

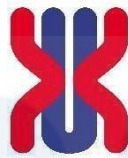
**The Study on Service Quality Towards Students'
Satisfaction on Online Bus Ticket Booking Platform**

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MALAYSIA

KELANTAN
2023



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MALAYSIA
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FACULTY OF ENTREPRENEURSHIP AND BUSINESS

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by

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A report submitted in fulfilment of the requirements for the degree of Bachelor
of Entrepreneurship (Logistic and Distributive Trade) with Honours

Faculty of Entrepreneurship and Business

UNIVERSITY MALAYSIA KELANTAN

2023


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ACKNOWLEDGEMENT

The success and end of the final year project required the guidance and support of a large number of people, and we feel very grateful to those who guided, helped, and supported us in completing this task within the stipulated time frame.

First and foremost, we would like to express our sincere gratitude to our supervisor, Professor Madya Dr Mohd Nor Hakim bin Yusoff, who was always willing to spend his valuable time to guiding us through each step of the task. His professional, patience and attentive advice ensured that the task was on the right track and ran smoothly. We sincerely appreciated what he had done to guide us. In addition to this, we would also like thanks to University Malaysia Kelantan (UMK) for giving us the opportunity to implement this study since we have gain knowledge throughout the process of study, and it will be useful for us in future.

Secondly, we are very grateful to the respondents who were willing to spend their valuable time for answering the questionnaire and we sincerely thank those who helped us directly and indirectly to complete the study. In addition, we would like to thank our parents and friends who have been the source of success in our lives. They encouraged and supported us in completing this final year project within the given time frame.

Last but not least, the effort from each group members by coordinated and collaborated during the whole task is much appreciated. The study could not be complete and run smoothly without their hard work.

TABLE OF CONTENT

	PAGE
Thesis Declaration	i
Acknowledgement	ii
Table of Content	iii
List of Table	iii
List of Figure	v
List of Abbreviations	vi
Abstrak	vii
Abstract	vii
 CHAPTER 1: INTRODUCTION	
1.0 Introduction	1
1.1 Background of the Study	1
1.2 Problem Statement	3
1.3 Research Objectives	5
1.4 Research Questions	5
1.5 Scope of the Study	6
1.6 Significance of the Study	6
1.7 Operational Definition	
1.7.1 Service Quality of Online Bus Ticket Booking Platform	7
1.7.2 Customer Satisfaction on Online Bus Ticket Booking Platform	8
1.7.3 Ticketing and Route Management Software Solution	8
 CHAPTER 2: LITERATURE REVIEW	
2.0 Introduction	9
2.1 Service Quality Model (SERVQUAL)	9
2.2 Student Satisfaction on Online Bus Ticket Booking Platform	10
2.3 Relationship Between Reliability and Student Satisfaction on Online Bus Ticket Booking Platform	11
2.4 Relationship Between Assurance and Student Satisfaction on Online Bus Ticket Booking Platform	12
2.5 Relationship Between Responsiveness and Student Satisfaction on Online Bus Ticket Booking Platform	12

2.6	Relationship Between Tangibles and Student Satisfaction on Online Bus Ticket Booking Platform	13
2.7	Theoretical Framework	14

CHAPTER 3: RESEARCH METHODOLOGY

3.0	Introduction	15
3.1	Research Design	15
3.2	Data Collection Method	16
	3.2.1 Primary Data	16
3.3	Population and Sampling	16
	3.3.1 Target population	16
	3.3.2 Sampling frame	17
	3.3.3 Sampling Techniques	17
	3.3.4 Sampling size	18
3.4	Research Instrument	19
3.4.1	Multiple Choice Question	19
3.4.2	Likert scale	19
3.5	Data Analysis	20
	3.5.1 Statistical Package for Social Science (SPSS)	20
	3.5.2 Structural Equation Modelling	20
	3.5.3 Smart PLS	20
	3.5.4 Frequency Distribution	21
	3.5.5 Pilot Test	21
	3.5.6 Reliability Analysis	22
	3.5.7 Descriptive Analysis	22

