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Modelling Self-service Technology Quality, Acceptance and Customer Delight Toward Sustainable Practices in Fast-Food Kiosk Use

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Abstract

The primary purpose of this study was to determine the relationship of self-service technology quality, acceptance and use, customer delight on sustainable practices of interactive kiosks in the fast-food restaurants. The data were obtained from 660 customers who have used the interactive kiosk in the fast-food restaurants. The study employed mean, Pearson R, regression, descriptive-correlation, and Structural Equation Modeling were utilised in the study as statistical tools. The findings of the study revealed that the level of self-service technology quality, acceptance and use, customer delight and sustainable practices were all high. Moreover, self-service technology quality, acceptance and use, and customer delight were highly correlated to sustainable practices. The results revealed that the endogenous indicators of self-service technology, acceptance and use, and customer delight have missing value treatment to the latent variables to have a goodness of fit measure. Lastly, the final or best fit model passed all the goodness of fit indices criteria. This study implies that more innovation, ambience, excellent service, feedback, and sustainable practices lead to the delightfulness of the customers in the fast-food industry.

Keywords: Self-service technology quality, acceptance, customer delight, sustainable practices, fast-food kiosk

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Introduction

Self-serving ordering kiosk or interactive kiosk in the fast-food restaurant has been gaining momentum in the fourth industrial revolution or industry 4.0 (Hassoun et al., 2022). Indeed, self-service technology has been incorporated more and more into the service sector nowadays (Park et al., 2021) and appears to be one of the technologically diverse self-service forms (Vakulenko et al., 2019). Also, one of the most prevalent and well-liked innovations in the fast-food restaurant (Baba et al., 2023). The fast-food restaurant in South Korea has been observed that the service sector has seen significant changes as a result of the technology-based self-service without the assistance of service professionals in an effort to increase profitability through self-service technologies, lower labour costs, and reduce labour-intensive tasks (Na et al., 2021). The two biggest fast-food restaurant chains in South Korea, Lotteria and McDonald's, claim that roughly 60% of all the establishments they manage have touchscreen kiosks installed (Yonhapnews 2019). Such kiosks do have drawbacks, too, including being less cost-effective than anticipated because installation and maintenance of the kiosks still require labour (Yonhapnews, 2019). Self-service kiosks have also been criticised for not being able to satisfy all of the demands of different clients, even when they reduce the order and payment times (Biz, 2018). However, customer acceptance and use of self-service technology in Malaysia at fast food restaurant is one of the utmost importance and company's existence at a time of intense competition depends on it that leads to more profit and revenue through repeat purchases which tend to that product through delighted customer (Jamil et al., 2020). McDonald's, one of the fast-food chains in Manila that uses self-service technology, has a strong demand for customers, so service providers have prioritised and concentrated on decreasing waiting times for customers as well as speeding up the delivery of the restaurant's services (Sy et al., 2021). Technologies like self-service technology, in the opinion of Shin & Kang (2020), could be viewed as a risk-reduction technique that will aid the service sector in recovering from the losses sustained during the pandemic. Due to the reduced need for human interaction and the ability to offer customers specific transaction options based on perceived health concerns, self-service technologies may therefore have a stronger impact on the future of the restaurant business (Sy et al., 2021). On the other hand, one of the issues facing Jollibee Foods Corporation in Cebu is the long queues waiting to be served. With this problem, Jollibee plans to upgrade its processes in managing its global organisation, requiring it to be at the forefront of customer service in product innovations, and must keep abreast with emergent technologies and trends in the industry (Gutierrez, 2021). Additionally, research on fast food restaurants' use of various technologies, including how they compete with one another in this area or what advantages come with adopting technological breakthroughs, is becoming popular in Davao City, as highlighted by Peimani & Kamalipour (2022). Fast food establishments must digitalise a typical drive-through in order to meet customers' modern food service needs as the food service sector continues to expand exponentially (Castillo et al., 2020).

However, the existing studies did not identify the relationship between self-service technology quality, acceptance and use, customer delight and sustainable practices. Thus, based on the problem statement and the background of the research, this study will examine the self-service technology quality, acceptance and use, customer delight on sustainable practices of interactive kiosk in the fast-food restaurant in Davao Region. The primary goal of the study is to determine how customers in the Philippines' Davao Region feel about self-service kiosks at fast food restaurants. Such a topic was not covered in many

studies. This is the first time that a study on the self-service technology quality, acceptance, and use, customer delight and sustainable practices of interactive kiosks in the fast-food restaurants will be undertaken in the Davao Region. The research findings are anticipated to close a knowledge gap, as well as to offer academics and practitioners practical guidance regarding the self-service technology quality, acceptance and use, customer delight, and sustainable practices of interactive kiosks in the fast-food restaurants in the Davao Region. As a result, concerned beneficiaries may find the study to be a helpful tool in formulating potential fixes for linked problems. The purpose of this quantitative study is to determine the relationship between self-service technology quality, acceptance, delight, and sustainable practices of interactive kiosks in fast food restaurants in Davao Region, Philippines. Specifically, the study sought to attain the following objectives:

To assess the level of self-service technology quality of interactive kiosks among fast food restaurants in terms of functionality, enjoyment, security, assurance, design, convenience, and customisation.

To ascertain the level of acceptance and use of interactive kiosk among fast food restaurants in terms of performance expectancy, effort expectancy, social Influence and facilitating conditions.

To measure the level of customer delight of interactive kiosk among fast food restaurants in terms of product and service quality, marketing strategy, customer focus and differentiation.

To discover the level of sustainable practices of interactive kiosks among fast food restaurants in terms of food sustainability practices and waste reduction practices.

To establish the significant relationship between self-service technology quality and sustainable practices, acceptance and use and sustainable practices, customer delight and sustainable practices.

To determine which model best fits the sustainable practices among fast food restaurants.

The following hypotheses were tested at 0.05 level of significance:

There is no significant relationship between self-service technology quality and sustainable practices.

There is no significant relationship between acceptance and the used and sustainable practices.

There is no significant relationship between customer delight and sustainable practices.

There is no influence on self-service technology quality, acceptance and use, and delight on sustainable practices.

Literature review

Self-service technology quality

One sort of information and communication technology (ICT) known as self-service technology (SST) enables customers to design their own services, such as personal service, self-service, or a combination of the two, with little to no assistance from staff or service providers (Jamil et al., 2020). Fast food restaurant industry has used various forms of information technology to help deliver their services to customers more effectively and efficiently while also improving the general quality of the services provided (Law et al., 2020). In addition, Park et al. (2021) enumerated the indicators that identify self-service technology quality, which refers to functionality, enjoyment, security, assurance, design convenience and customisation. *Functionality.* It speaks of a property of self-service technology's functionality (Ghosh, 2020). Functionality determines how effectively a technology delivers services in a short amount of time, as well as how simple it is to use and how accurate the results are. It highlights the unique qualities of SSTs (Pai et al., 2022). *Enjoyment.* It refers to the joy people get when using the self-service technology (Ghosh, 2022). The degree to which customers experience enjoyment while utilising SSTs is characterised as enjoyment (Lin & Hseih, 2011). People are more likely to use the self-service alternatives if technology-based self-service sounds fun (Pai et al., 2022). *Security.* It refers to protection from external scams or the loss of sensitive user information (Ghosh, 2022). When individuals interact with SSTs, they should not feel frightened at risk, or suspicious. This is what security/privacy entails. Customers' trust in the usage of SSTs, confidence in the technology's ability to protect their personal information, and conviction that there is no chance of fraud are all mentioned (Pai et al., 2022). *Assurance.* The goal of assurance is to provide users confidence because of the service provider's good reputation (Ghosh, 2022). Assurance refers to a company's reputation for reliability and safety in the provision of services (Pai et al, 2022). According to Lin and Hsieh (2011), an important component of SST evaluation is assurance, which they defined as the standing and expertise of organisations offering SSTs.

