

INSTITUTIONAL FOODSERVICE ATTRIBUTES ON STUDENT SATISFACTION: A STUDY AMONG HOSPITALITY STUDENTS OF INSTITUT KEMAHIRAN TINGGI BELIA NEGARA (IKTBN) ALOR GAJAH, MELAKA

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ABSTRACT

In the business context, "customer satisfaction" refers to evaluating how well a company's products or services align with customer expectations. Within a facility, the Institutional Foodservice, such as dining halls, holds a significant role in the dormitory setup. These dining spaces provide students with opportunities to socialize, dine, and engage with peers and faculty from diverse backgrounds. This fosters a sense of community on campus. Specifically, the Institutional Foodservice at IKTBN Alor Gajah is located near the student dormitory block. This research comprises a descriptive survey aimed in assessing student satisfaction with the Institutional Foodservice. Data for this study were collected through questionnaires distributed to hospitality students at IKTBN Alor Gajah, resulting in a sample of 226 respondents. Data analysis employed Statistical Package for Social Sciences (SPSS) version 15.0 for Windows, and the findings were summarized in terms of frequency, percentage, mean, and standard deviation. The study's findings revealed that, among three factors—food quality, service quality and atmosphere the highest mean score was attributed to cleanliness (atmosphere factor), with a mean score of 3.17 and a standard deviation of 0.69. Conversely, the lowest mean score was associated with employee helpfulness (service quality factor), with a mean score of (M=2.12) and a standard deviation of 1.18. This research was initiated with the objective of offering recommendations and assistance to

the related stakeholders, with the ultimate goal of improving the performance of the Institutional Foodservice.

Keywords: Customer Satisfaction, Institutional Foodservice, Service Quality, Food Quality, Atmosphere

INTRODUCTION

Customer satisfaction is one of the business terms that means measuring the extent to which a product or service provided by the organization meets customer expectations. Customer wants, needs and expectations that need to be achieved or met will create customer loyalty to the product or service offered. According to Kennedy et al. (2022), university food service is crucial to the worldwide catering sector since students visit restaurants more frequently when they are enrolled in classes.

Background of the Study

The Institutional Foodservice at the institute of studies is an area for students to enjoy meals during or after class sessions. Each institute of learning has their own Institutional Foodservice. As a result, the Institutional Foodservice is one of the main facilities that students at the National Youth High Skills Institution (IKTBN) are engaged in. Institutional Foodservice operators need to ensure that the quality of Institutional Foodservice services are in good condition to ensure student satisfaction is at a satisfactory level. As mention by (Raihen et al., 2023), due to the expanding population, the inadequate student food service, and the restricted financing, it has been difficult to offer appropriate meal service. Despite these challenges, Institutional Foodservice management has a chance to improve personnel performance, which will ultimately improve the overall satisfaction of students.

The quality of Institutional Foodservice is highly correlated to several factors, including the variety of menus offered, the overall cleanliness of the facility, and the hygiene practices of the employees, particularly in terms of food handling. This statement finds support in the work of Brown et al. (2010), who argue that upholding personal hygiene standards when handling food plays a crucial role in preventing food contamination. Such practices fall within the scope of the responsibilities of professional foodservice operators. Failure to maintain the quality of food served within Institutional Foodservice can have unfavourable effects, potentially resulting in students falling ill due to foodborne illnesses.

According to academic studies cited by Hall (2014), it is clear that university students' perceptions of the on-campus foodservice operation have a significant impact on their levels of satisfaction, frequency of eating out, and overall college experience. Foodservice providers encounter numerous challenges when catering to Millennial students, a generation characterized by cultural diversity, changeability, complexity, extensive dining experience, and often limited to campus restrictions. These characteristics collectively contribute to the complexity of their dietary needs, as highlighted by Choi et al. (2013) and Joung et al. (2014). Hall (2014) highlights the considerable influence of the cultural backgrounds of residential students on how they perceive the quality of their dining experiences within on-campus foodservice operations. Considering that many residential university campuses provide few or no alternative meal options beyond on-campus foodservices, it can be argued that students' perceptions of these foodservice operations significantly contribute to their overall satisfaction and dining frequency at these establishments. This concept holds particular significance in academic discussions.

In light of these considerations, the objective of this research was to examine the satisfaction levels of students regarding the Institutional Foodservice. Additionally, this investigation facilitated a deeper understanding for foodservice operators regarding customer needs, enabling the enhancement of foodservice facility. This study holds significance in the field of academic research. To date, no research has investigated the factors that affect student satisfaction with the IKTBN Alor Gajah Institutional Foodservice. Hence, it is essential to conduct this study.

When the expectations and demands of IKTBN Alor Gajah students are achieved, the level of satisfaction toward the Institutional Foodservice facilities and services can be met. The study also supports that the level of satisfaction or dissatisfaction of a user is related to the evaluation of a service. Food handlers are responsible for maintaining hygiene in activities such as personal hygiene, hygiene in cooking, clean serving equipment, and the cleanliness of food preparation areas. Once students enter the dining hall, it is the obligation of the foodservice operator to give the finest service possible in all areas and ensure student safety and security.

Problem Statement

The Institutional Foodservice in educational institutions plays an essential role in shaping the overall student experience. However, it is crucial to assess and understand the degree of student satisfaction with this vital service. While educational institutions primarily prioritize academic excellence, it's important to recognize that the quality of foodservice significantly impacts students'

overall well-being, health, and academic performance. Hence, there is a requirement to conduct a thorough examination and assessment of the factors contributing to student satisfaction. This involves identifying areas that require improvement and creating strategic approaches to raise the standard of Institutional Foodservice. The primary aim of this research is to address these issues comprehensively and generate valuable insights aimed at enhancing the dining experience for students within educational institutions.

An institute's most valuable asset is its students. As a result, each ILKBS (Institut Latihan Kemahiran Belia dan Sukan) must compete with one another in terms of creating more quality students and providing superior facilities and services that fulfil stakeholder satisfaction. The institute will appoint a food service operator to manage the students' meals and beverages once they have registered at the institute.