CHAPTER 4: DATA ANALYSIS

4.0	Introduction	23
4.1	Reliability Analysis	24
4.2	Characteristics of Demographic	25
	4.2.1 Ranking of Frequency	27
4.3	Descriptive Analysis	28
4.4	Results of Measurement Model	33
	4.4.1 Loading and Cross Loading	33

4.4.2	Convergent Validity	36
4.4.3	Discriminant Validity	37
4.5	Structural Model Result	38
CHAPTER 5: DISCUSSION AND CONCLUSION		
5.0	Introduction	41
5.1	Findings and Discussion	41
5.2	Limitation and Recommendation	43
5.3	Conclusion	44
REFERENCES		46
APPENDIXES		
	Draft of Questionnaire	51
	Gantt Chart	60

LIST OF TABLES

Table	Page
Table 4.1 Reliability Test for Pilot Test	24
Table 4.2 Respondents' Background	25
Table 4.3 State of Origin of Respondents	26
Table 4.4 Ranking of Frequency of Seeking Support Based on Strongly Agree	27
Table 4.5 Descriptive Analysis for Dependent Variables and Independent Variables	28
Table 4.6 Descriptive Analysis for Customer Satisfaction (Dependent Variables)	29
Table 4.7 Descriptive Analysis for Reliability (Independent Variables)	30
Table 4.8 Descriptive Analysis for Assurance (Independent Variables)	30
Table 4.9 Descriptive Analysis for Responsiveness (Independent Variables)	31
Table 4.10 Descriptive Analysis for Tangibles (Independent Variables)	32
Table 4.11 Construct Validity	33
Table 4.12 Construct Reliability and Convergent Validity	37
Table 4.13 The Fornell-Larcker Criterion	38
Table 4.14 The Path Coefficient and Hypothesis	39

LIST OF FIGURES

Figure	Page
Figure 2.1 Theoretical Framework-Conceptual model of Service Quality	14
Figure 3.1 Table for determining sample size for a given population	19
Figure 4.1 Structural Model (Standardized Estimates)	34
Figure 4.2 Structural Model (T-Value)	39

LIST OF ABBREVIATIONS

SERVQUAL	Service Quality
GPS	Global Positioning System
MCQ	Multiple Choice Question
SPSS	Statistical Package for Social Science
SEM	Structural Equation Modelling
PLS	Partial Least Square
AVE	Average Variance Extracted
CR	Composite Reliability

**Kajian Tentang Kualiti Servis Platform Tempahan Tiket Bas Atas Talian Dalam
Kalangan Pelajar UMK PC Kampus FKP Tahun Empat**

ABSTRAK

Tujuan kajian ini adalah untuk menentukan hubungan antara dimensi Model SERVQUAL dengan kepuasan pelajar terhadap platform tempahan tiket bas dalam talian. Dimensi Model SERVQUAL terdiri daripada kebolehpercayaan, jaminan, responsif dan ketara. Kajian ini mengeksplorasi kualiti perkhidmatan platform dalam talian dengan menggunakan sampel yang diwakili oleh kepuasan pelajar tahun empat kampus PC UMK yang belajar di Fakulti Keusahawanan dan Perniagaan (FKP). Persampelan rawak mudah telah digunakan dalam kajian ini dan soal selidik akan diedarkan kepada 265 pelajar. Hasil kajian menentukan bahawa kebolehpercayaan, responsif dan nyata mempunyai hubungan yang signifikan dengan kepuasan pelajar terhadap platform tempahan tiket bas dalam talian manakala jaminan tidak. Kajian ini penting kepada penyelidik untuk menyiasat bagaimana kualiti perkhidmatan platform tempahan tiket bas dalam talian memberi kesan kepada kepuasan pelajar. Selain itu, dengan mengetahui bagaimana kualiti perkhidmatan memberi impak kepada kepuasan pelajar, pengkaji dapat mengetahui apa yang pelanggan harapkan daripada sistem perkhidmatan E-ticketing pengangkutan awam dan bagaimana ia harus disampaikan oleh penyedia perkhidmatan, supaya perkhidmatan pembekal boleh menambah baik kualiti perkhidmatannya untuk memenuhi jangkaan pelanggan dan meningkatkan kepuasan, sekali gus meningkatkan jualan, pertumbuhan hasil dan berkembang secara berterusan.

