90	3.85	High
Healthiness of Food	.82	4.10	High
Reasonable Price	.91	3.91	High
Availability of Food and Beverage	.92	3.75	High
Dining Experience	.76	4.07	High
Overall	.69	3.94	High

Customer satisfaction is a concern in the food service industry. In a school canteen in Malaysia, 53% of the diners are generally satisfied (Azni et al., 2019). This was also affirmed by the quantitative result, which showed a high level of satisfaction. However, specific items in the questionnaire are worth noting and need to be explained and addressed. In particular, 3 out of 5 indicators got mean scores that are below 4 but are still descriptively interpreted as high.

Numerous studies have claimed that other important factors in determining a customer's satisfaction are the healthiness of food, food product availability (Babashahi et al., 2021; Beelen et al., 2021), and dining experience in a cafeteria, which includes waiting time for specific items (Czarniecka-Skubina et al., 2019). Several studies have also emphasized the importance of reasonable pricing, which was also mentioned in the interview:

“Agree ko sa price ma’am, given na 25 asa naman ka maka kitag 25 sa gawas diba? Then maka meat napud ka for example sa 50 pesos nimo naa nakay 2 ka ulam then rice nimo kung mag kaon pud ka sa gawas di ka maka guarantee na healthy ug kanang iyang gina baligya how they perform the cooking ang 50, 1 viand and rice nana siya, unya whole day ka sa school so gutom kaayo diri ka sa school even portioned siya kaayu or gina control nila ang food but ang food equivalent sya sa price ok na siya.” (I agree with the price, ma’am, where can we find a dish amounting to Php 25.00, right? While staying at the school for a day, you can just spend Php 50.00 for 2 dishes and 1 serving of rice. When dining at an eatery outside the campus, there is no assurance of the meal's nutritional value or the methods used in its preparation, which pertains to food safety and sanitation.) *Participant 2, senior high school student, male*

Food quality was consistently rated as the most critical factor influencing customer satisfaction. In other words, customers placed high importance on the taste, appearance, freshness, and overall sensory experience of the food they consumed (D’Souza et al., 2022). It was also highlighted by one of the interviewees that:

“Ang food pud ma’am usahay karon ok ilang food pero then ugma Lain dayun ang lasa dili consistent no?”, explaining that the taste and quality of food options in the canteen are acceptable, however they lack consistency on the following days. *Participant 1, personnel, female*

Another aspect that influences the customer satisfaction is the healthiness of the food. By meeting this demand, food service providers can attract a wider customer base and gain a competitive advantage in the industry (Othman et al, 2022; Canterberry et al, 2018). Moreover, the SCHOOL canteen's healthy food option was highly appreciated by the interviewees. Two of the interviewees have mentioned that:

“Kanang sa food pud naga help sila na i control atung sarili na dili mag kaon ug unhealthy.” (For the food, it helps us control ourselves to not eat any unhealthy food.) *Participant 3, senior high school student,*

“Healthy benefits nu kay naga hatag man sya ug healthy products, nagahatag pud sya ug kanang health benefits sa atung kaugalingon, Wla syay mga other bitsin or magic sarap” which explained that canteen provides health benefits by offering healthy products, it also gives customers healthy benefit to themselves, and it does not use any artificial flavorings. *Participant 1, personnel, female*

Another domain that got a lower mean score among other domains of customer satisfaction was the availability of food and beverage products in the canteen. The interviewees talked about the availability and highlighted the need for improvement in that particular area of concern. Some respondents highlighted:

“Inig ka lunchtime pud dili pud tanan maka kaon kay by reserve reserve.” (During lunch not all are able to eat because of the reserved seats.) *Participant 6, college student, female*

Reserved seats referring to canteen cater during school events such as retreats.