Food poisoning is still a problem, as evidenced by its incidence. Food handlers that do not follow proper ethics and procedures when preparing food are the major cause of food poisoning. Aqilah (2020) wrote in the journal *Utusan Malaysia* that the Ministry of Health reported 516 incidents of food poisoning overall in 2019. Half of these food poisoning incidents are caused by an Institutional Foodservice operator's fault. As a result, during the preparation and presentation of food, food handlers play a critical role in preventing food poisoning. Food poisoning hazard can be caused by a variety of factors, including the cleanliness of facilities and employees.

Besides that, in the contemporary business landscape, entrepreneurs are continually engaged in a process of evolution and development, striving relentlessly to improve the value they provide in their offerings and ensure customer satisfaction. This practice, as highlighted by Sriyam (2010), extends to encompass various sectors, including the foodservice industry. The foodservice industry comprises both on-site and commercial operations, encompassing diverse establishments such as restaurants, cafes, vending machines, bars, and fast-food outlets. Particularly, the restaurant sector has witnessed global growth, demonstrating an ongoing commitment to adapt and implement specific strategies tailored to accommodate diverse local cultures and contexts.

In Malaysia, foodservice operators in universities encounter a challenging task as they serve a diverse, dynamic community confined to the university premises. A significant portion of the university campus population relies on on-campus food outlets to fulfil their daily nutritional needs. Despite the convenience offered by on-campus dining facilities, dissatisfaction with the

present food and service quality of on-campus foodservice may motivate customers to seek alternative dining options off-campus, as noted by Gassenheimer et al. (1998).

Due to increasing student enrolments and economic factors, ensuring student satisfaction with on-campus foodservices has become more challenging. This is especially true for institutions with limited foodservice options, as highlighted by Smith et al. (2020). According to Shanka and Taylor (2005), the demand for foodservice accessibility and its quality within educational campuses becomes more pronounced as the student population at the higher education level continues to grow. This relationship between enrolment numbers and the authoritative for quality foodservice availability on campuses is further explained by Kim et al. (2009).

Furthermore, Shariff et al. (2015) highlighted the essential role of campus foodservice facilities as a crucial component of university operations. They suggest that universities utilize foodservice outlets strategically to attract a greater number of students to pursue their higher education at the respective institution. In essence, foodservice establishments are often regarded as support systems for universities and colleges and are commonly referred to as food plans. This perspective highlights the many-sided role that foodservice plays in the broader educational landscape, serving both as a practical necessity and a strategic tool for institutions to enhance their appeal and functionality.

Institutional foodservices, on the other hand, fulfil the essential role of providing meals within various settings, including schools, colleges, universities, hospitals, correctional facilities, cafeterias, nursing homes, and childcare centers. These services are essential for both the public and private sectors, playing a crucial role in providing sustenance and nutritional support. Significantly, the foodservice sector within universities has become a large market segment, competing on par with local and private foodservice providers, fast-food establishments, and vending machine enterprises. This transformation highlights the energetic nature of the foodservice industry, especially in the academic setting, reflecting the changing landscape of food provision and consumption practices.

Through this study, the researcher will evaluate the food's overall quality, taste, and nutritional value as it is provided in dining halls of institutions. In addition, the diversity and variety of food choices available to accommodate a range of preferences, dietary needs, and cultural backgrounds will be taken into account. The cleanliness of the kitchens, the utensils, and the

general hygiene standards upheld in the foodservice establishments are important aspects of this study. Other significant aspects include assessing the

customer service, friendliness, and willingness to address concerns displayed by the staff members working in the foodservice industry. Consideration should also be given to the ambiance and comfort of the dining spaces, including the seating configurations, cleanliness, and general environment. The institute's

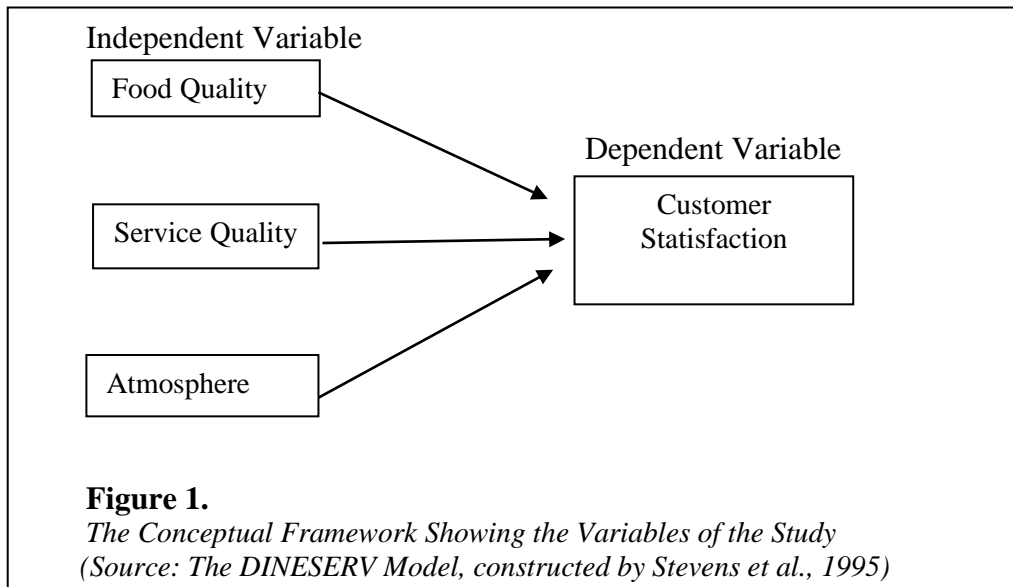
increasing enrolment has compelled it to create a suitable dining hall to serve a significant number of students. Aside from the appropriate facilities, the dining staff's service performance and menu quality should be considered. The menu may need to be changed, facilities may need to be improved, service standards may need to be raised, and effective methods of communication between students and foodservice providers may need to be established.

