

***E-SERVICE QUALITY AND STUDENT LOYALTY: A STUDY OF ONLINE
FOOD DELIVERY SERVICES AT UNIVERSITI ISLAM MELAKA
(UNIMEL)***

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ABSTRACT

This study explores how the quality of online food delivery (OFD) services specifically efficiency, system availability, and privacy and security have a relationship towards the loyalty of students at Universiti Islam Melaka (UNIMEL). A total of 80 students from the Faculty of Business, Hospitality and Technology (FPHT) took part in the survey. Data were analyzed using IBM SPSS software through descriptive and correlation analyses. The results show that all three aspects of OFD service quality efficiency, system availability and privacy and security are significantly linked to students' loyalty towards food delivery services in UNIMEL.

Keywords: *E-service quality, customer loyalty, efficiency, system availability, privacy and security, food delivery company*

1.0 INTRODUCTION

In line with technological advancements, the food and beverage industry has evolved to attract more customers and increase profitability. This development has given rise to e-services such as Online Food Delivery (OFD) companies, which provide users with convenience and diverse choices (Elvandari et al., 2018). The rise of OFD services has been strongly associated with the shift towards a fast-paced lifestyle, especially among young consumers in Malaysia (Chai & Yat, 2019). Consumers often use OFD services to overcome time constraints in obtaining meals during or after a busy day. From the restaurant perspective, online technology enables customers to order food through websites or platforms such as ShopeeFood, GrabFood, and Misi (Suhartanto et al., 2019).

Based on a study conducted by Ganatra et al. (2021) involving 101 students from Universiti Sains Malaysia, it was found that FoodPanda was the most preferred online food delivery application, used by 64.4% of respondents, followed by GrabFood at 33.7%. The study also revealed that 63.4% of users were satisfied with the application they used, indicating that the quality of e-service—such as ease of use, delivery efficiency, and system reliability—successfully met customer expectations. These findings highlight the importance of e-service quality in shaping customer satisfaction and loyalty towards a particular food delivery brand.

According to Azizan and Ridzuan (2023), online food delivery (OFD) services have made it easier for university students to make purchases without spending much time and effort, which has increased their popularity. The available applications allow students to view various food menus from different restaurants promoted through business websites. This feature adds value for users, especially students with busy schedules, as they can easily place orders without leaving campus or their accommodation. Indirectly, the convenience and variety offered have become key factors that increase students' interest in and reliance on OFD applications. Expectations for OFD services are that they will continue to grow in usage, which in turn encourages more purchases and greater use among consumers (Amran and Buang, 2022). This growth not only promotes more online purchases but also provides opportunities for service providers to improve quality and user experience to maintain customer loyalty and attract new users.

Despite extensive research on e-service quality and customer satisfaction, limited attention has been given to university students, particularly those in smaller institutions such as Universiti Islam Melaka (UNIMEL). Addressing this gap, the present study investigates the relationship between e-service quality and student loyalty within the context of online food delivery services at UNIMEL, where students' reliance on such platforms makes it a pertinent setting for examination.

2.0 PROBLEM STATEMENT

The online food delivery (OFD) service system is becoming increasingly popular and a preferred choice, especially among university students, due to its convenience and efficiency. With just a few clicks, users can order food from a wide variety of restaurants without having to leave campus. However, according to a study by Norhisham et al. (2023) conducted among students at Universiti Malaysia Kelantan (UMK), despite the popularity of the OFD industry, service providers still face several issues such as delivery delays, order errors, and system problems that affect the overall user experience. This situation has a negative impact on users, particularly students, as it may lead them to switch to other applications or return to making physical purchases. This is supported by Amran and Buang (2022), who emphasized that e-service quality plays a crucial role in shaping customer loyalty. The three main variables used to measure OFD quality are efficiency, system availability, and privacy and security. Therefore, it is important to determine how key dimensions of e-service quality influence students' loyalty toward online food delivery services.

3.0 LITERATURE REVIEW

3.1 Conceptual Synthesis

This study is grounded in the e-service quality model proposed by Zeithaml, Parasuraman, and Malhotra (1996), which highlights four key dimensions: efficiency, reliability, fulfillment, and privacy. In the context of online food delivery services, these dimensions form the foundation of user experience and influence both customer satisfaction and loyalty. Based on this model, a high level of e-service quality is expected to enhance students' satisfaction, thereby fostering greater loyalty toward the online food delivery platforms they use. Accordingly, this study integrates the dimensions of e-service quality into a conceptual framework to examine their influence on student loyalty at Universiti Islam Melaka (UNIMEL).