Design. It pertains to the SST service system's general design (Ghosh, 2022). The aesthetics of the facilities depicted in the most recent photographs, as well as the colour scheme and interface screen arrangement, are all part of the design of SSTs (Ahn & Seo, 2018). The design has been used to gauge two things: (1) customers' opinions of the SSTs' interface and aesthetics; and (2) how new the technology is seen to be (Lin & Hsieh, 2011; Pai et al., 2022). *Convenience.* It represents service accessibility from anywhere at any time in the fast-food restaurant using a self-service ordering kiosk (Ghosh, 2022). The degree to which customers can use the SSTs at a convenient time and location is referred to as convenience (Pai et al., 2022). *Customization.* It measures how adaptable the SST is to the client's unique requirements Ghosh, 2022). The degree to which SSTs are customised to match customer needs and preferences. Adding a customisation dimension makes it possible to satisfy the demands and preferences of individual customers, improving the quality of the service (Pai et al., 2022).

Acceptance and use

The unified theory of acceptance and use of technology (UTAUT) model was developed concurrently with other research projects looking at the reasons behind and processes involved in new information technology adoption (Venkatesh et al., 2003; Jeon et al., 2022). One of the most popular theories, the unified theory of acceptance and usage of technology has been successfully replicated multiple times and is used to investigate a variety of technologies and even contexts outside of employee adoption (Venkatesh, 2021). Numerous factors that may influence people's use of different technologies have been identified by research on technology adoption (Al-saedi et al., 2020). *Performance expectancy.* The degree to which a person believes that using an information system will help them execute their job or task more effectively is referred to as performance expectancy (Jeon et al., 2020). In other words, it is associated with utility, increased productivity, and users' perceptions of efficiency when utilising new technology.

Effort expectancy. The term effort expectancy describes the level of ease associated with the application of a system (Al-saedi et al., 2020). In the early stages of a technology's introduction, effort expectancy may play a significant role in predicting adoption intentions. However, as users get used to technology, these factors have less of an impact on adoption intentions over time. Technology adoption is initially significantly influenced by effort expectancy, but this influence declines over time (Jeon et al., 2020). Thus, customers are more likely to use technology if it is readily available, increasing the likelihood that they will embrace and adopt it (Alam et al., 2018). *Social influence.* A user's perception of the extent to which people close to them think they should adopt a new information system is known as their social influence (Jeon et al., 2020). In other words, someone who is close to them and believes that using new technology is important is likely to be influenced and convinced (Lee et al., 2019). *Facilitating conditions.* The degree to which someone thinks that there are "facilitating conditions" Infrastructures are in place both technically and organizationally to support the application of new technology (Jeon et al., 2020). Additionally, it has been noted that facilitating conditions have a favourable impact on acceptance intention of the self-service technology (Alalwan et al., 2018).

Customer delight

Customer delight is at its highest level of satisfaction when customers have thresholds at which they are unhappy (performance is significantly below expectations), satisfied (performance is within expectations), and delighted (performance is significantly above expectations), as cited by Barnes & Krallman (2019). In recent years, scholars and practitioners have become interested in the concept of customer delight (Barnes et al., 2021). In addition, Hubay et al. (2023) enumerated the indicators that identify customer delight, which refers to product and service quality, marketing strategy, customer focus and differentiation. *Product and service quality.* one of the most important factors in determining customer delight across all business sectors and societal domains (Hallencreutz & Parmler, 2021). The difference between the customer's expectations of the service provider and their judgment of the services, according to Ali et al. (2021), is what constitutes service quality. Additionally, there is a difference in service quality between what customers anticipate would happen when they receive services and what they see when they receive them. *Marketing strategy.* It consists of fast-food businesses' online and offline marketing initiatives on social media and email that increase brand awareness and allow them to communicate with their customers through various channels (Gupta, 2019). The foundation of a business's actions or marketing initiatives is its marketing strategy (Halim & Halim, 2019). *Customer focus.* The core of this concept is to satisfy the customer with the necessary work correctly the first time, as well as to take into account all employees as the customer's focus of activity and attention, regardless of the nature of their functions, and employees must look into customer reactions to the services or products provided (Saffar & Obeidat, 2020). *Differentiation.* The most important component in determining how inventive a brand is and how well a fast-food restaurant performs is differentiation concerning menu, service, promotion, physical facility and it was found that excellent restaurants are more inventive than inferior ones (Kim et al., 2021).

Sustainable practices

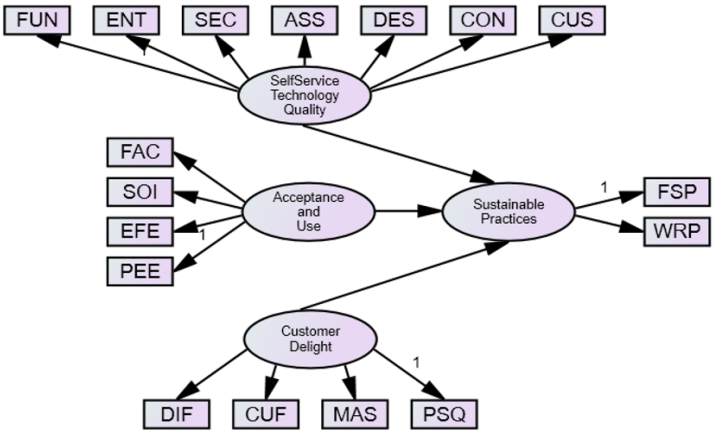
Sustainability practices is a significant topic in business processes and customers lifestyles (Elkhwesky et al., 2022) where sustainability practices play a critical role in the fast-food restaurants (Ocampo et al., 2021) and are significant for achieving customer delight, increasing competitiveness, and improving their performance (Cantele & Cassia, 2020). The adoption of sustainable practices depends heavily on the organisational trait of innovation (Chege & Wang, 2020). According to Bourhis et al. (2013), focusing on the sustainable practices of fast-food restaurants and quoted by Martins et al. (2019), sustainability has grown in importance as a source of competitive advantage for businesses. In light of recent studies (Lu et al., 2019; Persdotter et al., 2019), society is increasingly requiring businesses to adopt sustainable practices across all aspects of their supply, manufacturing, and distribution chains. In order to maximise financial gains and improve the economic and environmental sustainability of local communities, sustainable practices are crucial for the restaurant business (Han, 2020). In addition to minimising the restaurant industry's enormous carbon footprint (Ozgen et al., 2021), actions like waste reduction practices, the use of single-use plastics, promoting recycling, and food sustainability practices providing more locally sourced, organic, and vegetarian food options convey a competitive advantage (Hussain et al., 2020). Thus, sustainability practices may benefit from increased delighted customers, enhanced self-service kiosk technology quality (Dhir et al., 2021), and acceptance and use of the interactive kiosks in the fast-food restaurants.