**Study on Service Quality of Online Bus Ticket Booking Platform Towards UMK PC
Campus FKP Fourth-Year Students' Satisfaction**

ABSTRACT

The purpose of this study was to determine the relationship between the dimensions of SERVQUAL Model and students' satisfaction on online bus ticket booking platform. The dimensions of SERVQUAL Model consisting of reliability, assurance, responsiveness, and tangibles. This study exploited the service quality of the online platforms by utilizing sample represented by UMK PC campus fourth-year students' satisfaction who study at Faculty of Entrepreneurship and Business (FKP). Simple random sampling was being used in this study and questionnaire will be distributed to 265 students. The results of the study determined that reliability, responsiveness and tangibles have significant relationships with students' satisfaction on online bus ticket booking platforms while assurance has not. This study is vital to researcher to investigate how the service quality of the online bus ticket booking platform gives an impact on student satisfaction. On top of that, by knowing how service quality impacts on the student satisfaction, the researcher can find out what customers expect from a E-ticketing service system of public transport and how it should be delivered by the service provider, so that the service provider can improve on its service quality to fulfill customer's expectation and increase satisfaction, thus boost sales, revenue growth and develop continuously.

CHAPTER 1: INTRODUCTION

1.0 Introduction

This study is mainly focus to study on service quality of online bus ticket booking platform that give impact on customer satisfaction. This chapter clearly provide an overview of this research which about background of this study, problem statement, research objectives, research questions, scope and significance of the research, and lastly operational definitions of main terms.

1.1 Background of the Study

Public transport was a necessity transportation mode for the public to use in order to reduce traffic congestion, cut down the cost on transportation since taking public transport is usually cheaper than taking private vehicles for the passengers. Nowadays, people tend to take public transport as buses to travel interstate owing to it being less stressful since they do not need to drive by themselves, and they can rest and do other things during their journey. By taking buses to travel interstate, there are two channels to purchase on the bus tickets which classified into online and offline. Offline purchase can be explained as buying tickets at the counter while online purchase is buying through online platform as Redbus, EasyBook and more.

Online bus ticket booking platform can be explained as an E-ticketing system which aims to provide customers a user-friendly, interactive, personalized, data-driven, available anytime and anywhere services. This can be illustrated that purchase bus ticket through online platform is more convenient and advantageous than the traditional way which is buying at the counter. The E-ticketing system is unlike the traditional way, as people need to queue up at the counter and waiting for the staff to serve them while E-ticketing system provide customers an

extensive experience since the system usually able to maintain customer service quality, owning previous customers records and data, then consolidate interactions into one thread. Besides, the E-ticketing system is able to organize high volumes of customer inquiries or requests in a centralized system. Customers do not need to spend a lot of time waiting to serve. It can be concluded that the E-ticketing system is easier and more efficient to use.

There are increasingly demand on the online bus ticket booking platform especially during the peak period as festivals or holidays. This is important for the service provider to improve on their service quality so that customer retention and attract new customer base. Otherwise, there are some issues which may occur caused by the poor service quality given on the customer satisfaction will bring for. To be specific, this will lead to loss of profit owing to the sales drop, loss of employees due to uncertainty over job prospects, loss of customers retention, reputation damage and lastly lead to closure of the platform.

This study purpose was to determine the relationship between the dimensions of SERVQUAL Model and customer satisfaction among UMK PC campus fourth-year students who study at Faculty of Entrepreneurship and Business (FKP) on online bus ticket booking platform, while the dimensions of SERVQUAL Model included reliability, assurance, responsiveness, and tangibles. This study is vital to researcher to investigate how the service quality of the online bus ticket booking platform gives an impact on student satisfaction. In details, by knowing how the service quality give impact on the student satisfaction, the researcher can find out what a customer expects from a public transport E-ticketing service system and how it should be delivered by the service provider, so that the service provider can improve on its service quality to fulfil customer's expectation and increase satisfaction, thus boost sales, revenue growth and develop continuously.