3.2 Customer Loyalty Towards E-Service Quality.

Abou-Shouk and Khalifa (2017) stated that customer loyalty, particularly in the online context, refers to customers' commitment to a website, demonstrated through their intention to revisit the site, make transactions, and recommend it to others. Therefore, the level of satisfaction and user experience plays a vital role in shaping customer loyalty toward a website.

In this regard, it is appropriate to analyze the nature of loyalty instruments based on one of the well-known conceptual influences described by Zeithaml et al. (1996). The researchers proposed a conceptual model that explains the impact of service quality on specific behaviors that indicate whether customers remain loyal or switch to other

companies (loyalty or disloyalty). Their analysis highlights the crucial role of satisfaction as a precursor to loyalty, as satisfaction is based on certain expectations of service quality which, when fulfilled, lead to satisfaction and eventually loyalty.

Customer loyalty acts as a dependent variable because it is influenced by the quality of e-services provided by food delivery companies. Companies that deliver high-quality e-services are more likely to retain loyal customers who continue using their services and recommend them to others (Amran & Buang, 2022). According to Suhartanto et al. (2019), in the context of online food delivery (OFD), a loyal customer is defined as one who regularly places food orders, either through the restaurant's official website or via intermediary platforms. Therefore, online loyalty towards OFD can be described as the customer's commitment to online food delivery services, which results in repeat purchases and positive behaviors towards the OFD service providers.

3.3 Efficiency

According to Norhisham et al. (2023), to ensure customer satisfaction, online food delivery services must provide the most efficient service possible to attract customers and maintain sales and relationships. Customers generally focus on key features that should be present in any food delivery service to ensure convenience. They use OFD services to simplify their daily routines; therefore, they are unlikely to continue using services that are inefficient or inconvenient. It is also important for companies to effectively promote their products—especially when requested by customers—to draw more attention to their business and the services they offer (Norhisham et al., 2023).

Therefore, in the context of this study, the aspect of efficiency is associated with users' evaluation of how easy it is to purchase food online. Other key features that determine whether individuals choose to use or avoid online food delivery services include user experience, the ability to search for restaurants, service usability, and the quality of food offered (Norhisham et al., 2023). In conclusion, a high level of efficiency in OFD services is a major factor that drives customer loyalty.

3.4 System Availability

This aspect focuses on the proper technical functioning of the application. If problems arise while users are using the app, it can lead to dissatisfaction, as the OFD system is expected to provide greater convenience compared to physical food purchases. Customer satisfaction with the quality of a website can help build loyalty towards a business, especially for OFD companies (Amran and Buang, 2022). This indicates that the stability and efficiency of the OFD application system play a crucial role in providing a positive experience and maintaining customer loyalty.

According to a study by Tribhuvan (2020), elements such as ease of use, responsiveness, speed, and the accuracy of system operations are likely to influence users' continued use of online food delivery platforms. Overall, system availability plays a vital role in determining the quality of e-services provided by food delivery companies and in fostering customer loyalty. A system that is easily accessible, fast, responsive, and well-managed enhances the overall customer experience, ultimately strengthening their loyalty towards the company.

3.5 Privacy and Security

Yazdanifard et al. (2011) found that privacy and security issues in the field of online business pose one of the greatest risks to its growth. This is because, today, user and buyer behavior can be tracked through the Internet using text files known as “cookies.” Through these cookies, users leave digital footprints online, which are then used by internet advertisers to identify their habits and interests. While this method allows marketers to better reach potential customers, it is also seen as a form of privacy intrusion for users (Ilham and Salleh, 2015). Therefore, data protection and the security of users’ personal information are essential to maintaining trust in online services.

Overall, privacy and security form the foundation of a positive online food purchasing experience. They ensure that users feel comfortable and safe when making food orders online. When personal information and transactions are well protected, users are more likely to have a positive experience and continue using the service while complying with existing legal and regulatory requirements.