“Gamay lang ang food na ginabaligya sa canteen na nila dle halos tanan student maka avail ug maka kaon ke ano kanang usahay mahutdan” (Food being sold is not enough that not all student can be catered.) *Participant 4, MWSP student, female*

“What can I say is more variety and more food menu.” *Participant 7, junior high school student, male*

“Same lang sa iyaha more variety of food kay sum-ol jud bya sya... chicken every day and lomi everyday”. (I agree, it is sickening to eat chicken and lomi everyday.) *Participant 2, senior high school student, male*

Consequently, the dining experience which encapsulate the way diners are treated at every stage of the dining experience has a significant impact on their overall satisfaction. In other words, customers at the dining establishment should be treated the way they would like to be treated (Baluyot & Pampolina, 2021). This related literature is also affirmed by the respondents' statements:

“Concern pud nako kana gung chit maam , imbess na deretso na didtu sa tindero ang bayad ma delay pa ke mag pila pa didtu mag change pa ng chits tapos ang uban pud maam naga singit pud maam na mag deteso bayad didto na wla sila ga change ug chits.” (My concern is on the chit system of the canteen, instead of directly paying to the canteen servers, it is deleted since I need to have my money exchange to chits, but it is inconsistent because others staffs accept money directly not having their money exchange to chits.) *Participant 3, senior high school student, female*

Finally, this discussion summarizes the customer satisfaction of the SCHOOL canteen on both sides. The expectation-disconfirmation theory coined by Oliver (1976) evaluated how well a service did compared to the customer's expectations. When actual

performance matches or exceeds one's expectations, satisfaction sets in. The results of this investigation are consistent with those that were hypothesized.

4.4 Significance of the difference on the level of Service Quality in SCHOOL Canteen when analysed by demographics

4.4.1 Significance of the difference on the level of Service Quality in SCHOOL Canteen when analysed by Sex

Presented in Table 3 is the result of the ANOVA test, where the overall p-value is 0.905, which is greater than the 0.05 level of significance. This means that there is no significant difference on the level of service quality in the SCHOOL canteen when analyzed by sex. Therefore, the results failed to reject the null hypothesis. The first domain, tangibility, got a sig. value of 0.969, assurance got a sig. value of 0.466, reliability got a sig. value of 0.567, responsiveness got a sig. value of 0.176, and empathy got a sig. value of 0.649.

Table 3: Significant Difference on the level of service quality of SCHOOL canteen when analysed by sex.

Factor	Sex				Total		F	Sig.	Decision on H ₀
	Male		Female						
	Mean	SD	Mean	SD	Mean	SD			
Tangibility	4.25	0.58	4.25	0.73	4.25	0.67	0.002	0.969	Accept
Assurance	4.06	0.69	4.12	0.72	4.09	0.7	0.532	0.466	Accept
Reliability	3.99	0.71	4.03	0.68	4.01	0.69	0.328	0.567	Accept
Responsiveness	4.16	0.66	4.06	0.67	4.1	0.66	1.839	0.176	Accept
Empathy	4.11	0.75	4.07	0.72	4.09	0.73	0.207	0.649	Accept
Overall	4.11	0.56	4.11	0.60	4.11	0.58	0.014	0.905	Accept

The existing literature suggests that individual customer differences, including gender, can have significant differences in customer satisfaction and their perceptions of service quality. Czarniecka-Skubina et al. (2020) found that gender identity plays a significant role in customer satisfaction. They noted that female customers tend to give higher ratings for service efficacy and are more sensitive to relational aspects of service interactions. This implies that female customers pay more attention to the services the SCHOOL Canteen provides, especially compared to male customers.

However, contrary to the expectations based on the existing literature, the results of the quantitative side of this study indicate that there is no significant difference in the level of service quality when analyzed by sex at the SCHOOL Canteen. This suggests that the SCHOOL Canteen's level of customer service does not significantly differ based on the customers' sex.

This study's qualitative findings further support those customers at the SCHOOL Canteen, regardless of sex, have a shared perception of service quality. Interviews conducted with participants, regardless of gender, highlighted the importance of proper service as a key factor in satisfaction. For example, participant 1, a female employee, emphasized the crucial role of proper service in addressing occasional service issues caused by insufficient manpower, given the number of students and employees. Similarly, participant 2, a male senior high school student, expressed the need for employees to move quickly to serve students efficiently, reflecting the importance of responsiveness in service quality. These qualitative results reinforce the idea that male and female customers place similar importance on service quality at the SCHOOL Canteen. Despite the referenced study indicating potential differences based on gender.

The findings of this study, which did not affirm the related literature, emphasize the need for further research to explore the role of gender in service quality and customer satisfaction. However, it is important to note that these results are specific to the context of the school canteen and may not be generalizable to other establishments.