1.2 Problem Statement

As the economic and growth recovery from the pandemic, Malaysia has opened up cross state travel, thus the demand of public transport to the inter-state has increased as well. As reported by Tan (2022), Redbus, an online bus ticket booking platform in Malaysia which provides its users ticketing and route management software solutions. It has recorded a significant increase in the bus ticket sales demand, which was about 37% more than previous month during the week before Raya Haji. There were more than 100,000 tickets that were sold by RedBus in the week before Raya Haji since people who stay away from their hometown would like to go back and spend their holidays with their friends and family. This can be explained as Malaysians are confident to travel inter-state by taking public transport by booking their bus ticket through online platform. It is important for service organizations to implement service quality improvement continuously since service quality can defined as a critical determinant of competitiveness (Gloria, K., 2010).

Service quality is able to assist a service organization to position itself differently and gain competitive advantage for itself. (Randal, S. & Susan, E., 1987). By contrast, a service organization which with poor service quality would lead it to failure. Traveloka was a great example to illustrate the consequence that will bring to from poor service quality. Traveloka was an E-ticketing system that consumers can book bus and shuttle tickets through online. Arif et. al. stated that an initial survey that implemented in Binjai City which is in Indonesia has proved that 30% of Traveloka customers were dissatisfied with its system's purchasing procedure and policies while 23.34% of customers have not recommend others to make their booking through Traveloka since they dissatisfied with its service quality. Also, Arif et. al. mentioned that Traveloka services is user unfriendliness and does not guaranteeing customers' data security in its purchasing procedures. These proved that Traveloka has poor service quality thus influence customer satisfaction as well.

Furthermore, according to Mahida and Handayani (2019), customers has facing barriers when purchasing ticket through an E-ticketing bus transit system, Trans Semarang Bus in Indonesia as unable to check data balance due to out of network and signal, also crowded service system. The service system of Trans Semarang Bus has no technical capability to deal with the problems, thus lead trouble to customers and give impact on customer satisfaction and customer repurchase intention. These prompt researcher to study the service quality of online bus ticket booking platform in Malaysia and investigate the relationship between the service quality of the online bus ticket booking platform and customer satisfaction.

As stated by Kumar (2013), service quality has a significant association with customer satisfaction. According to a conceptual model which Zeithaml et. al. (1996) has used in their study, it stated that the greater service quality a company provide to its customers, the stronger the customer behavioural intention to repurchase the product or services. Otherwise, low service quality would break the relationship between customer and the company, thus lead to unfavourable customer behavioural intention.

In this study, it can be explained as an online booking bus ticket platform which provide its customer low service quality will drive to unfavourable customer satisfaction, customer would switch to other platform to purchase bus ticket, take flight to inter-state travel, thus lead to image and sales of the entire platform drop due to word of mouth. Customer would not purchase bus ticket through the platform again. Low service quality eventually led to the closure of platform and unemployment of the company's employees. These all give impetus to researcher to conduct this study in order to determine the service quality of online bus ticket booking platform that give impact on customer satisfaction, thus, to make improvement and solve the issues that bring from low service quality to the platform.

1.3 Research Objectives

- a) To identify the relationship between the reliability and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform.
- b) To determine the association between the assurance and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform.
- c) To identify the association between the responsiveness and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket platform.
- d) To examine the relationship between the tangibles and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform.

1.4 Research Questions

- a) What is the relationship between reliability and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform?
- b) What is the relationship between assurance and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform?
- c) What is the relationship between responsiveness and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform?
- d) What is the relationship between tangibles and customer satisfaction among UMK PC campus FKP fourth-year students on online bus ticket booking platform?

1.5 Scope of the Study

This study will discuss the customers satisfaction on service quality of online bus ticket booking platforms among UMK FKP fourth-year students who has used online bus ticket booking platform before. Moreover, the study is focus on the dimensions of service quality which consisting of reliability, assurance, responsiveness, and tangibles. These dimensions assist researcher to measure the service quality of the online bus ticket booking platform. To collect student's data and opinion to have a better understanding on student's satisfaction on the service quality of online bus ticket booking platforms, questionnaires will be implementing to reach it.

1.6 Significant of the Study

This study will be focus on the quality service of online bus ticket booking platforms towards customer satisfaction which is UMK FKP fourth-year students who has used the platforms before. The purpose of this study is to discuss the relationship between the dimensions of service quality which consisting of reliability, responsiveness, assurance, and tangibles in online bus booking ticket platforms. As students also a target customer of the online bus ticket booking platform, it can be explained as the result of the study is beneficial to the customers since the result of the study can be a guide for them which make decision based on students' expectations or experience towards the service quality of the certain online bus ticket platform.