Research Objectives

The study was conducted to ascertain the overall student satisfaction with the Institutional Foodservice from the perspective of hospitality students. There are four main objectives that the study aims to identify and its comprises the followings:

1. To discover the food quality at IKTBN Alor Gajah Institutional Foodservice.
2. To explore service quality in IKTBN Alor Gajah Institutional Foodservice.
3. To investigate the atmosphere of IKTBN Alor Gajah Institutional Foodservice.
4. To examine overall satisfaction at IKTBN Alor Gajah Institutional Foodservice.

Research Framework



Significance of the Study

It is anticipated that this study will help bridge the gap between the operator's perceived service performance and the service that students actually receive. The results of this study will give the operator insightful information that will improve their comprehension of student preferences.

This study has the potential to lead to improvements in existing services, positively impacting the Institutional Foodservice's reputation. It also aids Institute Administrators in effectively monitoring the performance of appointed Institutional Foodservice operators. Furthermore, operators must promptly identify and address any weaknesses to improve their services. It is vital for both Institute Administrators and Foodservice Operators to recognize that student satisfaction plays a pivotal role in the institution's overall performance, especially in the age of digital communication where dissatisfied students may resort to airing their grievances on social media.

Quality nutrition provided through Institutional Foodservice has the potential to enhance students' cognitive function and concentration, ultimately resulting in improved academic performance. This connection emphasizes the vital importance of investing in both the quality and variety of food offerings within campus dining facilities. When students have access to nourishing meals

that align with their dietary needs and preferences, they are better equipped to excel academically.

Moreover, understanding students' preferences and their satisfaction levels empowers foodservice operators to restructure their operational processes. By identifying areas where operational efficiency can be improved, institutions can achieve cost savings and potentially reduce food waste. This not only benefits the institution financially but also contributes to environmental sustainability by minimizing food-related waste.

Additionally, research in this field can contribute to the enhancement of health and hygiene standards within foodservice operations. The recognition of factors that influence student satisfaction highlights the importance of maintaining cleanliness and safety standards. Ensuring food safety and hygiene not only protects students' health but also upholds the institution's reputation. In essence, the identification and rectification of these factors can lead to the establishment of a safer and more hygienic foodservice environment, which is indispensable for both student satisfaction and well-being. Furthermore, the maintenance of health and safety standards is essential for the institution's standing in terms of foodservice quality and its overall reputation. Consequently, research within this field serves as an invaluable instrument for promoting and upholding these essential standards.

Furthermore, a satisfying dining experience fosters a sense of community and student engagement within the campus environment. When students are content with their dining options, they are more likely to participate in social activities on campus, enriching their overall college experience. This social dimension plays a critical role in creating a lively and organized campus community.

Beyond these considerations, investigating student satisfaction also offers valuable insights into understanding food preferences and dietary trends. These insights are relevant not only to educational institutions but also to foodservice providers looking to adapt to changing consumer demands. By staying aware of changing food preferences, institutions can more effectively meet the diverse needs of their student population.

Moreover, providing of quality nutrition, consideration of student preferences, compliance to health and hygiene standards, fostering a sense of community, and monitoring food trends all play an important role in enhancing the overall student experience within educational institutions. These factors not

only contribute to academic success but also contribute to the sustainability and competitiveness of the institution in the evolving landscape of higher education.

Due to the initial research on this topic, this study can help foodservice providers make sure they follow to institution standards to prevent problems or termination. Additionally, it may result in positive performance reviews, establishing them as respectable and reliable service providers in the educational environment. Therefore, through this study, it is hoped that the researchers will obtain research findings that will have a positive impact and effect on all parties involved

Scope of the Study

This study was conducted to get feedback from IKTBN Alor Gajah students on their level of satisfaction with the facilities and services provided. The researcher also hopes that the students give a good cooperation, quick response and demonstrate honesty about their level of satisfaction with the facilities and services provided by the IKTBN.

The scope of this project includes 226 respondents consisting of hospitality students from IKTBN Alor Gajah. The Institutional Foodservice is located approximately 500m from the IKTBN Alor Gajah Hospitality Department.

LITERATURE REVIEW

Food service, namely the Institutional Foodservice in educational institutions is the main place that is the focus of students to obtain food during or after their study sessions. The supply of meals and food selections inside a space, usually on a college campus, in a workplace, or in another community context, is known as Institutional Foodservice. Self-service kiosks, a selection of hot and cold foods, drinks, occasionally specialist dietary items and cafeteria-style serving with a range of cuisines are frequently offered. The objective is to provide a group of people with simple and varied meal options in a common dining space. The demand for food service is rising as well, especially in universities, as student enrollment in tertiary education institutions continues to rise.

As a result of the intense competition brought on by these rising demands, foodservice providers are under more pressure than ever to meet students' requirements and expectations (Li, 2008). Common quality factors measured in food service such as food quality, variety, convenience and price have been proven by Xi and Shuai (2009) to have an effect on a student's

satisfaction. Since it is an important place for an institution, then the institute should not ignore the cleanliness of the environment and food provided by the Institutional Foodservice operator (Mohd & Noraini, 2010). When the food service is at a good level, then it can be said that the quality of service provided is at a satisfactory level. Although the quality of service provided by food is quite difficult to measure, it can be measured by the level of customer satisfaction after they see, feel and benefit from the service.

Many studies have found that the quality of a product or service is related to customer satisfaction (Seung, 2012). During teenage years, individuals go through a significant transition from childhood to adulthood. This period is noticeable by various physical, physiological, biochemical, and hormonal changes, impacting growth patterns. Adequate food intake is crucial during this stage to support proper physical development and overall well-being. Proper food intake can also improve learning abilities and affect their level of achievement (Frankle, 1993).