4.4.2 Significance of the difference on the level of Service Quality in SCHOOL Canteen when analysed year level and category

After the ANOVA test, the result in Table 4 highlighted that the overall level of service quality, when analysed by category, has a significant difference with a p-value of 0.000. Therefore, the null hypothesis is rejected. In terms of tangibility, senior high school students and employees have different levels of service quality. Also, college students and employees significantly differ on their service quality level.

In terms of assurance, grade school students, college students, and employees have significant differences on their level of service quality in the school canteen. On the other hand, reliability and responsiveness have rejected the null hypothesis; however, they did not give specific categories with differences. Consequently, in terms of empathy, there is a significant difference between college students and MWSP students, as well as between senior high school students and MWSP students. The overall result also shows a significant difference between grade school students and college students and between college students and employees, respectively.

Table 4: Significant Difference on the level of service quality of SCHOOL canteen when analysed by Year level and Category.

Factor	Year Level/Category												Total	F	Sig.	Decision on H ₀ w/ Sig. Diff.		
	GS (A)		JHS (B)		SHS (C)		College (D)		MWSP (E)		Employee (F)							
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD						
Tangibility	3.95	0.7	4.3	0.61	4.33	0.82	4.36	0.68	4.28	0.48	3.78	0.8	4.25	0.67	5.76	0.000	Reject	C-F, D-F
Assurance	3.69	0.67	4.1	0.69	4.18	0.63	4.26	0.74	4	0.55	3.78	0.88	4.09	0.7	5.27	0.000	Reject	A-C, A-D, D-F
Reliability	3.67	0.67	4.1	0.81	4.04	0.66	4.14	0.67	3.91	0.63	3.83	0.74	4.01	0.69	3.04	0.011	Reject	
Responsiveness	3.9	0.73	4.22	0.6	4.15	0.57	4.2	0.67	3.97	0.73	3.89	0.79	4.1	0.66	2.41	0.036	Reject	
Empathy	3.92	0.72	4.14	0.84	4.16	0.69	4.27	0.66	3.72	0.82	3.88	0.66	4.09	0.73	4.77	0.000	Reject	C-E, D-E
Overall	3.83	0.6	4.17	0.62	4.17	0.53	4.24	0.59	3.98	0.48	3.83	0.63	4.11	0.58	5.17	0.000	Reject	A-D, D-F

Comparison with the referenced literature highlights notable differences in focus and outcomes. The study by Acilo and Cabal (2021) explored school canteen management perspectives among instructors, parents, and canteen operators, revealing significant differences. Similarly, D'Souza et al. (2022) identified significant disparities in the healthiness of food between school canteen menus and fundraising items. While these studies provide valuable insights into canteen-related aspects, they do not directly align with the researcher's study of service quality differences across categories. Nevertheless, the referenced studies set expectations that significant differences can indeed exist.

In line with the related literature, this study affirms the presence of significant differences in service quality. The findings reveal that the SCHOOL canteen experiences varied levels of service quality across different categories. Statistical analysis supports the existence of an overall significant difference in service quality among the categories. This indicates that factors such as the type of student (grade school, senior high school, or college) and employment status (teaching and non-teaching) contribute to the perceived service quality within the SCHOOL canteen. Furthermore, this study's quantitative analysis corroborates these findings. The perspective of MWSP students stands out as they reported experiencing rudeness from canteen staff in certain instances, unlike other categories whose experiences revolved more around inconveniences.

In conclusion, the findings of this research align with the referenced literature in demonstrating significant differences in service quality within the SCHOOL canteen as analysed by category. These findings emphasize the importance of addressing these differences to enhance the overall service quality in the canteen, especially when creating interventions in the canteen operation.

4.5 Significance of the difference on the level of customer satisfaction when analysed by demographics

4.5.1 Significance of the difference on the level of customer satisfaction when analysed by Sex

Highlighted in Table 5 is the overall level significant difference on the level of customer satisfaction in the school canteen when analysed by sex got a p-value of 0.172 which is above the 0.05 level of significance. Thus, we failed to reject the null hypothesis. The statistical result simply express that there is no significant difference on the level of customer satisfaction in the school canteen regardless if the customer is male or female.