Theoretical framework

This study was anchored on the concept of service quality (SERVQUAL), as espoused by Parasuraman et al. (1988). They stated that self-service technology in situations where service was provided face-to-face, service quality was based on the discrepancy between customer expectations and perceived actual performance. For this reason, Lin & Hsieh (2011) developed the SSTQUAL scale to gauge how well customers feel their technology-based services are provided, cited by Joshi & Joshi (2020). This scale has seven components: functionality, fun, assurance, security, design, ease of use, and customisation (Adil, et al., 2020). The technology acceptance model (TAM) and the unified theory of acceptance and use of technology (UTAUT) (Davis et al., 1989; Venkatesh et al., 2003) concerning performance expectancy, effort expectancy, social influence, and facilitating conditions were models and theories that researchers used to understand how customers adopted technology (Jeon et al., 2020). The UTAUT model was developed concurrently with numerous studies looking at why and how people use new information technologies. Individual components can also have an impact on the adoption of technological innovations (Dwivedi et al., 2019). Regarding how customers accept any IT-based devices (Xu et al., 2020). Thus, this is an adaptation of the theory of reasoned action (TRA) specifically meant for understanding individuals' acceptance of the interactive kiosk in the fast food restaurants (Davis, 1986; Ghosh, 2020). Additionally, the theory of customer delight developed by Parasuraman et al. (2021) is defined as emotion and surprise, which is defined as a positive sensation that customers feel when their expectations are unexpectedly and pleasantly exceeded, to unanticipated and surprising. Also, according to the cognitive appraisal theory (CAT), by Bagozzi et al. (1999), customers are more likely to return to fast food restaurants if they are pleased with the product and service quality, marketing strategy, customer focus, and differentiation (Hubay et al., 2023). This theory focuses on analysing how one's interactions with particular emotions impact their behavioural choices. According to the concept of sustainable practices, there has been a significant increase in research on the restaurant industry related to food sustainability and waste reduction (Baldwin et al., 2011; Hu et al., 2013; Pirani & Arafat, 2016; Visschers & Siegrist, 2015). In response to research by Baldwin et al. (2011) and cited by Kim et al. (2020), sustainable practices in the fast-food industry that complied with the Green Seal standard certification greatly reduced their environmental impact without incurring any additional long-term expenditures. Due to worries about the disposal of edible food, the environmental impact of plastics, and the connections between waste and carbon emissions, waste reduction is currently a top priority for the government and the restaurant industry (Pirani & Arafat, 2016). Based on several research studies, the restaurant industry is adopting sustainability and waste reduction practices (Gössling et al., 2011; Jang et al., 2017; Martin-Rios et al., 2018). Predicting consumer response to efforts becomes crucial in influencing the adoption of sustainable restaurant practices, such as strategies for waste reduction and sustainable food (Kim et al., 2020).

Conceptual framework

The model showing the direct link of the latent exogenous variables towards the latent endogenous variables was illustrated in Figure 1.



Legend:
SSTQUAL - Self-Service Technology Quality
FT – Functionality
EM – Enjoyment
SC – Security
AR – Assurance
DS – Design
CV – Convenience
CZ – Customization
AUS - Acceptance and Use

PE - Performance Expectancy
EE - Effort Expectancy
SI - Social Influence
FC - Facilitating Conditions
CDT - Customer Delight
PSQ - Product and Service Quality
MS - Marketing Strategy
CS - Customer Focus
DF – Differentiation

SUP- Sustainability Practices
FSP -Food Sustainability Practices
WRP - Environmental Sustainability

Figure 1. A model showing the direct link of the latent exogenous variables towards the latent endogenous variables

The models were explored to come up with the best interlinkages among the variables, namely self-service technology quality, acceptance and use, customer delight and sustainable practices, which would serve as the basis for continuous quality improvement among fast food restaurants. The first exogenous variable was self-service technology quality from the study of Park et al. (2021). This variable has seven indicators: functionality, enjoyment, security, assurance, design, convenience, and customisation. The second exogenous variable was acceptance and use of self-service technology derived from Jeon et al. (2020). Performance expectancy, effort expectancy, social influence and facilitating conditions are the attributes of acceptance

and use of the self-service technology. The third exogenous variable was customer delight from the study of Hubay et al. (2023), was taken into consideration in the choice or selection of indicators used in this study. The following indicators are product and service quality, marketing strategy, customer focus, and differentiation. The latent endogenous variable was the sustainable practices adapted from the study of Kim & Hall (2020) with two indicators: food sustainability practices and waste reduction practices.

Method

In this study, the researcher utilised a quantitative non-experimental design research method (Parcel et al., 2022). In the generation of the best fit model, the structural equation model (SEM) was used. This was used to aid in the explanation and interpretation of social phenomena without directly affecting the circumstances of the participants (Frey & Šešelja, 2018; Yanong-Tupas & Schneider, 2022). The purpose of this study was to determine the connection between self-service technology quality, acceptance and use, customer delight on sustainable practices on interactive kiosk among fast-food restaurants in Davao Region using a correlational technique. First, it was employed the descriptive-correlation method of research in which this method is a measure of the relationship of the variable with the changeable level of extent. It was emphasised by Szapkiw (2012) and cited by Beceira & Genuba (2022) that descriptive-correlation studies provided an understanding of what is in a particular condition with a recognised population and scrutinised the level to which two or more variables correlate with one another. Second, this review utilised the primary condition model (SEM). Lomax & Li (2013) and Beciera & Genuba (2022) indicate that this method blends factor assessment with rear entryway examination to test the speculative relationship among disguised factors. Here, repeats range from easy to complex, of quite a few elements or types that can be involved (i.e., noticed, inactive, free, or potentially subordinate factors). The mixture of figure investigation primary condition demonstrates licenses the specialist to use compound strategies of each static variable as an alternative to a specific measure; it works with advanced conditions and individual evaluation. As per the Philippine Statistics Authority of Region XI, the population of the Davao Region was 5,243 536. Based on the Raosoft sample size calculation with confidence level of 95%, the recommended sample size is 660 customers who have used self-service ordering kiosk among fast-food restaurant in Region XI. This region known as the Davao Region which lies in the southeastern part of the Mindanao. The researcher opted to choose five provinces in Region XI who have used self-serving ordering kiosk in the operation namely Davao del Sur, Davao Occidental, Davao del Norte, Davao Oriental and Compostela Valley which has 6 component cities including Davao, Panabo, Tagum, Digos, Mati and Island Garden City of Samal among fast-food restaurants. Further, in selecting the respondents, the stratified random sampling procedure was employed to obtain a sampling frame to estimate the population parameters from the weighted sample data which are got by means of simple random sampling from each stratum as highlighted by Rahman et al. (2022). The study was conducted from May 2023 to August 2023 in the School Year of 2023 – 2024. In any ethnicity, the respondents were legal age and customers of fast-food restaurants who have used self-service kiosk upon ordering.