3.6 Research framework and hypothesis

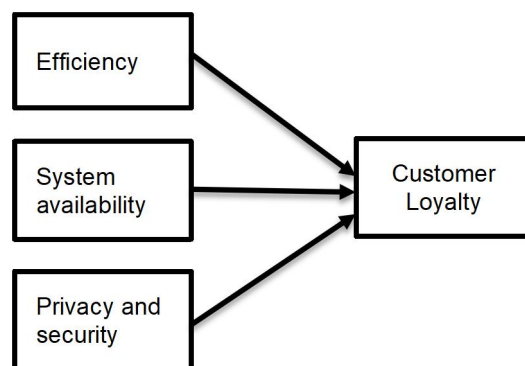


Figure 1: The relationship between e-service quality of food delivery companies and the loyalty of UNIMEL students.

Therefore, are three research questions in this study which are;

- i. Is there a relationship between efficiency and customer loyalty?
- ii. Is there a relationship between system availability and customer loyalty?
- iii. Is there a relationship between privacy and security and customer loyalty?

Based from the research questions, the objectives of this research are:

- i. To study the relationship between efficiency and customer loyalty.
- ii. To examine the relationship between system availability and customer loyalty.
- iii. To investigate the relationship between privacy and security and customer loyalty.

Efficiency and customer loyalty.

H1_o: There is no relationship between efficiency and customer loyalty among UNIMEL's students.

H1_a: There is a relationship between efficiency and customer loyalty among UNIMEL's students.

System availability and customer loyalty.

H1_o: There is no relationship between system availability and customer loyalty among UNIMEL's students.

H1_a: There is a relationship between system availability and customer loyalty among UNIMEL's students.

Privacy and security and customer loyalty.

H1_o: There is no relationship between privacy and security and customer loyalty among UNIMEL's students.

H1_a: There is a relationship between privacy and security and customer loyalty among UNIMEL's students.

4.0 METHODOLOGY

The conducted research is focused on Malaysian consumers specifically around Universiti Islam Melaka. Furthermore, this study solely concentrates on a wide range of consumers who use online food delivery services.

4.1 Measurement

The instrument used by the researcher in this study takes the form of a questionnaire. This questionnaire serves as the instrument for collecting quantitative data on the consumers who use online food delivery services.

This study incorporated five constructs from existing research: demography respondent, efficiency, system availability, privacy and security, and customer loyalty. Items related to efficiency were taken from Yeo, Goh dan Rezaeil, (2017), system availability taken from (Snigdha, 2022) while those concerning privacy and security were derived from Leong et al. (2008). The measures for customer loyalty were adopted from (Chiu et al., 2009). All items used in the present study were measured using a five-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree").

4.2 Sampling

This study adopted a simple random sampling technique, where each individual had an equal chance of selection. The sample size was determined following Tabachnick and Fidell's (2013) guideline, $N \geq 50 + 8m$. With three independent variables, the minimum required sample size was 74 respondents, representing consumers who use online food delivery services. The study focused on students from the FPHT at UNIMEL, as they are more familiar with online food delivery (OFD) services due to their academic background and frequent usage. This makes them a relevant group for examining the relationship between e-service quality and student loyalty. However, the limitation of

using a single faculty sample is acknowledged, as it may restrict the generalizability of the findings.

4.3 Data collections and analysis

Data were gathered through an online Google Form survey distributed to students around Universiti Islam Melaka, yielding 80 valid responses. The data were then analysed using IBM SPSS Version 25, applying descriptive and correlational analyses to explore the relationships between dependent and independent variables. The questionnaire comprised a total of 20 items distributed across the study constructs. The reliability analysis produced a Cronbach's alpha value of 0.884, indicating a very good level of internal consistency for the instrument.

5.0 RESULTS

5.1 Correlation Analysis

Table 1 : Correlation Analysis

Variables	r	P
Efficiency	.877**	< .000
System availability	.877**	< .000
Privacy and security	.862**	< .000

Based on the Pearson correlation analysis, the findings indicate a significant relationship between efficiency, system availability and privacy and security of e-service platforms used by food delivery companies with students' loyalty at Universiti Islam Melaka (UNIMEL). Both efficiency and system availability recorded the highest correlation values ($r = 0.877$, $p = 0.000$), suggesting that these two factors are the most influential determinants of customer loyalty.