In addition, this study will be beneficial to the organization of online bus ticket platforms such as Red Bus, EasyBook and others. It is owing to this study contributes to the online bus ticket platform management to improve and ensure their quality service for customers and also provide higher service quality based on customer demand and

expectations. Thus, this study also will help the organization operator to gain profit and achieve their goals.

Moreover, this study will enable researcher to gain knowledge about how the service quality of the system will affect the customer satisfaction and the further impact will bring to. Moreover, this study allows service provider to improve their service continuously in order to meet customer satisfaction and lead to customer's favourable behavioural intention. Customer satisfaction is an essential element that affects customer decision making on using the online ticketing bus service platform.

1.7 Operational Definitions

1.7.1 Service Quality of Online Bus Ticket Booking Platform

According to Parasuraman et. al. (1988), service quality is defined as the difference in expectation of services by customers and their perception towards the services provided by a management. According to Felix, R (2017), Service quality is an attitude that is connected to but different from satisfaction given on by a comparison of expectations and performance. Customers typically evaluated service quality using a set of criteria by looking at these four dimensions which are reliability, responsiveness, assurance, and tangibles. Customer satisfaction is directly influenced by service quality, according to several empirical researchers (Ali and Reza, 2017; Nunkoo et al, 2017). Service quality is more likely to gain weight in the online bus ticket booking platform through the e-ticketing management. This shows that service quality is important in the business management field of services. However, the level of service quality is different based on the customer expectation and service experience.

1.7.2 Customer Satisfaction on Online Bus Ticket Booking Platform

According to Szyndlar, M (2022), customer satisfaction is a measure of how well customer expectations match the customer experience. In other words, it is the index that customers derive by comparing the perceived effectiveness of a product or service with their expectations. In addition, it also helps predict business growth and revenue. Therefore, customer satisfaction is important to the growth of any business because they can use customer satisfaction surveys to understand customer needs to prevent customer churn and build customer loyalty (Bernazzani, S. 2022).

1.7.3 Ticketing and Route Management Software Solution

Ticketing is the process of producing and selling tickets. It is indicating that its holder has paid for or is entitled to a specific service, right or consideration. In the case of online bus ticket booking platform, an individual who has purchasing ticket through online is entitled to this service. An online ticket system known as a E-ticketing system keeps track of all catalogues of the interactions that take place between the customers and support team. The majority of contemporary transportation agencies keep all pertinent data on a locally hosted server or in the cloud. Information can be viewed on any platform that can be viewed from anywhere with a secure connection, including GPS customer facing portals, routing management software, and other platforms. Many packages of routing software come with analytical tools and maps that can be used to plan routes remotely. Before selecting a route management system, the bus management must concentrate on a number of factors. Utilizing GPS, financial, and routing data to produce an operational improvement performance is the hallmark of a strong route management system. The duration and capacity utilization of each run in the transportation system should also be analysed.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Independent variables and dependent variables for this research proposal will be discussing in this chapter. The independent variables of the study have included reliability, assurance, responsiveness, and tangibles. Meanwhile, dependent variable was UMK PC campus FKP fourth-year student's satisfaction. This research proposal will study on service quality of online bus ticket booking platforms toward fourth-year student satisfaction in University Malaysia Kelantan PC campus. Therefore, the SERVQUAL model will be used to measure the service quality of online bus ticket booking platform in this research in order to determine how it influences customer satisfaction.

2.1 Service Quality Model (SERVQUAL)

SERVQUAL is an acronym for "Service Quality", a term that first appeared in 1988 by three American marketing scientists, Parasuraman, Zeithaml, and Berry. Parasuraman et al., (1985) defined service quality as "the difference between consumers' perceptions of the services provided by a particular company and their expectations of the company providing such services". Meanwhile, service quality has been recognized as a main factor that led an organization to success by differentiate and stand out from its competitors (Ladhari, 2009). According to the previous study, an organization which provide its customers a great service quality would increase customer retention and attract new customers efficiently, thus profitability boosted, gained positive word-mouth and image of organization would enhance. (Kang & James, 2004; Yoon & Suh, 2004).