Table 1: Demographic profile of respondents

Profile of Respondents	# of Respondents	Percentage
Sex		
Male	244	36.97%
Female	416	63.03%
Age		
19 Below	31	4.70%
20-29	520	78.79%
30-39	82	12.42%
40-49	22	3.33%
50-59	5	0.76%
60 above	0	0%
Civil Status		
Single	601	91.06%
Married	59	8.94%
Widow	0	0%
Educational Attainment		
Elementary Level	1	0.15%
Elementary Graduate	1	0.15%
High School Level	4	0.61%
High School Graduate	13	1.97%
College Level	329	49.85%
College Graduate	278	42.12%
Master's Degree	23	3.48%
Doctors Degree	11	1.67%
Davao Region XI		
Davao City	110	16.67%
Davao Del Sur	110	16.67%
Davao Occidental	110	16.67%
Davao Del Norte	110	16.67%
Davao De Oro	110	16.67%
Davao Oriental	110	16.67%
TOTAL	660	100%

Table 1 shows the demographic profile of the respondents. Majority of the respondents responded the survey was 416 females with 63.03% ages 20-29 year old of 520 number of respondents with 78.79% who are single with 91.06% equivalent to 601 number of respondents were college level at 49.85% of 329 respondents and coming from Davao Region or Region XI who have used the interactive kiosk in the fast food restaurants. The researcher was used an adapted questionnaire from Park et al. (2021) for the self-service technology quality; Jeon et al. (2020) for acceptance and used; Hubay et al. (2023) for customer delight; and Kim & Hall (2020) for the sustainable practices which was measured in a five-point Likert scale from very high to very low. A pilot test was conducted to determine the extent to which the items in the instrument measure each of the self-service technology quality, acceptance and use, customer delight and sustainable practices. The instrument was pre-tested with 30 participants comprising customers who have used self-service kiosk in fast-food restaurants. The following data treatment

approaches were mean, standard deviation, Pearson R, Stepwise Regression, and Structural Equation Model (SEM) was used in the computation of data and testing the hypothesis at alpha 0.05 level of significance.

Results and discussion

Self-service technology quality

Presented in Table 2 is the level of self-service technology quality, which is measured by seven indicators, namely: functionality, enjoyment, security, assurance, design, convenience, and customisation. These indicators obtained an overall rating of 4.13 described as high. This means that the customers who have used interactive kiosk among fast food restaurants in Davao City were satisfied and very much observed the self-service technology quality. Scrutinising the individual results of the indicators revealed that the design got the highest mean score of 4.26 followed by enjoyment (m=4.23), convenience (m=4.19), assurance (m=4.14), customisation (m=4:06), functionality (m=4.04), and security got the lowest mean score of 3.97.

Table 2: Level of self-service technology quality

Indicators	SD	Mean	Descriptive Level
Functionality	0.64	4.04	High
Enjoyment	0.68	4.23	Very High
Security	0.79	3.97	High
Assurance	0.76	4.14	High
Design	0.70	4.26	Very High
Convenience	0.72	4.19	High
Customization	0.73	4.06	High
Overall	**0.60**	**4.13**	**High**

Findings reveal that the self-service technology quality of the interactive kiosk in the fast-food restaurants got the highest level of design, with a mean of 4.26 and a standard deviation of 0.70. Moreover, customers were delighted with the acquired interactive kiosk in the fast-food restaurants because the layout was aesthetically appealing and appeared to use up-to-date technology. Therefore, the results corroborate the findings of the study by Park et al. (2021), which found that the interactive kiosk design in fast food restaurants gave preference to the customers due to the use of technology and the possibility of a novel experience that would pique their curiosity. In terms of enjoyment, diners and customers appreciated utilising the interactive kiosks in fast food restaurants because they were interested in the features, functionality, and design of the system, which also provided all pertinent information when placing an order. The findings of this research support those of Lian (2021), who found that the customer enjoyed utilising the interactive kiosk in the fast-food restaurants because of its convenience, flexibility and accessible navigation of the kiosks. In terms of convenience, assurance and customisation, diners who have used interactive kiosks when placing their orders, the kiosk easy and convenient to use. Whilst assurance of interactive kiosk in the fast-food restaurant was well known and had a good reputation.

Lastly, it can be seen the results that security got the lowest mean of 3.97 with a standard deviation of 0.79. Utilising the interactive kiosk where diners or customers felt safe and had a clear privacy policy was stated upon settling and placing orders. Fast-food restaurants have an option on how they will settle their payments due to their trust and security, navigating the interactive kiosk. These findings support the study of (Considine & Cormican, 2016; Park et al., 2021) that security is the most important among SSTQ attributes. The study's findings also demonstrate that, as additional communication support has a major influence on the attributes of functionality, security, assurance, convenience, and customisation, it should be regarded as a crucial interactive kiosk technical feature. This shows that even while customers give interactive kiosks themselves, they still want the ability to contact employees for assistance when needed (e.g., employee live chat). This is because both interactive kiosk users and technological malfunctions will inevitably lead to interactive kiosk failure (Shin and Perdue, 2019). Fast food establishments should, as Williams & Savage (2019) suggested, recognise the need to strike a balance between the importance of technology in empowering guests and the value of people, since the latter cannot fully replace the former. In particular, service staff members possess the ability to comprehend particular circumstances, including malfunctions in the service, and provide support in the most efficient manner possible. This study serves as a fair caution to any service providers who solely offer SST in this way. Therefore, the findings of this study were highlighted by Barrett et al. (2015), Lee (2016), and Hamid et al. (2021) that the self-service technology quality has transformed the facets of interaction service to the customers which is rapidly gaining the attention and innovation of customer dining experience in the use of self-service technology (Jeon et al., 2022) concerning functionality, enjoyment, security, assurance, design, convenience, and customisation. Indeed, this is a big impact to the operation of the fast-food industry, which can reduce labour costs and improve the operating efficiency as well as on the customers' convenience and reduce waiting time (Turner & Szymkowiak, 2019). Therefore, the self-service technology quality of the interactive kiosk reduces wait times and ensures accuracy of the delivery of innovative service, which will simplify the customer experience through acceptance and use of the self-service technology quality offered, that can also increase the delightfulness of the customer. As a result, wait staff may concentrate on giving exceptional customer service and expediting the exit of customers from fast food restaurants.

Acceptance and use

Table 3 highlighted the level of acceptance and use of interactive kiosks among fast food restaurants in terms of performance expectancy, effort expectancy, social influence and facilitating conditions. It can be seen that the overall rating is 4.17 with a standard deviation of 0.63, described as high. This means that the acceptance and use of interactive kiosks by customers was observed in the fast-food restaurants. The mean ratings are sorted out from the highest to lowest as follows: effort expectancy

(m=4.27), performance expectancy (m=4.24), facilitating conditions (m=4.24) are described as very high, whilst social influence (m=3.93) is described as high.