Table 5: Significant Difference on the level of customer satisfaction in a school canteen when analysed by Sex

Factor	Sex				Total		F	Sig.	Decision on Ho
	Male		Female						
	Mean	SD	Mean	SD	Mean	SD			
Food Quality	3.9	0.94	3.81	0.87	3.85	0.9	0.93	0.34	Accept
Healthiness of Food	4.2	0.8	4.03	0.83	4.1	0.82	3.58	0.06	Accept
Reasonable Price	3.98	0.92	3.86	0.9	3.91	0.91	1.37	0.24	Accept
Availability of Food and Beverage	3.79	0.94	3.72	0.91	3.75	0.92	0.49	0.49	Accept
Dining Experience	4.1	0.73	4.04	0.78	4.07	0.76	0.66	0.42	Accept
Overall	3.99	0.71	3.89	0.68	3.94	0.69	1.87	0.17	Accept

Boys have a higher tendency to make impulsive, intuitive changes. Conversely, females are more prone to prolonged contemplation of their decisions, reducing the impact of a visually appealing meal option. A study revealed slight discrepancies across genders, with boys demonstrating a higher frequency of purchasing food and beverages outside of school, indicating dissatisfaction with the school canteen's food product availability and other factors (Evenhuis et al., 2020). Nevertheless, this discovery warrants additional investigation in subsequent research.

However, contrary to the expectations based on the existing literature, the results of the quantitative side of this study, as presented in Table 6, indicate that there is no significant difference in the level of customer satisfaction when analyzed by sex at the SCHOOL Canteen. The statistical result simply expresses that there is no significant difference on the level of customer satisfaction in the SCHOOL canteen, regardless of whether the customer is male or female.

This is then further affirmed by the qualitative side of the present study, which showed both male and female customers expressed similar sentiments, emphasizing that in reasonable pricing, the maintenance of consistent portion sizes in relation to price is important.

These results suggest that there are no substantial differences in service quality and satisfaction levels between male and female customers at the SCHOOL canteen. This study provides valuable insights specific to this context, raising questions for future research on factors contributing to the observed similarities in perceptions and satisfaction between genders.

4.5.2 Significance of the difference on the level of customer satisfaction when analysed by year level and category

The results presented in Table 6 have an overall p-value of 0.041, which shows an overall significant difference on the level of customer satisfaction in the SCHOOL canteen when analysed by category. Therefore, the null hypothesis is rejected. This means that they have different experiences, specifically in the domains of food quality (p-value 0.038), healthiness of food (p-value 0.001), reasonable price (p-value 0.009), and dining experience (p-value 0.014). However, only the availability of food and beverages, with a p-value of 0.114, indicates that there is no significant difference on their level of customer satisfaction; in other words, all categories have the same level of satisfaction in terms of food and beverage availability as perceived by customers.

Table 6: Significant Difference on the level of customer satisfaction in SCHOOL canteen when analysed by category.

Factor	Year Level/Category												Total	F	Sig.	Decision on Ho	w/ Sig.Diff.	
	GS		JHS		SHS		College		MWSP		Employees							
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)						
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD				
Food Quality	4.16	0.79	4.01	0.89	3.86	0.92	3.88	0.82	3.67	1.09	3.50	0.79	3.85	0.90	2.39	0.038	Reject	
Healthiness of Food	4.10	0.95	4.19	0.70	4.20	0.74	4.16	0.79	3.53	0.90	4.23	0.85	4.10	0.82	5.195	<.001	Reject	B-E, C-E, D-E, E-F
Reasonable Price	3.66	0.92	3.93	0.93	4.00	0.87	4.05	0.84	3.50	1.05	3.91	0.85	3.91	0.91	3.108	0.009	Reject	D-E
Availability of Food and E	3.89	0.79	3.86	0.77	3.79	0.91	3.82	0.92	3.58	1.14	3.38	0.88	3.75	0.92	1.789	0.114	Accept	
Dining Experience	3.66	0.88	4.08	0.80	4.16	0.66	4.15	0.76	4.02	0.91	3.88	0.59	4.07	0.76	2.896	0.014	Reject	
Overall	3.89	0.65	4.02	0.66	4.00	0.65	4.01	0.67	3.66	0.86	3.78	0.66	3.94	0.69	2.348	0.041	Reject	

The results of this study, as presented in Table 7, demonstrate a significant difference in the level of customer satisfaction within the SCHOOL canteen when analyzed by category. These findings emphasize the importance of considering category-specific factors to better understand and enhance customer satisfaction within the canteen.