SERVQUAL MODEL first classifies service quality into ten dimensions that include reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding consumers, and tangible assets. (Parasuraman et al., 1985) Afterward, they drop out the remaining dimensions to five dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy, each level is subdivided into a number of questions, and the user is asked to rate the expectation, actual feeling, and minimum acceptable value of each question through a questionnaire. Parasuraman et al., also pointed out that when the perceived experience is lower than the expected experience, it means that the service quality is not satisfactory.

2.2 Student Satisfaction on Online Bus Ticket Booking Platform

In recent years, organizations have come to recognize the value of customer satisfaction. It is well acknowledged that retaining existing consumers is significantly less expensive than acquiring new ones. As stated by Poisz and Van Grumbkow (1988), customer satisfaction was view as the discrepancy between what customer get and their expectations. This can be explained as customers wants the consistency between the values of the product or services and the desires. Furthermore, customer satisfaction can be illustrated as the finish point in the motivational process and also can be considered as the fulfilment response of customers. (Rust and Oliver, 1994). As stated by Education Malaysia Global Services (2020), students in higher education institutions have frequently using the transportation among the public transport users since many of them are continue their studies in other states in Malaysia. Hence, in order to facilitate the purchase of tickets, the online ticket booking platform is the choice of many students to cross-state travel. Therefore, public transport, especially buses, is the choice for many students to go to their study destinations.

Students UMK in Pengkalan Chepa (PC) campus are among the direct recipients of the service provided by the online bus ticket platform. Hence, researcher decide to set UMK PC Campus FKP fourth-year students as population of the study since students' satisfaction should be taken into consideration to improve the service quality of online booking platforms due to demand for public transport among the students.

2.3 Relationship Between Reliability and Student Satisfaction on Online Bus Ticket Booking Platform

Reliability is an important aspect in the SERVQUAL model. This aspect demonstrates the ability to offer services precisely, on time, and convincingly. Reliability defined as the capability of an organization to provide product or services with expected and consistency standard. Besides, it also refers to the ability of the organization to deal with customer problems and feedback, deliver customer a great performance and assistance on its services all the time (Iberahim et. al. 2016). According to Parasuraman et al., reliability means that an organization performs a service correctly the first time. Furthermore, reliability has consisted of the precise of order fulfillment, record, quote, billing that maintain the service guarantee to customers (Yang & Fang, 2004). A good online bus ticket platform will be trustworthy in their commitment to deliver the service on time and as accurately as promised. According to the previous study that implemented by Ismail & Yunan (2016), reliability in performing daily tasks has a significant impact on customer satisfaction. Moreover, Owuamanam et. al. (2022) has reported that there is positive relationship existing between reliability of e-system and customer satisfaction. Hence, a hypothesis has been created to find out if reliability has a positive relationship with customer satisfaction among UMK PC campus students on online bus ticket booking platforms.

2.4 Relationship Between Assurance and Student Satisfaction on Online Bus Ticket Booking Platform

Assurance is one of a vital dimension in the SERVQUAL model, it can be illustrated as the ability of the organization to transmit confidence and credibility for the customers (KLOKKENGA, 2020). As stated by Kobiruzzaman (2020), assurance refer to the technical knowledge, professionalism, competency, communication, and problem-solving skills that the employees show to their customers thus prompt them to trust the entire organization. As reported by Rachman (2017) and Badara et. al. (2013), assurance of a service has positive and significant effect on customer satisfaction and customer loyalty. Besides, a survey that implemented by Murdifin et. al. (2018), has proved that assurance of services is an important indicator and get most attention of customers. Customers looking for a sufficient information of the services and expects employees serve them in a professionalism manner as well. Hence, a hypothesis of this study has illustrated as assurance has positive relationship with customer satisfaction among UMK PC campus students on online bus ticket booking platform.