Table 3: Level of acceptance and use

Indicators	SD	Mean	Descriptive Level
Performance Expectancy	0.69	4.24	Very High
Effort Expectancy	0.70	4.27	Very High
Social Influence	0.84	3.93	High
Facilitating Conditions	0.68	4.24	Very High
Overall	**0.63**	**4.17**	**High**

After a thorough analysis of the data, the performance expectations for acceptance and use were found to be highest, with facilitating conditions receiving a mean score of 4.24 with a standard deviation of 0.69 and 0.68. According to performance expectations, diners or customers who used interactive kiosks in fast food restaurants were delighted because they could complete the ordering and payment process more quickly, efficiently, and usefully. Customers were thrilled with the interactive kiosk's facilitating conditions in the fast food restaurant because the staff members felt comfortable, could assist with system errors, offered self-order payment services, and provided simple-to-understand instructions for using the interactive kiosk. This study supported the study of Venkatesh (2021) that individual perceives that using an interactive kiosk in a fast-food restaurant will help improve customer performance. In other words, it is related to usefulness and increases in productivity and efficiency that users or customers perceive when using new technology like an interactive kiosk. It was asserted by Jeon et al. (2020) that positive usage intention is triggered when users perceive that an information system is easy to use and requires little time and effort to learn. Research in various fields suggests that performance expectancy and facilitating conditions have significant effects on the user's intention to adopt as well as subsequent actual use (Alalwan et al., 2018). When it came to effort expectations, customers who utilised interactive kiosks in fast food restaurants were thrilled since they were simple to use, intuitive, and skilled when it came to making food purchases. Alam et al. (2018) and Jeon et al. (2020) found in their study that the interactive kiosk's effort expectation in fast food restaurants was that customers' simple access to technology encourages them to utilise it, raising the likelihood that they will accept and use the technology. In other words, the intention to embrace a technology is positively connected with effort expectancy. Numerous studies have supported this finding (Alalwan et al. 2018; Arenas-Gaitán et al. 2015; Jiang et al., 2016). Social influence got the lowest mean score of 3.93 with a standard deviation of 0.84. This means some of the customers were influenced to use the interactive kiosk in the fast-food restaurants because of their family, friends, colleagues or social media to try new technology when placing an order. This study, supported by Lee et al. (2019) that an individual is likely to be influenced and persuaded by the people who are close to him/her and perceive that the use of new technology is important. Based on the findings, authors have asserted that interactive kiosks in fast-food restaurants can improve the service quality of the fast-food restaurants because of technological innovations (Yaacob et al., 2021). For this reason, customers were curious and tend to demand for a new experience and things especially in innovation technology concerning performance expectancy, effort expectancy, social influence and facilitating conditions which can enhance the attraction, acceptance, use, and delightfulness of the customers towards product and services (Lowe & Dwivedi, 2019).

Customer delight

Displayed in Table 4 is the level of customer delight in terms of product and service quality, marketing strategy, customer focus and differentiation. These indicators generated an overall mean of 4.18, which is described as high. The marketing strategy got the highest mean score of 4.24, followed by differentiation (m=4.20), product and service quality (m=4.16) and customer focus (m=4.12). This means that the use of interactive kiosks in fast-food restaurants was observed and appreciated by the customers.

Table 4: Level of customer delight

Indicators	SD	Mean	Descriptive Level
Product and Service Quality	0.64	4.16	High
Marketing Strategy	0.62	4.24	Very High
Customer Focus	0.71	4.12	High
Differentiation	0.71	4.20	Very High
Overall	**0.62**	**4.18**	**High**

Marketing strategy got the highest mean score of 4.24 with standard deviation of 0.62 were customers or diners delighted because the fast-food restaurants has a customer service reached in social medias, active social media engagement, promos, continues to improve and innovate its menu and technology like interactive kiosk, known by word of mouth, accessible, and strictly implements discounts for senior citizens and PWDs. The study's findings support Torres & Kline's (2013) assertion that favorable emotional reactions from delighted customers must result in positive word-of-mouth communication. Similarly, Pearson (2016) provided an example of this as a successful strategy for educating customers, differentiating the company's goods and services from those of its rivals, and increasing sales significantly. According to Hirschman & Holbrook (2012), offering solely utilitarian benefits will not be sufficient in the current product and service landscape. As a result, businesses must effectively market the benefits they have in store for their customers, from first-rate customer service to engaging experiences that make customers' visits worthwhile. Differentiation, customer delighted because of its ambience, the staff are hospitable, and it has a unique self-service ordering kiosk compared with other fast-food restaurants. The results are consistent with the claims made by Jayasimhan et al. (2017), who claimed that setting originality will give diners an unexpected feeling in addition to comfort and a delightful dining experience. Furthermore, Jovanovic et al. (2014) asserted that a restaurant's

uniqueness is defined by its outstanding food, first-rate service, and a distinctive idea of ambience that makes a visit worthwhile. Overall, the restaurant received great marks for delighting its patrons, particularly in the areas of distinctiveness and high-quality goods and services. This implies that restaurants place a greater focus on making sure that customers have an unforgettable, authentic eating experience and that they can make an impression of quality (in both product and service). Regarding the product and service quality, the customer was thrilled with the excellent service, the knowledgeable personnel who engaged them, the interactive ordering kiosk's unique experience, the portion size of the food, the consistency with which the cuisine was maintained, and the overall value for the money. Customer delight can be generated through interactions with front-line staff, standard services that go hand in hand with the product, and the quality of the product itself, according to research backed by Ali et al. (2018). Additionally, this supported Tripathi & Dave's (2016) assertion. Therefore, customers visit restaurants for more than just the food or cuisine—they also come for the ambience, prompt service, personalised attention, and indulgent treats. They also said that customers are not solely motivated by the quality of the cuisine to be satisfied; they are also greatly influenced by the quality of the services provided.

Customer focus got the lowest mean score of 4.12 with a standard deviation of 0.71. Some of the customers were delighted because the fast-food restaurant staff makes sure that the complaint is settled before the customers leave, assists the customers in navigating the interactive kiosk installed, gives a complimentary gift if there's a complaint, and is open for suggestions for improvement. This result is consistent with research (see Barnes et al., 2016; Wang et al., 2017), which emphasises that satisfying customers' emotional demands is the key to achieving customer delight. According to these studies, a customer's emotional needs can be satisfied through an interaction that provides a recommendation. This can also be demonstrated by asking a customer for feedback or a suggestion regarding a course of action. Furthermore, according to Hubay et al. (2022), customer recommendations are an instance of informational social influence in which a staff member offers reliable proof of reality. They went on to say that giving customers advice causes them to get mentally engaged with the company and its offerings, and that the delight they feel is probably because of the company. The findings supported by the study of Hubay et al. (2023) that the customer delightfulness experience of the customers are essential consideration in the fast food restaurants where providing great customer goods and innovative services like interactive kiosk stimulates customer inclination towards the fast food restaurants and its services concerning product and service quality, marketing strategy, customer focus and differentiation which were the customers particular on the factors that characterise customer delight in the fast-food restaurants.

Sustainable practices

Shown in Table 5 is the level of sustainable practices, which is measured by food sustainability practices and waste reduction practices. These two indicators obtained an overall mean of 3.76, described as high. This means that the customer was much observed on the sustainability practices in the fast-food restaurants concerning waste reduction practices (m=3.89) and food sustainability practices (m=3.64).

Table 5: Level of sustainable practices

Indicators	SD	Mean	Descriptive Level
Food Sustainability Practices	0.83	3.64	High
Waste Reduction Practices	0.78	3.89	High
Overall	**0.75**	**3.76**	**High**

In order to protect the environment and lessen the carbon footprint of food consumption and waste, authors claim that enticing patron engagement in sustainable restaurant activities, such as waste reduction and food sustainability practices, is crucial. This can be accomplished by offering sustainable food, innovative restaurant services like interactive kiosks, and environmentally friendly goods that are valued by consumers. Doing so will delight consumers and increase the acceptance and use of interactive kiosks in fast food restaurants.