Ng (2005) suggested a few additional suggestions for elements that affect the satisfaction of students, including food and beverage quality, service quality, value, cost, hygienic conditions, location, and product diversity. Meanwhile according to Rozekhi et al. (2016), there is a statistically significant correlation between food quality features and client satisfaction. In one research, Yale Dining Services conducted by Pinnell (1999) used a scale of 1 (poor) to 5 (excellent) to rate the services provided to university diners. The waiting queue, among other things, received a 3.28 rating from students, who also gave the food's freshness a 2.83, its appearance a 2.96, its flavour a 3.29, and its healthy selections a 2.91.

Food Quality

According to McWilliams (2000) supported by Kaura et al. (2014) food quality refers to the attributes of food that are acceptable and meet customer expectations, such as the food's look, smell, taste, and texture. Entrepreneurs should diversify their menus, in order to entice clients to visit their establishment. In addition to selling things, this phase serves as an indirect promotional tactic. Vangvanitchyakorn (2000) showed in his research that the most important component in a consumer's appraisal of different types of restaurants is the quality of the cuisine. Lee (2002) stated that the diversity of the menu in a dish reflects the efficiency of service from two aspects namely physical and psychological. From the study conducted, respondents gave a high assessment of the quality of food service from the aspect of food served consisting of various menus.

Food quality represents a critical factor, repeatedly highlighted as a fundamental consideration for customers when choosing a fast-food restaurant to dine at (Namin, 2017). Numerous research studies have explored aspects of food quality, including the freshness of dishes, how food is presented, its taste, menu diversity, and the temperature at which it is served. As stated by Peri (2006), food quality stands as an essential prerequisite for meeting the desires and anticipations of restaurant patrons. Particularly, young customers, who often pursue flavourful cuisine, seek high-quality food and beverages to gratify their preferences. Customers chose food quality as the key aspect in achieving customer satisfaction, according to an earlier study (Pettijohn et al., 1997) and (Mensah & Mensah 2018). They also discovered that food quality is more significant than any other observable trait, including cleanliness, price, value, and convenience.

Table 1.
Summary of Food Quality Review Resources

Authors	Problem Description	Type of Industry	Variable Involved
McWilliams (2000) and Kaura et al. (2014)	Food quality attributes meeting customer expectations (look, smell, taste, texture)	Food Service	Food quality
Vangvanitchyakorn (2000)	Quality of cuisine in restaurant appraisal	Restaurant	Food quality
Lee (2002)	Diversity of menu in a dish reflecting service efficiency	Restaurant	Menu diversity, Service efficiency
Namin (2017)	Food quality as a crucial factor in fast-food restaurant choice	Fast Food	Food quality
Peri (2006)	Food quality as an essential requirement for meeting customer	Restaurant	Food quality

Pettijohn et al. (1997) and Mensah et al. (2018)	expectations Food quality's significance in achieving customer satisfaction	Fast food and Restaurant	Food quality
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Service Quality

According to other studies (Song et al., 2022; Nizam et al., 2022) on customer satisfaction and loyalty in restaurants, service quality is crucial. In this case, it was discovered that characteristics that affect how satisfied students are with a food establishment rank second behind food quality. This study also shows that students' perceptions of the cleanliness of cafeteria service features are more important than other service characteristics, especially the ambiance and service. The findings indicated a significant relationship between student happiness and service quality. Service quality in the context of a fast food establishment, as mentioned by Parasuraman et al. (1988), serves as a measure for assessing how well a service aligns with the expectations of customers. It is an essential factor contributing to the success of fast food restaurants and lends itself to continuous measurement and enhancement.

In situations where there is direct interaction between a service employee and a customer, as emphasized by Rashid et al. (2015), the perception of the service being provided carries equal weight as the actual service itself. In essence, what customers perceive during the service interaction is as vital as the tangible aspects of the service. This perception arises from the comparison between their preconceived service expectations and their evaluation of how the service was executed. To put it simply, it's important to recognize that a customer's view of service quality in a fast food restaurant is closely tied to the behaviors and attitudes exhibited by the employees, as highlighted by Brady and Cronin (2001). These employee interactions can significantly shape a customer's perception of the service's quality.

Tucker (1991) recognised speed of service delivery, convenience, value-adding, lifestyle connotations, and technology as elements impacting customers' impressions of the service experience. Employee performance can also be used to predict “satisfaction, tardiness, absenteeism, excitement, dedication, and effort of employees.” Employee work performance is the most important determinant of organisational effectiveness, which can boost the company's output (Anderson et al., 1994). Both task performance and contextual performance contribute to effectiveness, according to Podsakoff et al. (1997).

This statement, which is backed up by Stathakokopoulos (1998), finds that the most important aspects of employee performance are efficiency, accountability, and integrity. As a result, this study focuses primarily on staff performance characteristics such as efficiency, responsibility, and integrity.

According to Borman(2004), employee work performance has typically been limited to a few core task related activities that are good predictors of employment success. Borman (2004) also concludes that, based on the literature, the concept of employee work performance may be characterised using two concepts: task performance and contextual performance. The concept of employee performance is commonly employed in industrial and organisational psychology as an important dependent variable, Kahya, (2009). Sobotka and Platts (2010) defined employee performance as "the process that underpins the organisational control system by connecting each individual employee or manager's work to the overarching purpose of the work unit." Service quality, according to Hong and Prybutok (2009), is a major factor in a company's success.