These results align with the referenced literature, which also reveals significant distinctions in focus and outcomes. Acilo and Cabal's (2021) study explored perspectives on school canteen management among instructors, parents, and canteen operators, revealing significant differences. Similarly, D'Souza et al. (2022) identified notable disparities in the healthiness of food between school canteen menus and fundraising items. These studies provide valuable insights into differences across categories within

canteen-related aspects. Thus, this study affirms the existence of substantial variations in perception that can indeed exist between different categories.

Moreover, the qualitative aspect of this study further supports this notion. When respondents were asked about the factors that contribute to their satisfaction as customers, evident disparities were observed among the categories. For example, senior high students and employees emphasized the importance of responsiveness, while there was a notable preference for empathy and reliability among the MWSP students.

4.6 Significance of the relationship between Service Quality and Customer Satisfaction

The significant relationship between service quality and customer satisfaction was tested at the 0.05 level of significance. The overall p-value of 0.000, which is below the 0.05 level of significance, means that there is a significant relationship between service quality and customer satisfaction in the SCHOOL canteen. Therefore, the null hypothesis is rejected. Moreover, the domain empathy and variable customer satisfaction have the strongest relationship with an R-value of .674, which is interpreted as strong.

Table 7: Significant Relationship between Service Quality and Customer Satisfaction

<i>Service Quality and Customer Satisfaction</i>	Customer Satisfaction					Overall
	Food Quality	Healthiness of Food	Reasonable Price	Availability of Food & Beverage	Dining Experience	
Tangibility	.410** (0.000)	.442** (0.000)	.453** (0.000)	.387** (0.000)	.517** (0.000)	.547** 0.000
Assurance	.351** (0.000)	.436** (0.000)	.405** (0.000)	.314** (0.000)	.398** (0.000)	.471** 0.000
Reliability	.380** (0.000)	.407** (0.000)	.436** (0.000)	.415** (0.000)	.390** (0.000)	.505** (0.000)
Responsiveness	.379** (0.000)	.442** (0.000)	.463** (0.000)	.458** (0.000)	.557** (0.000)	.569** (0.000)
Empathy	.513** (0.000)	.544** (0.000)	.583** (0.000)	.507** (0.000)	.565** (0.000)	.674** (0.000)
Overall	.486** (0.000)	.543** (0.000)	.560** (0.000)	.497** (0.000)	.578** (0.000)	.660** (0.000)

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

A study by Ji and Ko (2022) found that service responsiveness is the most important factor in customer satisfaction, among food quality, reliability, physical design, and price. Another study has argued that the most significant factor influencing customer satisfaction is the domain of tangibility (Nguyen et al., 2018). These results affirmed the results of this study. In a study by the domain, tangibility and customer satisfaction had an insignificant association with visa facilitation (Ramya et al., 2019), but the result of

this study found that there is a significant relationship among all the indicators and variables.

Furthermore, this study affirms the finding of Kobero and Swallehe (2022), who observed that other aspects of service quality obtained a negative gap score, indicating that students are dissatisfied with these particular services. Students are dissatisfied with the services due to the below-average overall service quality. Consequently, a study conducted in Poland resulted that the indicators under the variable service quality, which include the layout of seating, the quality of interior design, and the suitability of background music, have no effect on the level of student satisfaction with the cafeteria operators' service quality (Czarniecka-Skubina et al., 2019). However, this is not the case in a study conducted in Myanmar because it revealed that Service Quality and Satisfaction have a strong relationship (Htang, 2021). However, in addition, there is a significant correlation between student perception and the status of the school canteen and the status of school cafeteria practices (Minguito & Capunan, 2019).

Consequently, there was a significant correlation between all parameters of service quality and student overall satisfaction (Htang, 2021), and a strong positive correlation was discovered between customer satisfaction with the quality of food and beverages and customers' willingness to continue dining at a certain dining establishment. (Serhan & Serhan, 2019). Hence, another study indicated that customer satisfaction is an essential indicator for measuring and enhancing school canteen service quality (Righini, 2019).