Significance of the relationship between self-service technology quality and sustainable practices of interactive kiosk among fast food restaurants

Exhibited in Table 6 is the significance of the relationship between self-service technology quality and sustainable practices of interactive kiosks among fast food restaurants.

Table 6: Significance of the relationship between self-service technology quality and sustainable practices of interactive kiosk among fast-food restaurants

Self-Service Technology Quality	Sustainable Practices		
	Food Sustainability Practices	Waste Reduction Practices	**Overall**
Functionality	.356** .000	.406** .000	**.409** .000**
Enjoyment	.294** .000	.413** .000	**.378** .000**
Security	.383** .000	.411** .000	**.426** .000**
Assurance	.270** .000	.351** .000	**.332** .000**
Design	.289** .000	.387** .000	**.362** .000**
Convenience	.332** .000	.452** .000	**.419** .000**
Customization	.378** .000	.473** .000	**.456** .000**
Overall	**.396** .000**	**.498** .000**	**.479** .000**

The table showed that the self-service technology quality is significantly related to the two dimensions of sustainable practices as reflected by the p-value that is less than 0.05 and correlation coefficient, r=.479. This means that the self-service technology quality has a positive relationship and is strongly related to sustainable practices.

Significance of the relationship between acceptance and use and sustainable practices of interactive kiosks among fast food restaurants

Reflected in Table 7 is the significance of the relationship between acceptance and use and the sustainable practices of interactive kiosks among fast-food restaurants. The table showed that the acceptance and use are significantly related to the two dimensions of sustainable practices as reflected by the p-value that is less than 0.05 and the correlation coefficient, r=.508. This means that the acceptance and use of interactive kiosks in fast-food restaurants has a positive relationship and is strongly related to sustainable practices.

Table 7: Significance of the relationship between acceptance and use and sustainable practices of interactive kiosks among fast-food restaurants

Acceptance and Use	**Sustainable Practices**		
	Food Sustainability Practices	Waste Reduction Practices	**Overall**
Performance Expectancy	.341** .000	.427** .000	**.412** .000**
Effort Expectancy	.323** .000	.394** .000	**.384** .000**
Social Influence	.495** .000	.481** .000	**.525** .000**
Facilitating Conditions	.339** .000	.441** .000	**.417** .000**
Overall	**.440** .000**	**.507** .000**	**.508** .000**

Significance of the relationship between customer delight and sustainable practices of interactive kiosks among fast food restaurants

Featured in Table 8 is the significance of the relationship between customer delight and the sustainable practices of interactive kiosks among fast-food restaurants. With an overall R-value of .617 ($p<0.05$), it shows that there is a strong positive relationship between customer delight and sustainable practices. This means that the customer delight who have used interactive kiosks in the fast-food restaurants has a positive relationship and is strongly related to sustainable practices.

Table 8: Significance of the relationship between customer delight and sustainable practices of interactive kiosk among fast-food restaurants

Customer Delight	**Sustainable Practices**		
	Food Sustainability Practices	Waste Reduction Practices	**Overall**
Product and Service Quality	.508** .000	.589** .000	**.588** .000**
Marketing Strategy	.409** .000	.520** .000	**.498** .000**
Customer Focus	.528** .000	.598** .000	**.604** .000**
Differentiation	.487** .000	.577** .000	**.570** .000**
Overall	**.528** .000**	**.623** .000**	**.617** .000**

Significance of the influence of self-service technology, acceptance and use and customer delight on sustainable practices of interactive kiosk

Presented in Table 9 is the significance on the influence of self-service technology, acceptance and use and customer delight on sustainable practices of interactive kiosk. The overall correlation value is .618. The effect of the entry of the variables in the model can be explained that the value of 0.38 for the coefficient of determination (r2) means that 38 percent of the extent of self-service technology quality, acceptance and use, and customer delight is attributed to the total variance in the sustainable practices.

Table 9: Significance of the influence of self-service technology, acceptance and use and customer delight on sustainable practices of interactive kiosk

Sustainable Practices					
Exogenous Variables		*B*	β	*t*	*Sig.*
Constant		.633		3.745	.000
Self-Service Technology		-.049	-.039	-.657	.511
Acceptance and Use		.072	.060	.972	.331
Customer Delight		.726	.599	10.979	.000
R	.618				
R^2	.382				
ΔR	.379				
F	134.774				
ρ	.000				

The remaining 62% percent is a chance variation on the factors that contribute to the sustainable practices. The model is also valid because the homogeneity test is met by having an F value of 134.774.

Best fit model of sustainable practices

This section focuses on the analysis of the relationship between self-service technology quality, acceptance, and use, customer delight, and sustainable practices of interactive kiosk in the fast-food restaurants in Region XI. The models were examined in order to determine the sustainable practices model that fit the data the best. Additionally, the researcher demonstrated the causation relationship between the latent variable and other latent variables; the evaluation of fit served as a criterion for

approving or rejecting the model. Furthermore, it establishes the relationship between internal and external factors. A structured model's ability to fit data well verifies how accurate its assumptions about the empirical relationships between variables are. The model parameter takes the link's size and orientation into account. In the conceptualised models for this study, direct effects are shown by arrows that go straight from a predictor variable shown on the right side to the dependent variables shown on the left side. Indirect effects are those relationships between the predictor and the dependent variables that are mediated by one or more factors. To calculate the size of the indirect effects, which are subsequently added together, the coefficients for each path combination that links a dependent variable on the right with a predictor variable on the left are cross-multiplied. The total impact of a predictor variable is the sum of its direct and indirect impacts on the dependent variables. The generated structural model in the standardised solution is pictured in the appended tables. Results denoted that the latent variable customer delight has a significant contribution to the latent variable sustainable practices. It could be observed from the data that customer delight has a significant correlation to sustainable practices. Customer delight obtained the highest total effect of.836. Also, self-service technology quality garnered a total effect of .332. Lastly, acceptance and use effect is -.438 on sustainable practices. Revealed in the appended table are the effects of latent variables between measured and the latent variables were estimated to produce regression weights. The result shows that the latent variable, customer delight, significantly affects the endogenous variable, sustainable practices.

Table 10: Direct and indirect effects of the independent variables on sustainable practices of interactive kiosk on best fit model

Variables	Direct Effect	Indirect Effect	Total Effect
Self-Service Technology	.332	-	.332
Acceptance and Use	-.438	-	-.438
Customer Delight	.836	-	.836

Furthermore, the displayed table clearly illustrates the importance of customer delight as a predictor of sustainable practices. Thus, the findings suggest that the sustainable practices of interactive kiosk in fast-food restaurants were best anchored on customer delight. Shown in appended table is the assessment of model 5 using the goodness of fit indices where the Chi-Square/Degree of Freedom (CMIN/DF) is 1.563; Normed Fit Index (NFI) is .993; Tucker-Lewis Index (TLI) is .995; Comparative Fit Index (CFI) is .997; Goodness of Fit Index (GFI) is .990; Root Means Square of Error Approximation (RM SEA) is .029 and P of Close Fit (Pclose) is .962. Given that all indices had satisfied the predetermined criteria in comparison to the measurement of model fit value, the goodness of fit result of model 5 is highly acceptable. The goodness of fit measures was met by these indices. Additionally, this suggests that the resulting model 5 is a very well fit model. All indices must constantly fall within the permitted limits to choose the best fit model. The p-value should be more than 0.05, and the chi-square/degrees of freedom number must be less than 5. The approximation value for the root mean square error must be less than 0.05, and the related Pclose value must be higher than 0.05. The other indices, including the goodness of fit index, Tuker-Lewis index, normed fit index and comparative fit index, must be higher than 0.95