Table 2.
Summary of Service Quality Review Resources

Authors	Problem Description	Type of Industry	Variable Involved
Song et al. (2022); Nizam et al. (2022)	Customer satisfaction and loyalty in restaurants, with a focus on service quality	Restaurant/Food Service	Service quality, Food quality, Cleanliness
Parasuraman et al. (1988)	Defining service quality in the context of fast food establishments	Fast Food	Service quality
Rashid et al. (2015)	Emphasizing the significance of the perception of service provided	Fast Food	Service quality
Brady & Cronin (2001)	Highlighting the role of employee interactions in shaping service	Fast Food	Employee interactions, Service quality

	quality perception		
Tucker (1991)	Identifying elements impacting customers' impressions of service experience	Various	Speed of service, Convenience, Value-adding, Lifestyle connotations, Technology
Anderson et al (1994)	Linking employee work performance to organisational effectiveness	Various	Employee work performance
Podsakoff et al. (1997)	Emphasizing the contribution of task performance and contextual performance to effectiveness	Various	Task performance, Contextual performance
Stathakokopoulos (1998)	Identifying key aspects of employee performance such as efficiency, responsibility, and integrity	Various	Efficiency, Responsibility, Integrity
Borman (2004)	Defining employee work performance using two concepts: task performance and contextual performance	Various	Task performance, Contextual performance
Kahya (2009)	Characterizing employee performance as a key dependent variable in industrial and organizational psychology	Various	Employee performance
Sobotka & Platts (2010)	Describing employee performance as the	Various	Employee performance

	process connecting individual employee work to the unit's purpose		
	Identifying service quality as a major factor in a company's success	Various	Service quality
Hong & Prybutok (2009)			

Atmosphere

The atmosphere of a restaurant, often known as the place in which food is served, is crucial to its success. External elements that affect food and meal choices include the social and physical environment, temperature, aroma, time, sound, and distractions (Kim et al., 2022). The atmosphere in which individuals eat is the key factor influencing their dining experiences. Restaurant designers, architects, and retail specialists are all aware of how nature affects people's behaviour and eating preferences. The effects of external factors, such as colour, scent, light, temperature, and others, are discussed in the environmental literature on human food (Navaf et al., 2022; Abedi-Firoozjah et al., 2023). A hygienic business environment will be able to attract customers to visit the business. It is very important for a business to always ensure that its business environment is always in a clean and tidy condition (Masaaki, 1993).

Therefore, those in charge must always be sensitive and take appropriate measures as a control measure to control hygiene practices in the dining hall because according to Hamzah. A. (2002), food managers and operators are responsible for serving quality food as well as providing good service and clean eating places as well as selling food at reasonable prices. In a service context, the environment in which the service is provided can have a significant impact on client perceptions and satisfaction (Bitner, 1992). Customers consciously or unconsciously notice the physical surroundings (decor, artifacts, music, and layout) before, during, and after the meal when dining out in a restaurant, therefore making the atmosphere more pleasant and innovative is critical for restaurant success (Han & Ryu, 2009). Ng (2005) underlined the importance of improving the atmosphere in the kitchen since it affects the perception and pleasure of customers in the context of Institutional Foodservice. As a result, the literature on atmospheric qualities explains why this attribute is included in the study. According to Ibrahim and Fadzil (2013), the physical context can also influence customers' opinions of the quality of foodservice as described.

Table 3.
Summary of Atmosphere Review Resources

Authors	Problem Description	Type of Industry	Variable Involved
Kim et al., 2022	Examining external elements affecting food and meal choices	Food Service/Restaurant	Social and physical environment, temperature, aroma, time, sound, distractions
Navaf et al., 2022; Abedi-Firoozjah et al., 2023	Investigating the effects of external stimuli on dining experiences	Food Service/Restaurant	Colour, scent, light, temperature, and others
Masaaki, 1993	Highlighting the importance of a hygienic business environment	Various	Hygiene practices, Clean and tidy business environment
Hamzah. A. (2002)	Emphasizing the responsibility of food managers and operators for quality food and service	Food Service/Restaurant	Quality food, Good service, Clean eating places, Reasonable prices
Bitner, 1992	Discussing the impact of the service environment on client perceptions and satisfaction	Various	Physical surroundings (decor, artifacts, music, layout)
Han & Ryu, 2009	Stating the critical role of a pleasant and innovative atmosphere in restaurant success	Food Service/Restaurant	Pleasant and innovative atmosphere
Ng (2005)	Emphasizing the importance of improving the kitchen atmosphere in Institutional	Institutional Foodservice	Kitchen atmosphere

Ibrahim & Fadzil (2013)	Foodservice Explaining how the physical context can influence customers' opinions of foodservice quality	Food Service	Physical context
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Customer Satisfaction

In contemporary business practices, achieving customer satisfaction has emerged as a prevalent and essential objective for organizations. According to Oliver (1980), customer satisfaction pertains to the post-purchase assessment and appraisal of a product or service. It is commonly characterized as the degree to which the selected product either aligns with or surpasses consumer expectations. Maintaining and improving customer satisfaction is an ongoing process. Businesses often use feedback from customers to make strategic improvements and enhance the customer experience.

Indicators of a person's overall satisfaction with the food and service they receive include their perceptions of quality and any differences between what they expected and what they actually experienced (Zhong & Moon, 2020). Customer satisfaction, according to Oliver (1997), is a response after a person evaluates all of the elements in a product or service to see if they are satisfied after using it. An institution, eatery, restaurant, or some parties that provide food and beverage providing services that are ready to be prepared and consumed (or drunk) on the premises or off the premises are referred to as food service. Culinary and catering services are also included. Every business depends on customer satisfaction, and a lack of it can result in frustration, societal dissatisfaction and company failure. Satisfaction or dissatisfaction can have a significant impact on customer behavior and work ethic in the food sector, which can ultimately affect kitchen performance (Singh et al., 2023).

The Institutional Foodservice typically provides service cuisine at the institute. Students can acquire their regular meals at the Institutional Foodservice. Foodservice provided by Institutional Foodservice must maintain a high level of service while also ensuring customer satisfaction. As a result, it is critical for students to obtain their daily meals from Institutional Foodservice, where the food is prepared to a high standard. At this point, Institutional Foodservice operators play a role in food service management, ensuring that the food is clean and the Institutional Foodservice environment is maintained.

Most food service providers should provide a variety of food preparation services to suit consumer needs and improve service quality. Customer satisfaction is a significant determinant of foodservice provider success, according to Shanka and Taylor (2005), which is why many foodservice providers want to know how consumers develop and evaluate service relationships, and how that relationship affects overall levels of consumer satisfaction. Customer satisfaction can have far-reaching effects on a business's bottom line, reputation, and long-term success.