Also, the result of this study agrees with Chandra et al.'s (2018) claim that service quality has a positive effect on student satisfaction, leading to a positive and significant correlation. Moreover, existing literature in the context of a school canteen indicates a direct correlation between service quality and customer satisfaction levels. These findings also support Dam and Dam's (2021) discovery that service quality has a beneficial impact on not just customer satisfaction but also brand image and customer loyalty.

4.7 Significance of the Influence of Service Quality on Customer Satisfaction in a School Canteen

The significance of the influence of the domain of service quality on customer satisfaction in the school canteen is highlighted in Table 6. The overall p-value of 0.001 shows that there is a domain of service quality that significantly influences customer satisfaction in the school canteen. Thus, the null hypothesis is rejected.

It is also shown in the results that the value of F is 78.69, which means that 72 percent of service quality could affect customer satisfaction, and the remaining 28 percent are not part of the current study. Looking at the specific indicators of tangibility with a sig-value of .000, responsiveness with a sig-value of .006, and empathy with a sig-value of .000, On the other hand, the two indicators do not significantly predict customer satisfaction in the school canteen, namely, assurance, with a p-value of 0.077, and reliability, with a p-value of 0.843.

Table 8: Significance of the Influence of Service Quality on Customer Satisfaction in SCHOOL Canteen

<i>Service Quality and Customer Satisfaction</i>	Customer Satisfaction			
	Beta	B	t	Sig.
Tangibility	.261	.272	5.109	.000
Assurance	-.105	-.103	-1.776	.077
Reliability	-.012	-.012	-.199	.843
Responsiveness	.155	.162	2.771	.006
Empathy	.509	.481	9.568	.000
R	.720 ^a			
R ²	.519			
F	78.69			
P	.001			

The indicators with significance for the influence of service quality on customer satisfaction are tangibility, responsiveness, and empathy, which are the same as the results of Ji and Ko (2022), except for price, reliability, and other indicators not included in this study. The concerns that were also highlighted during the focus group discussion were the long service-related concerns such as long queues of lines, sanitation concerns, availability and variety of food, and inconsistencies.

A study by Nguyen et al. (2018) has argued that the most significant factor influencing customer satisfaction is the domain of tangibility. Moreover, the study of Baluyot and Pampolina (2021) also affirmed that the relationship between restaurant tangibles and consumer satisfaction is found to be positive, moderate, and statistically significant. The result of this study is also congruent with the above literature. However, a study by Sagarino et al. (2016) suggested that the floor area of a school cafeteria must be increased to accommodate more tables and chairs, and ventilation must be sufficient to maintain its cooling, which may result in an improved atmosphere.

Sagarino et al. (2016) also mentioned that the responsiveness of frontline employees has the greatest impact on customer satisfaction, followed by price and food quality. In addition, a study written by Ji and Ko (2022) found that among food quality, reliability, physical design, and price, the results indicate that service responsiveness is the most crucial aspect of customer satisfaction. In addition, a study conducted in a school setting found that the level of responsiveness in terms of complaints is just satisfactory (Labay et al., 2015). But a study by Chai et al. (2018) claimed that the service quality dimensions that have the greatest impact on consumer satisfaction are responsiveness, empathy, and assurance.

This paper confirmed the findings of some prior studies compiled in the literature while rejecting the findings of other prior studies. This shows that the strengths and opportunities for improvement are not universal across institutions. Also, respondents' perspectives may differ or may be the same.

4.8 Thematic analysis on the reasons of the quantitative results on the level of service quality and customer satisfaction in a school canteen

After the transcription and coding of the data gathered from the FGD, six themes have been generated. Namely, themes of Tangibility, Reliability, Responsiveness, Healthiness of Food, Availability of food, and Dining Experience in the SCHOOL canteen.

Consequently, all participants in this qualitative study met the criteria of having the opportunity to respond to the quantitative survey and being members of the target demographics. The majority of participants agreed that service quality is directly linked to customer satisfaction. When asked about the factors contributing to customer satisfaction, their answers consistently revolved around aspects of service quality. This qualitative side of the study shed light on the reasons and good practices of the canteen that led to the higher mean scores observed. However, it is important to note that while the overall domains received positive feedback, certain attributes and specific items exhibited comparatively lower mean scores in relation to others. These attributes and specific items were further explored and elucidated in the qualitative segment of this study as well.