Table 11: Estimates of variable regression weights in generated best fit model

			Estimate	S.E.	Beta	C.R.	P-value
Sustainable_Practices	<---	Acceptance_and_Use	-.438	.172	-.408	-2.552	.011
Sustainable_Practices	<---	Customer_Delight	.836	.112	.782	7.482	***
Sustainable_Practices	<---	SelfService_Technology_Quality	.332	.194	.271	1.714	.087
FUN	<---	SelfService_Technology_Quality	1.000		.817		
CON	<---	SelfService_Technology_Quality	1.113	.052	.817	21.384	***
CUS	<---	SelfService_Technology_Quality	1.191	.051	.855	23.400	***
PEE	<---	Acceptance_and_Use	1.000		.871		
EFE	<---	Acceptance_and_Use	.983	.036	.850	27.542	***
PSQ	<---	Customer_Delight	1.000		.945		
MAS	<---	Customer_Delight	.871	.027	.850	31.725	***
FSP	<---	Sustainable_Practices	1.000		.783		
WRP	<---	Sustainable_Practices	1.120	.060	.932	18.686	***

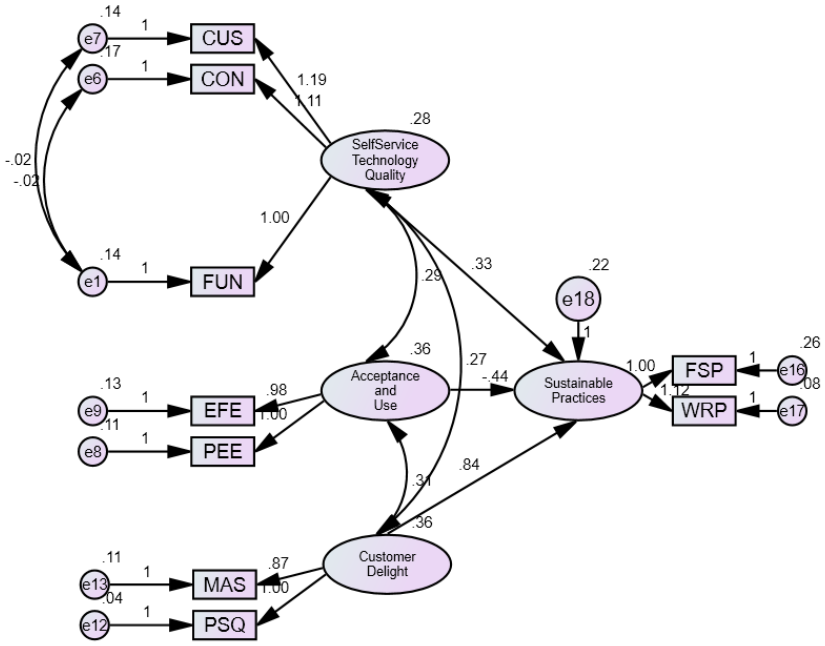
Legend:
FUN-functionality
ENJ-enjoyment
SEC-security
ASS-assurance
DES-design
CON-convenience
CUS-customization
PEE-performance expectancy
EFE-effort expectancy
SOI-social influence
FAC-facilitating conditions
PSQ-product and service quality
MAS-marketing strategy
CUF-customer focus
DIF-differentiation
FSP-food sustainability practices
WRP-waste reduction practice

Table 12: Goodness of fit measures of structural best fit model

INDEX	CRITERION	MODEL FIT VALUE
P-value	> 0.05	.056
CMIN/DF	0 < value < 2	1.563
GFI	> 0.95	.990
CFI	> 0.95	.997
NFI	> 0.95	.993
TLI	> 0.95	.995
RMSEA	< 0.05	.029
P-Close	> 0.05	.962

Legend:

CMIN/DF	-	Chi-Square/Degrees of Freedom
NFI	-	Normed Fit Index
TLI	-	Tucker-Lewis Index
CFI	-	Comparative Fit Index
GFI	-	Goodness of Fit Index
RMSEA	-	Root Means Square of Error Approximation
P-close	-	P of Close Fit



Legend:

SSTQUAL - Self-Service Technology Quality
FUN – Functionality
CV - Convenience
CZ – Customization

AUS - Acceptance and Use
PEE - Performance Expectancy
EFE - Effort Expectancy

CDT - Customer Delight
PSQ - Product and Service Quality
MAS - Marketing Strategy

SUP-Sustainability Practices
FSP -Food Sustainability Practices
WRP – Waste Reduction Practices

Figure 2. Best fit model on sustainable practices

Figure 2 shown the descriptors of best fit model generated that works in the fast-food industry concerning self-service technology quality, acceptance and use, customer delight and sustainable practices of interactive kiosks in Davao Region. To wit: The refinement of self-service technology indicators through goodness of fit measures resulted in the retention of three key factors: customisation, convenience, and functionality. These indicators were deemed essential for assessing the effectiveness of self-service technology in meeting customer needs and expectations. The significant relationship observed between functionality and both customisation and convenience underscore the pivotal role of functionality in facilitating seamless user experiences and enhancing customisation options and convenience. By prioritising these three indicators, businesses can focus on delivering user-centric self-service solutions that offer personalised experiences, streamlined interactions, and reliable performance, ultimately enhancing customer satisfaction and driving operational efficiency. In streamlining the descriptor indicators under acceptance and use, the focus narrowed down to two crucial factors: performance and effort expectancy. Performance signifies the perceived effectiveness and efficiency of the interactive kiosks in delivering the desired outcomes, such as accurate order processing and timely service. Meanwhile, effort expectancy reflects the perceived ease of use and convenience associated with interacting with the kiosks, encompassing factors like simplicity of navigation and clarity of instructions. By retaining these two indicators, the assessment framework highlights the importance of users' perceptions of both the kiosks' performance capabilities and the ease with which they can be utilised, offering insights into factors that influence acceptance and adoption among customers. In refining the customer delight indicators, the goodness of fit measures led to the retention of two pivotal factors: product and service quality, and marketing strategy. Product and service quality encompass the overall satisfaction derived from the fast food offerings and the excellence of customer service experienced during interactions with the restaurant staff. Meanwhile, marketing strategy reflects the effectiveness of promotional efforts and branding initiatives in capturing customer attention and enhancing brand perception. By focusing on these two indicators, the assessment framework prioritises the fundamental elements that directly contribute to customer delight in fast food restaurants, highlighting the significance of both the core product/service experience and the strategic communication and engagement strategies employed by the establishment.