METHODOLOGY

This section illustrates the research methodology used in this study, encompassing key elements such as research design, sample and population, research instruments, data collection process, and data analysis methods. It serves as a comprehensive guide for researchers, facilitating the collection, analysis, and interpretation of data to address research inquiries or attain predefined objectives. The primary objective of a well-defined methodology is to ascertain the reliability, validity, and consistency of research findings.

Research Design

The instrumentation is divided into three sections. The first section is concerned with the respondents' backgrounds. This section addresses the study sample's descriptive data, such as gender, age, and school (major). The primary components of section two are to investigate the quality of service in the dining hall IKTBN Alor Gajah from the perspective of food quality, service quality and the atmosphere of the dining hall. In section three, the respondent will be asked how satisfied they were with their whole dining experience. The number of respondents involved is 226 respondents involving students of the hospitality department of IKTBN Alor Gajah.

The term "research design" encompasses the main strategy and analytical methodology that a researcher selects to systematically integrate the various elements of a study. Its primary objective is to facilitate a systematic and coherent exploration of the research problem, ensuring comprehensive investigation. It serves as the foundational framework for guiding the collection, measurement, and interpretation of data and information. (Vaus, 2001)

In this study, the researcher has used a quantitative approach. The quantitative approach involves information in the nature of checklist questions on a phenomenon. Quantitative approach is a type of educational research in which the researcher determines what to study, asks specific and narrow

questions, collects data in the form of numbers from respondents who are then analyzed using statistics and conducts unbiased investigations to meet the objectives of the study.

To achieve the objective of the study, the researcher used the questionnaire to collect data for primary data collection. The collected data were then analyzed descriptively based on the objectives of the study. The study was a sample study and this design was chosen because it fits the objectives of the study. In addition, the study design that has been planned in a rapid and orderly manner can help researchers obtain the information and data needed for this study.

Sample and Population

This study was conducted at Institut Kemahiran Tinggi Belia Negara (IKTBN) Alor Gajah, Melaka. IKTBN Alor Gajah is located in Lot 641 and 644, Mukim Ramuan China Besar, Masjid Tanah, within the Alor Gajah district of Melaka. The campus occupies an area of 50 hectares, comprising 12 main buildings and various other facilities designed for the convenience of its students. IKTBN Alor Gajah, Melaka, is one of eight centers of excellence for skills-related and technical training institutions under the Malaysian Ministry of Youth and Sports (Kementerian Belia dan Sukan Malaysia or KBS). It is situated in Alor Gajah and has served a diverse student body of approximately 500 individuals from various regions across Malaysia. Established as an initiative of the Kementerian Belia dan Sukan Malaysia (KBS), IKTBN Alor Gajah aligned with the Seventh Malaysia Plan (Rancangan Malaysia ke - Tujuh). Its primary objective was to cultivate a new generation of skilled and innovative entrepreneurs while nurturing resourceful human capital in the technical field among young Malaysians.

IKTBN Alor Gajah commenced its operations in August 2002 and had since welcomed around 16,000 students from across Malaysia. The institution offers ten courses within the Hospitality Technology and Electrical Engineering Technology disciplines. The duration of these courses typically ranged from 18 to 36 months, depending on the specific level of certification students were pursuing.

Each institute provides a wide range of facilities to cater to the needs of its students, and one of these essential amenities is the Institutional Foodservice. The Institutional Foodservice serves as a dedicated space where students can conveniently access and enjoy meals during or following their class sessions. It's noteworthy that each institute of learning maintains its own dedicated

Institutional Foodservice to serve its student population. Consequently, the Institutional Foodservice stands as a crucial and highly utilized facility for students enrolled at the National Youth High Skills Institution (IKTBN).

It is essential to emphasize that no previous research has been conducted on this particular topic. Thus, the researcher has assumed the responsibility of conducting this study to investigate deeper and provide a more comprehensive understanding of Institutional Foodservice. This research aims to clarify various aspects related to Institutional Foodservice that have not been thoroughly explored in prior research project. The target population for this study is hospitality students from IKTBN Alor Gajah. The researcher decides to use purposive sampling. Purposive sampling is a non-probability sampling method and it occurs when elements selected for the sample are chosen by the judgment of the researcher. The sample selection was 226 students.

Table 1.

Population of Hospitality Student from IKTBN Alor Gajah, ILKBS 2019

	Items	Population
Gender	Male	65
	Female	161
Age	18-21	165
	22-25	47
	26-30	14
School	Food and Beverage	44
	Culinary	85
	Pastry	48
	Bakery	49

Source: Student Affairs Unit, IKTBN Alor Gajah 2020

Research Instruments

For the questionnaire, there are three sections in total where the first section is for demographic questions. For section two and three the items were measured based on the degree of agreement agreed upon by the respondents in four Likert scales. In the Likert scale there are two forms of statements namely positive statements that serve to measure positive attitudes, and negative statements that serve to measure the negative attitudes of attitude objects. In this study a positive statement score scale was used and started from 1 which is Strongly Disagree (STS), 2 for Disagree (TS), 3 Agree (S) and 4 for Strongly Agree (SS).

Various tools and methodologies exist for evaluating service quality, and among them, the SERVQUAL (service quality) instrument is notably one of the most widely recognized and utilized (Markovic et al., 2013). In the context of restaurants, the assessment of service quality frequently employs an adapted iteration of SERVQUAL known as DINESERV (Stevens et al., 1995). This study also utilizes a modified version of the DINESERV instrument. DINESERV is esteemed for its reliability and the straightforward manner in which it assesses customers' perceptions of a restaurant's quality. The DINESERV scale, originally developed by Stevens et al. (1995), comprises a set of service-quality criteria categorized into five DINESERV factors: assurance, empathy, reliability, responsiveness, and tangibles.

Table 2.