Efficiency emerged as a key aspect valued by users, as it represents the convenience of ordering food without the need for physical presence. When the online food delivery (OFD) application performs efficiently such as through timely delivery and error-free transactions users experience higher satisfaction, which in turn enhances loyalty.

Similarly, system availability, which also shows a significant relationship ($p < 0.05$), plays a crucial role in shaping users' experience. Consumers prefer systems that are simple, fast, and easy to navigate, as not all users possess high digital literacy. Additionally, flexible payment options, particularly online payment methods, are highly preferred among university students, reflecting current digital consumption trends.

Although privacy and security recorded a slightly lower correlation value ($r = 0.862$, $p = 0.000$), it remains statistically significant ($p < 0.05$). This indicates that users are still

highly concerned about data protection and transaction security when using OFD applications, as online purchasing involves potential risks of fraud and data breaches.

Overall, the results underscore that efficiency and system availability are the dominant predictors of loyalty among university students, while privacy and security remain essential supporting factors in sustaining trust and continuous usage of online food delivery services.

5.2 Hypothesis

The correlation analysis results revealed that H_0 was rejected due to a significant correlation value at the 0.05 level. Consequently, H_1 was accepted, confirming that efficiency, system availability, and privacy and security exhibit a strong and positive association with UNIMEL students' loyalty towards food delivery service providers.

6.0 CONCLUSION AND RECOMMENDATION

Based on the study conducted, the researcher identified that efficiency and system availability have a strong relationship with customer loyalty. This finding is consistent with the study by Suhartanto et al. (2018), which examined the relationship between loyalty behavior and service quality and highlighted the impact of loyalty on repeat purchases from food delivery companies. The results indicate that users prefer services that are easy and quick to use; therefore, they place high importance on efficiency and system availability. From a theoretical perspective, this supports the e-service quality model by Zeithaml et al. (1996), which posits that system reliability and functional efficiency are key determinants of user satisfaction and loyalty.

The findings are also supported by Amran and Buang (2022), who stated that good e-service quality significantly influences customers' loyalty and their intention to continue using online food delivery services. If the OFD systems or applications encountered by users are problematic or inconvenient, they are likely to switch to alternative OFD platforms or revert to making purchases physically. This suggests that maintaining system efficiency is not only a technological necessity but also a strategic factor in customer retention, particularly among student users who value speed and reliability.

In terms of privacy and security, the results of the study show that this factor also has a strong level of correlation, although not as strong as the other two variables. Nevertheless, it remains an important aspect to emphasize, as online transactions are more vulnerable to threats such as fraud, hacking, and losses — for instance, receiving the wrong order, spilled food, or undelivered meals despite completed payments. This finding underlines the theoretical implication that perceived risk moderates the relationship between e-service quality and loyalty, aligning with prior studies emphasizing the importance of trust in digital service environments.

Therefore, it is essential for food delivery companies to prioritize all three quality dimensions — efficiency, system availability, and privacy and security — to ensure customer loyalty and prevent users from switching to competitors. From a managerial standpoint, these findings indicate that OFD companies should invest in system reliability, user-friendly interfaces, and robust security protocols to sustain user engagement and

trust. Universities could also collaborate with OFD providers to enhance service accessibility for students on campus, aligning digital convenience with student needs. Overall, each of these variables plays a significant role in maintaining customer loyalty toward food delivery services, as the quality and advantages offered by OFD are what distinguish it from physical food purchases.

For future research, it is recommended to expand the study population to include students from various universities across Malaysia. This is because each group of students may have different perspectives and standards, which could diversify the findings and provide more detailed and valuable insights for researchers as well as for OFD companies to improve their services. In addition, future studies may consider using regression or structural equation modeling (SEM) to test the causal pathways between e-service quality dimensions and loyalty, thereby providing deeper theoretical insights.

AUTHOR CONTRIBUTIONS

Maryam, M.M: Conceptualization, Methodology; Suhailah, I.: Software; Nurain Nabilah, M.S.: Writing-Original Draft Preparation; Nurul Liyana, H.: Validation; Norhazanah, M.: Writing-Reviewing and Editing.

CONFLICT OF INTEREST

The manuscript has not been published elsewhere and is not under consideration by other journals. All authors have approved the review, agree with its submission and declare no conflict of interest on the manuscript.

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