2.5 Relationship Between Responsiveness and Student Satisfaction on Online Bus Ticket Booking Platform

According to Pakurar et. al. (2019), responsiveness is defined as the willingness that employees responding on customers request, questions, and concerns, and provide them prompt service. A study that has conduct by Uyoga (2018) has determine that responsiveness has a positive impact on customer satisfaction on the service since the study found that as high as the responsiveness of the employees to respond to the customer needs, as high the customers satisfaction. So, it is necessary for the service organization to create positive relationship with customers by respond to their questions and needs timeliness in order to enhance customer satisfaction. Additionally, Lin (2007) has implemented a study and the

study has identified that responsiveness of a services is positively affected customer satisfaction. The study which conducted by Lin has stated customers expect to get high responsiveness services. Therefore, there will be a hypothesis for this study as responsiveness has significant relationship with customer satisfaction among UMK PC campus students on online bus ticket booking platform.

2.6 Relationship Between Tangibles and Student Satisfaction on Online Bus Ticket Booking Platform

Tangibles refer to the look of physical infrastructure, communication tools and technology. Tangibles in service quality of online bus ticket platform have significant relationship based on the student satisfaction which is FKP year fourth campus Kota students. According to the studies conducted by A Gandhi et. al., (2019) tangibles refer to the company's utilization of attractive physical facilities, tools, and materials, as well as the look of its employees. Based on the previous studies by Teoh et. al. a company should set the objective of wanting all of their customers to have an extraordinary positive and never forget first impression, as this would improve the odds that they will come back rather than move to a competitor in the future. In addition, based on the study conducted by Samuel et. al., al (2016) found that tangible of a system was evaluated based on the presence of platform management and also the presence of appealing promotional pricing on E-ticketing, it proved that tangibles have significant relationships with customer satisfaction.

Munusamy et al., (2010) has proved stated that tangibles have significant impact on customer satisfaction. Additionally, Sanjuq, G. (2014) has proved that there is a high level of significance relationship between tangible and service quality. Thus, the tangibles hypothesis is assumed to have a significant relationship with customer satisfaction among UMK PC campus students on online bus ticket booking platform.

2.7 Theoretical Framework

As this study aimed to investigate the relationship between the service quality of online booking bus ticket platform and customer satisfaction among UMK PC campus FKP fourth-year students. Hence, theoretical framework and hypothesis for this study was formulated as below.

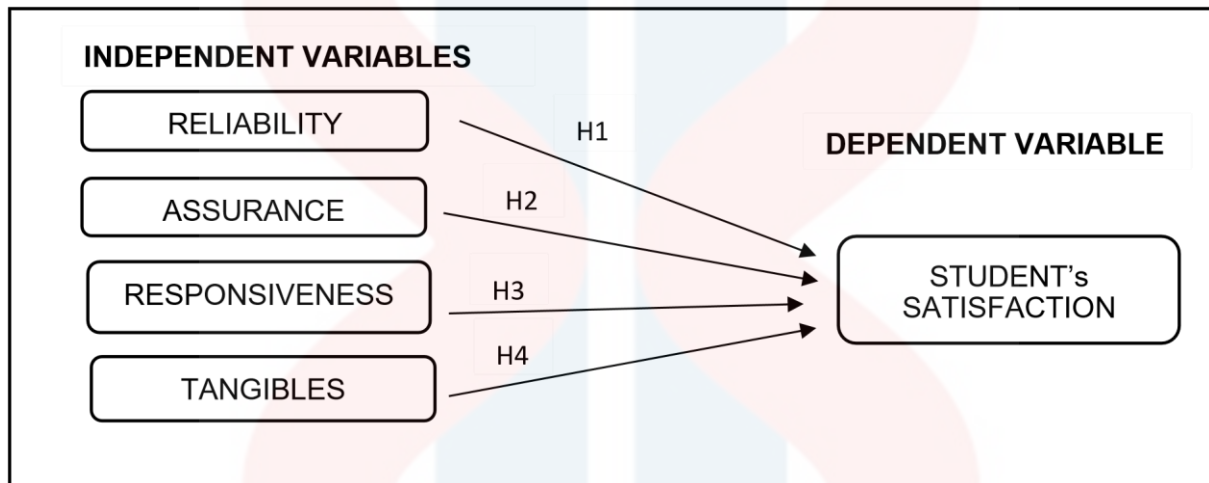


Figure 2.1: Theoretical Framework - Conceptual model of Service Quality

Source: Adapted from Parasuraman et al., (1985)