Instruments Summary of Questionnaire Development

Section	Items	Source	Number of Items
A	Demographic		3
B	Food Quality Service Quality Atmosphere	DINESERV by Steven et al. (1995)	12
C	Overall Satisfaction	DINESERV by Steven et al. (1995)	1

Data Collection and Methods

The respondents were informed that the data gathered are strictly for research purposes. Respondents were given 10 minutes to complete their questionnaire. Data will be analyzed after the data collected from the respondent. The technique used to analyze the data is frequency distribution and descriptive analysis. Descriptive analysis is a technique for describing the key characteristics of data in a study. It gives quick summaries of the sample and the measurements. The researcher is simply describing what is or what the data shows with descriptive statistics.

DATA ANALYSIS

The data are analyzed using frequency and descriptive analysis. Questionnaire has been distributed to the 226 respondents. The response rate is 100%.

Demographic Profile of Respondents

In this section there were three questions being asked which related with the demographic profile of the respondent. As shown on Table 3 most of the respondents are female (n=161, 71%) where male respondent percentage is 29% (n=65). As for the age of the respondent, the majority of respondents are between 18-21 years old (n=165, 73%) and for ages between 26-30 years have the lowest percentage which is 6% (n=14). Under the Hospitality Faculty in IKTBN Alor Gajah there are four (4) schools which are Food and Beverage, Culinary, Pastry and Bakery. Majority of the respondents are from Culinary School with the percentage of 38% (n=85) and the respondents from Food and Beverage School contribute only 19% (n=44).

Table 3.

Demographic Characteristic of the respondents (n= 226)

Description		Frequency	Percent
Gender	Male	65	29%
	Female	161	71%
Age	18-21 years old	165	73%
	22-25 years old	47	21%
	26-30 years old	14	6%
School	Food and Beverage	44	19%
	Culinary	85	38%
	Pastry	48	21%
	Bakery	49	22%

Table 4.*Descriptive Analysis for Food Quality*

Items	Mean	Std. Deviation
I am satisfied with the variety of menus provided	2.67	0.95
I am satisfied with the taste of menu	2.50	0.77
I am satisfied with the portion of the menu	2.33	0.75
I am satisfied with the appeal of the menu	2.16	0.90

Descriptive Analysis

In term food quality factor, the lowest mean score is menu appeal (M=2.16) with the standard deviation 0.90. The item is '**I am satisfied with the appeal of the menu**'. It means that most of the respondents found the menu presentation unappealing. The foodservice operator needs to improve their menu presentation to increase the level of the students. This issue can be overcome by sending the staff to a plate presentation course.

While according to Table 4, the highest mean score is menu variety (M=2.67) with the standard deviation of 0.95. The item is '**I am satisfied with the variety of menus provided**'. Most respondents agree that the foodservice operator provides a variety of menu. One of the benefits of providing a variety menu is that different menus provide different types and amounts of key nutrients.

Table 5.*Descriptive Analysis for Service Quality*

Items	Mean	Std. Deviation
I am satisfied with employee communication skills	2.35	1.11
I am satisfied with dress code of the employee	2.18	1.07
I am satisfied with the waiting time at dining hall	2.75	1.23

I am satisfied with the helpfulness of employee	2.12	1.18
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As shown in Table 5, the service quality factor highest mean score is (M=2.75) with standard deviation of 1.23. The item is **‘I am satisfied with the waiting time at the dining hall’**. It means that respondents feel they are satisfied and agree that the foodservice operator provides a faster service and receives care

less than their expected time. Most of the food and beverage service operator concern about the timing as it is among the top service quality issue

The lowest mean score is (M=2.12) with the standard deviation of 1.18. The item is **‘I am satisfied with the helpfulness of the employee’**. It means that most of the respondents feel unsatisfied with the manners shown by the employee when delivering the service. To counter this issue, foodservice operators need to send or conduct etiquette and customer service training for the staff. The foodservice operator needs to improve their staff performance to capture the students of satisfaction toward Institutional Foodservice.

Table 6.
Descriptive Analysis for Atmosphere

Items	Mean	Std. Deviation
I am satisfied with cleanliness of the dining hall	3.17	0.69
I am satisfied with safety and security level of dining hall	3.16	0.69
I am satisfied with the decoration of dining hall	2.33	0.94
I am satisfied with the layout arrangement of the dining hall	2.16	1.06

The third factor that has been studied is the atmosphere at the dining hall. Table 6 showed that most of the respondents strongly agree that cleanliness gives the highest satisfaction with mean score (M=3.17) and standard deviation of 0.69 compared to layout with mean score 2.16 and standard deviation of 1.06. The items are **‘I am satisfied with the cleanliness of the dining hall’** and **‘I am satisfied with the layout arrangement of the dining hall’**.

Table 7.

Descriptive Analysis for Overall Dining Experience

Items		Frequency	Percentage (%)
I am satisfied with overall dining experience	Strongly Disagree	8	3.5
	Disagree	11	4.9
	Agree	148	65.5
	Strongly Agree	59	26.1

Table 7 shows that 148 respondents or 65.5 % agreed that they were satisfied with overall dining experience at IKTBN Alor Gajah Institutional Foodservice. Meanwhile, 8 respondents or 3.5% disagreed that they were satisfied with the overall dining experience. Based on the table shown, this can be concluding that majority of the student are satisfied with overall service and product provided by the foodservice operator

FINDING AND DISCUSSION

Result

The study conducted was to identify the overall student satisfaction of the Institutional Foodservice from the hospitality student perspective. There are four main objectives are:

1. To discover the food quality at IKTBN Alor Gajah Institutional Foodservice.
2. To explore service quality in IKTBN Alor Gajah Institutional Foodservice.
3. To investigate the atmosphere of IKTBN Alor Gajah Institutional Foodservice.
4. To examine overall satisfaction at IKTBN Alor Gajah Institutional Foodservice.