In the context of sustainable practices in fast food restaurants, two key indicators emerge: food sustainability practices and waste reduction practices. Food sustainability practices encompass efforts to source ingredients ethically and responsibly, considering factors such as local sourcing, organic farming, and fair trade practices to minimise environmental impact and support sustainable agriculture. Waste reduction practices focus on minimising waste generation throughout the restaurant's operations, including strategies such as composting, recycling, and implementing packaging alternatives to reduce single-use plastics. By emphasising these indicators, fast food restaurants can align their operations with principles of environmental stewardship, promoting sustainable food systems and reducing their ecological footprint, while also contributing to broader efforts towards sustainability and conservation. The descriptors of self-service technology quality, acceptance and use, customer delight, and sustainable practices illustrate a significant and interconnected relationship within the context of fast food

restaurants. High-quality self-service technology not only enhances customer acceptance and use but also contributes to customer delight by providing convenience and customisation options. Moreover, sustainable practices complement these aspects by reinforcing customer delight through environmentally conscious operations and reducing the ecological footprint of the restaurant. This holistic approach reflects a symbiotic relationship where each element reinforces the others, ultimately contributing to a positive dining experience, improved customer loyalty, and sustainable business practices in fast food establishments. Whilst the significant relationship observed solely between sustainable practices and self-service technology quality underscores the critical role of technological innovation in fostering sustainability within fast food restaurants. This relationship suggests that investments in high-quality self-service technology not only improve operational efficiency and customer delight but also facilitate the implementation of sustainable practices. For instance, advanced self-service kiosks may enable features like electronic receipts, digital menu updates, and data analytics capabilities, which can streamline operations, reduce paper waste, and optimise resource utilisation. By leveraging technology to support sustainable initiatives, fast food restaurants can enhance their environmental performance while simultaneously enhancing the overall dining experience for customers.

Conclusions

The quality of self-service technology in fast-food restaurants significantly influences customer delight and overall dining experience. Efficient and user-friendly interfaces enhance convenience and streamline the ordering process, leading to increased patronage and positive brand perception. However, technological glitches, slow service, or complex interfaces can frustrate customers and deter repeat visits. Therefore, investing in high-quality self-service technology, coupled with seamless integration into the operational framework, is paramount for fast food restaurants to meet evolving customer expectations and maintain competitiveness in the market. The adoption and utilisation of interactive kiosks in fast food restaurants have become increasingly prevalent, reflecting a positive trend in customer acceptance. These kiosks offer convenience, customisation, and efficiency, catering to the evolving preferences of modern consumers seeking quick and personalised dining experiences. The widespread integration of interactive kiosks underscores their effectiveness in enhancing order accuracy, reducing wait times, and empowering customers with greater control over their dining choices. However, successful implementation hinges on factors such as intuitive interface design, technical reliability, and responsive customer support to address any issues promptly. Overall, the continued embrace of interactive kiosks by customers signals their enduring value as a pivotal component of the fast-food industry's digital transformation, contributing to improved service delivery and heightened customer delight. Customer delight regarding interactive kiosks in fast food restaurants is multifaceted and deeply influenced by various factors. While these kiosks offer convenience and efficiency, their true impact on delight stems from their ability to enhance the overall dining experience. When interactive kiosks are intuitive, user-friendly, and seamlessly integrated into the restaurant's operations, they empower customers with greater control over their orders, leading to a sense of delight and empowerment. Moreover, the personalisation options and streamlined ordering process provided by these kiosks contribute to a positive emotional response, fostering feelings of delight and loyalty among customers. However, to ensure sustained delight, it's crucial for fast food restaurants to continually refine and innovate their interactive kiosk offerings, addressing customer feedback and evolving preferences. Ultimately, by prioritising customer-centric design and functionality, fast food restaurants can maximise the potential for interactive kiosks to not only meet but exceed customer expectations, driving long-term success and differentiation in the competitive market landscape. Integrating sustainable practices into the deployment and operation of interactive kiosks in fast food restaurants holds significant potential for reducing environmental impact and enhancing corporate responsibility. By leveraging energy-efficient components, utilising eco-friendly materials in construction, and implementing recycling programs for outdated kiosks, restaurants can minimise their carbon footprint and contribute to a more sustainable future. Additionally, optimising kiosk placement and functionality to encourage reusable utensils and containers can further mitigate waste generation. However, realising the full benefits of sustainable practices requires collaboration across the supply chain, including kiosk manufacturers, software developers, and waste management partners. Through ongoing commitment and innovation, fast food restaurants can harness the power of interactive kiosks not only to improve operational efficiency and customer satisfaction but also to advance environmental stewardship and social responsibility in their communities.

Recommendations

To enhance the self-service technology quality of interactive kiosks in fast food restaurants, it is crucial to prioritise user-centric design, reliability, and efficiency. Begin by designing intuitive interfaces that are easy to navigate and visually appealing, catering to diverse customer preferences and ensuring accessibility for all users. Invest in robust hardware and software components to minimise technical issues and downtime, while also implementing regular maintenance and updates to ensure optimal performance. Streamline the ordering process to minimise wait times and offer customisation options to meet individual customer needs. Additionally, integrate kiosks seamlessly with existing restaurant systems for consistency and efficiency. Finally, prioritise sustainability by incorporating eco-friendly materials and energy-efficient components, as well as implementing recycling programs for outdated equipment. Through these measures, fast food restaurants can elevate the quality of their interactive kiosks, leading to enhanced customer satisfaction and operational effectiveness. To promote acceptance and use of interactive kiosks in fast-food restaurants, it's essential to focus on customer education, convenience, and incentivisation. Begin by launching comprehensive marketing campaigns that highlight the benefits of using kiosks, such as faster service, order customisation, and reduced wait times. Ensure that kiosks are strategically placed in high-traffic areas within the restaurant and feature clear signage to attract customers' attention. Additionally, offer incentives such as discounts or loyalty

rewards for using the kiosks, encouraging customers to try the technology and experience its advantages firsthand. Provide user-friendly interfaces with intuitive navigation to facilitate a seamless ordering process. Finally, gather feedback from customers regularly to identify and address any barriers to acceptance or usage, ensuring continuous improvement and optimisation of the interactive kiosk experience. Through these efforts, fast food restaurants can increase acceptance and usage of interactive kiosks, ultimately improving operational efficiency and customer delight.

To enhance customer delight with interactive kiosks in fast food restaurants, focus on personalisation, convenience, and seamless integration. Offer a wide range of customisation options that allow customers to tailor their orders to their preferences, such as dietary restrictions or portion sizes. Ensure that the kiosks are easy to use with intuitive interfaces and responsive touchscreens, providing a smooth and efficient ordering process. Implement features like order history and favourites to expedite future transactions and enhance convenience for returning customers. Moreover, integrate the kiosk experience seamlessly with other aspects of the restaurant, such as mobile ordering apps and loyalty programs, to create a cohesive and enjoyable dining journey. By prioritising these elements, fast food restaurants can elevate customer delight with interactive kiosks, fostering loyalty and repeat business. To promote sustainable practices surrounding interactive kiosks in fast food restaurants, prioritise the use of eco-friendly materials in their construction and operation. Opt for energy-efficient components and technologies to minimise power consumption and reduce the environmental footprint of the kiosks. Implement recycling programs for outdated or damaged kiosks to ensure responsible disposal and minimise electronic waste. Additionally, consider sourcing materials from sustainable suppliers and exploring opportunities for refurbishment or repurposing to extend the lifespan of the kiosks. By integrating these sustainable practices into the design, operation, and end-of-life management of interactive kiosks, fast food restaurants can minimise their environmental impact and contribute to a more sustainable future. Future research may be undertaken to introduce other variables which explore other fields aside from self-service technology quality, acceptance and use, customer delight on sustainable practices of interactive kiosk in the fast food restaurants or other businesses.

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