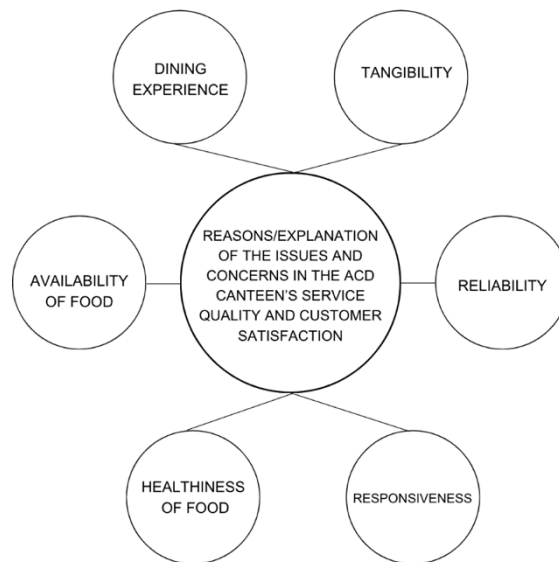


Figure 2: Themes on the reasons of the quantitative results on the level of service quality and customer satisfaction in a school canteen

The Service Quality (SERVQUAL) evaluation is an extensively researched area in food service (Ji & Ko, 2022; Chai et al., 2018), highlighting its relevance and effectiveness in assessing service quality. The qualitative aspect of these studies has provided valuable

insights into the different Service Quality (SERVQUAL) domains that apply to the food service industry.

This study specifically confirms the significance of several domains: Tangibility, Assurance, Reliability, Responsiveness, and Empathy. Tangibility, emphasized in related literature, is crucial for businesses that require significant investments in physical facilities (Ramya et al., 2019). The assurance domain revealed the highest satisfaction ratings in a related study (Sarsale & Caday, 2020), while reliability highlighted the importance of companies maintaining their word to enhance customer satisfaction (Ramya et al., 2019). Literature also suggests that the responsiveness of frontline employees has the greatest impact on customer satisfaction (Ji & Ko, 2022), and empathy has been identified as a dimension that receives high assessments of perceived service quality in another related study (Baluyot & Pampolina, 2021).

These domains were relevant in the qualitative discussion as respondents' personal indicators of satisfaction. Tangibility, Reliability, and Responsiveness emerged as major themes in the conversation, while Assurance and Empathy received notable mentions, being identified as domains that performed well in the SCHOOL canteen. Similarly, in terms of customer satisfaction, related literature has identified that customer satisfaction is closely linked to the quality and healthiness of food and beverages (D'Souza et al., 2022; Li et al., 2018). This study reinforces the significance of quality and healthiness in determining customer satisfaction. The qualitative aspect of the research further supports this notion by highlighting the healthiness of food as one of the major themes that emerged from the qualitative analysis.

Other domains of customer satisfaction, such as food product availability, established by El-Said and Fathy (2015) in their research on on-campus cafeteria services, highlighted the importance of having a wide range of food options available in a cafeteria setting as a key determinant of customer satisfaction. Similarly, Rajput and Gahfoor (2020) emphasized that the dining experience encompasses intangible and tangible elements.

This qualitative part of the study aligns with the related literature, as the qualitative analysis confirms the significance of food product availability and dining experience as major themes in the discussions. The findings reinforce that customers value having a diverse selection of food options and express value in the overall dining experience, encompassing both intangible and tangible aspects.

5 Conclusion

The researchers conclude that the overall level of service quality at the SCHOOL canteen is consistently high, with an impressive mean rating of 4.11. This signifies that service quality is often prominently displayed at the canteen. The individual indicators, ranging from 4.01 to 4.25, further reinforce the high quality of service across various domains. Notably, tangibility stands out with the highest mean of 4.25, emphasizing its frequent manifestation.

The results regarding customer satisfaction in the SCHOOL canteen, as presented in Table 2, show consistently high ratings, with means ranging from 3.75 to 4.10. The overall mean of 3.94 suggests that customer satisfaction indicators are frequently manifested. Additionally, the low standard deviation of 0.69 indicates a tight cluster of responses. These findings suggest that customers at SCHOOL canteen generally experience high levels of satisfaction across various aspects of their dining experience, and the consistency in responses reinforces the reliability of these findings.