Based on Table 2, 3 and 4, the highest mean score among three factors (food quality, service quality and atmosphere) is cleanliness (atmosphere factor) with mean score 3.17 and standard deviation of 0.69. Ibrahim and Fadzil (2013) and prior findings (Han & Ryu, 2009) indicated the dining atmosphere has a significant impact on students' satisfaction with the dining facility. Many product offerings in the foodservice industry are very intangible and rely heavily

on the establishment of a great client experience. In accordance with Kim et al. (2009) study, it is recommended that Institutional Foodservice operators maintain a focus on keeping the cleanliness of their facilities, providing a conducive and comfortable dining environment, and promoting a welcoming atmosphere within the dining room. For the lowest mean score is employee helpfulness (service quality factor). The mean score is ($M=2.12$) with the standard deviation of 1.18. The current study's findings demonstrated that all employee behaviours, whether bad or positive, are strongly linked to customer satisfaction. Deborah and Wanda (2008) found that people with a higher possibility of providing outstanding customer service and ensuring customer satisfaction are more likely to be hired. Kim et al. (2009) in his study suggest university food service operators to persist in providing training for their employees. This training should encompass courteous and polite customer greetings, the maintenance of professional appearances, attentive and considerate service, and the enhancement of food-related knowledge. Such efforts are aimed at enabling employees to deliver an elevated level of service to students. As a result, it is clear that employees that behave well will contribute to increased customer satisfaction.

Implication of the study

Customer satisfaction is the most crucial factor for any business, and it is typically considered the most reliable method of evaluation. In order to measure customer satisfaction, this study looked into how much food quality, service quality and atmosphere components influence a student's enjoyment of institutional food service.

This study can benefit foodservice operators in a number of ways, including assisting them in determining factors that lead to student satisfaction. They can use the findings of this study to better understand the factors that influence student satisfaction and incorporate them into their operations.

A thorough examination of customer satisfaction need to be conduct to gather valuable feedback and insights for improvement, helping to refine products, services, and customer experiences. It has the potential to bring about significant and long-lasting effects by promoting customer loyalty and fostering growth through exceptional customer experiences. This, in turn, positively impacts various aspects of a business, including its financial performance, reputation, and long-term viability.

Identifying and addressing the factors that influence customer satisfactions, as revealed by such a study, provides valuable insights for

businesses. By giving priority to and improving these elements, companies can enhance their overall operational efficiency and profitability. Furthermore, higher levels of customer satisfaction are often linked to increased customer loyalty and retention rates. Satisfied customers are more inclined to engage in repeat transactions, resulting in a reduction in customer turnover and the associated costs associated with acquiring new customers.

Besides that, conducting a study on customer satisfaction has the potential to return large and lasting benefits for businesses. It fosters a culture of customer loyalty and positive experiences, ultimately contributing to the long-term success and reputation of the enterprise. Additionally, satisfied customers are inclined to recommend a business to others, effectively becoming supporters who engage in positive word-of-mouth marketing. This form of encouragement can attract new clients and enhance the company's reputation. Furthermore, understanding customer preferences and consistently delivering exceptional service can differentiate a business in a competitive marketplace, serving as a crucial distinguishing factor.

Moreover, satisfied customers are more likely to actively engage with a business through feedback, reviews, and participation in surveys. This engagement offers valuable insights and opportunities for improvement. Furthermore, a study on customer satisfaction can unveil areas where operational processes can be streamlined or refined, resulting in cost savings and heightened operational efficiency.

Also, high levels of customer satisfaction foster strong brand loyalty. Customers who have positive experiences tend to identify closely with a brand and may become enthusiastic brand supporters. Additionally, consistently high levels of customer satisfaction contribute to the long-term sustainability of a business. Satisfied customers are often forgiving of occasional service issues and are willing to give the business an opportunity to rectify any problems.

In summary, the findings of such a study encourage businesses to adopt a customer-centric approach, emphasizing the importance of meeting and exceeding customer needs and expectations. Lastly, it's crucial to note that

customer satisfaction research should be an ongoing and continuous process. Regular assessments and adjustments, guided by customer feedback, are essential for maintaining and continuously improving satisfaction levels.

CONCLUSION

This study has found that customer satisfaction depends on different factors like food quality, service quality and atmosphere. Notably, the research highlights that a pleasant atmosphere significantly boosts customer satisfaction. However, a considerable number of students are unhappy with how dining hall employees perform.

Recognizing the long-term impact of customer satisfaction on business profitability, it's crucial for foodservice operators to understand which aspects require constant monitoring to improve customer satisfaction. To address the dissatisfaction raised in this study, operators must focus on improving employee well-being and job satisfaction. This can lead to more positive attitudes among employees, which in turn can enhance customer satisfaction. Additionally, allowing employees to grow, engage in their roles, and take ownership can play a vital role in improving overall customer satisfaction.

Even though most students are satisfied with the menu, it's vital for the operator not to neglect this aspect. Numerous studies consistently show that food quality is the primary factor strongly linked to customer satisfaction. Thus, foodservice operators should consistently invest in measures to maintain and enhance menu quality, making it a top priority in their operational strategies.

FUTURE RESEARCH AND LIMITATION

Several recommendations for future research in this area become apparent. Firstly, there's a need to broaden the study's sample and respondent scope. Future research should aim to include the entire student population of ILKBS institutions in Malaysia. The current study focused solely on hospitality students, resulting in a limited sample size. Expanding the sample to include a more diverse representation of students from various skill fields and certification programs offered by ILKBS would enhance the study's accuracy and representativeness.

Secondly, future research should prioritize increasing the sample size. The results obtained in this report do not fully represent student satisfaction across all ILKBS institutions in Malaysia. For instance, in the case of IKTBN Alor Gajah, only 226 questionnaires were collected. Therefore, it is strongly

recommended that future research efforts target larger and more diverse participant populations.

Thirdly, it is advisable for future research to consider the inclusion of additional dependent and independent variables. The current study primarily focused on three main factors: food quality, service quality, and atmosphere. Expanding the scope to include other relevant variables would provide a more comprehensive understanding of the factors that influence student satisfaction within the context of Institutional Foodservice.

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