The significance of differences in service quality at SCHOOL Canteen, when examined by category, has yielded valuable insights. Notably, when analyzed by category, the overall level of service quality exhibited a significant difference with a p-value of 0.000, leading to the rejection of the null hypothesis. These findings underscore the importance of tailoring service quality improvements to specific categories and year levels within the SCHOOL Canteen. The nuances in service expectations and experiences among these groups warrant a more targeted approach to meet their diverse needs. This research provides a foundation for further exploration and fine-tuning of service quality strategies to enhance the overall dining experience for all patrons.

The analysis of the significance of differences in customer satisfaction at SCHOOL Canteen, when examined by sex, provides a clear outcome. This statistical finding implies no substantial variation in the level of customer satisfaction between male and female customers at SCHOOL Canteen. The data suggests that the canteen's services and offerings appear equally satisfying to both genders. While gender-specific preferences in customer satisfaction are not evident in this analysis, the canteen must maintain its commitment to consistently providing high-quality service and dining experiences to all patrons, regardless of gender. This conclusion reaffirms the canteen's ability to offer a universally satisfying experience to its diverse customer base.

The analysis undertaken to explore the relationship between service quality and customer satisfaction at SCHOOL Canteen has yielded compelling results. It is noteworthy that within the different domains assessed, the domain of empathy exhibited the strongest relationship with customer satisfaction. This underscores the importance of empathy in the service experience, demonstrating that customers who feel understood and valued are more likely to be satisfied with their overall dining experience. These findings emphasize the pivotal role that service quality plays in shaping customer satisfaction. It underscores the need for businesses, including SCHOOL Canteen, to prioritize and enhance the quality of their services, particularly in terms of empathy, not only to meet but exceed customer expectations, ultimately fostering higher levels of satisfaction. This research provides valuable insights for SCHOOL Canteen and similar establishments aiming to elevate customer satisfaction by focusing on service quality.

The significance of the influence of service quality on customer satisfaction at SCHOOL Canteen has been rigorously examined, is well-demonstrated in the results, and indicates that there are specific domains of service quality that have a significant influence on customer satisfaction within the canteen, leading to the rejection of the

null hypothesis. Our analysis also revealed that 72 percent of service quality can be attributed to its influence on customer satisfaction, underlining the substantial impact of service quality on shaping the overall dining experience in the canteen. It is important to note that the remaining 28 percent, while not part of this study, may encompass other factors that contribute to customer satisfaction.

Furthermore, the SCHOOL canteen excels at providing a high level of healthiness in its food offerings. The availability of healthy options, natural seasonings, and the consistency in delivering nutritious meals all contribute to this positive assessment. The canteen's commitment to promoting healthier food resonates with customers, making it a compelling and convincing option for those seeking nourishing meals at the school premises. In conclusion, the lowest mean rating in the availability of food and beverage domain can be attributed to the limited food options, the customers' strong desire for variety, and the inconsistency in supply. By addressing these factors and offering a wider range of choices, the canteen can improve its rating in this domain and better meet the needs and expectations of its customers.

Finally, the thematic analysis findings explained an evident concern, particularly for the specific items in each indicator, such as the dining experience, which highlighted the overcrowding, delays in payment, and challenges in acquiring change for chits. Also, the lack of implementation of effective solutions, such as a robust cashiering system and addressing overcrowding issues, are some of the specific items that have been highlighted concerning the overall dining experience and the general customer satisfaction of the students in the SCHOOL canteen.

6 Recommendations

Based on the conclusions, the researchers would like to recommend the following:

To school canteen owners, lessee and/or consignees, they may use trainings as interventions to address such as: proper risk management as applied to safety and sanitation in a foodservice establishment, product development, food and beverage costing, customer service, that will enhance a canteen's service quality and customer satisfaction.

To the canteen-in-charge/managers, they may collaborate with academic programs related to business in implementing the aforementioned interventions to improve service quality and customer satisfaction.

To the canteen workers, the result of this study may be a starting point for learning the trends and preferences of their captured market.

To the school administration, this research may contribute to their recommending approval in terms of the canteen development plan, specifically in managing the queue and enhancing the variety of menu options.

The findings of this study can serve as an initial guide for future researchers conducting feasibility studies on possible specific product innovations and/or services in a school canteen and studies about school canteen development.

7 About the author

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