H1: Reliability has positive relationship with customer satisfaction among UMK students on online bus ticket booking platform

H2: Assurance has positive relationship with customer satisfaction among UMK students on online bus ticket booking platform

H3: Responsiveness has positive relationship with customer satisfaction among UMK students on online bus ticket booking platform

H4: Tangibles has positive relationship with customer satisfaction among UMK students on online bus ticket booking platform.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

This chapter will discuss the methods that will be used by researchers in conducting this study. Research methodology refers to the process of applying the scientific method of data collecting and interpretation to the right data collect. In this chapter, the methodology of this study includes methods of data collection, population, sampling technique and data analysis to determine the service quality of online bus ticket platforms towards customer satisfaction among UMK PC Campus FKP fourth-year students.

3.1 Research Design

Research design is the structure of a researcher method selections for doing research. The purpose of research design is to ensure that the data collected can confidently and effectively meet the research question (Vaus, 2009). In this study, the type of research design that will implement is a quantitative method, which is questionnaire and data analysis. Quantitative research divided into primary data collection and questionnaire. Questionnaires will be used to collect data on service quality of online bus ticket booking platforms toward customer satisfaction among UMK PC campus FKP fourth-year students. This study examines the relationship between reliability, assurance, responsiveness, and tangibles towards customer satisfaction among UMK PC Campus FKP fourth-year students on online bus ticket booking platforms.

3.2 Data Collection Method

Data collection method is a systematic gathering and analysis of data on certain variables to answer research objectives and to know the outcomes of the study. In this study, a quantitative research method was adopted. The questionnaires will be distributed between 11/12/2022 until 17/12/2022. The questionnaire for this study will be created using Google Forms and delivered to the UMK PC campus FKP fourth-year students through WhatsApp.

3.2.1 Primary Data

This study uses primary data as a source of study, it defined as a data that will be collected for the first time by the researchers. The primary data will be generated from questionnaires that are specially designed for understanding and obtaining data for research objectives. The primary sources are from questionnaires that will be divided into three sections which included demographic, general information, and satisfaction level of customer service of online bus ticket platforms.

3.3 Population and Sampling

This chapter will discuss the elements of population and sampling, including the target population, sampling frame, sampling technique, and sample size of this study.

3.3.1 Target population

According to Bhandari (2020), a population is an entire group of many people with common characteristics. In a study, a population can contain any element or group you want to study, such as people, items, activities, groups, organizations, states, etc. The target population of this research was all UMK PC campus FKP fourth-year students. According to data retrieved from faculty FKP, there are a total of 889 FKP fourth-year students in UMK

PC campus. We focus our target population on fourth-year students since fourth-year students take public transit as bus to go and back to their hometown and school more often and experienced, while Year 1 to Year 3 students were have their classes through online before opened up inter-state and recovery from Covid-19 pandemic, they have not much experience on taking the bus go and back, and they only started to take physical classes this year. So, researcher finally choose FKP fourth-year students as the target population to study the student's satisfaction towards service quality of online bus ticket booking platform.

3.3.2 Sampling frame

According to Rukmana (2014), the sampling frame is a list of all items in the population from which to select probability samples. In addition, a sampling frame is a set of items or a database from which your sample will be selected in a specific manner. A database of potential respondents serves as the sampling frame in the context of market research. You can categorize information about known segmentation characteristics in this way. (Whaley, J. 2022). According to Fillmore (2022), the name and appropriate contact information of the respondent are typically included in the sampling frame, but it is also possible to include other significant data that may be used in the study's analysis phase, such as age, location, or customer segmentation information. A set of questionnaires were distributed randomly to the respondents which are UMK PC campus FKP fourth-year students. Only the responses from respondents who have used online bus ticket booking platform before will be accepted to implement the further analysis.

3.3.3 Sampling Techniques

There are two types of sampling techniques including probability sampling and nonprobability sampling methods. In this research, researchers will use a probability type of sampling technique which is simple random sampling. Thomas (2022) claimed that there is no possibility of inequity in simple random sampling because each member of the population

has a similar chance of being selected. To use statistics to draw conclusions about the population, simple random sampling will be used since randomization is the greatest way to reduce the effect of any confounding variables, it helps to ensure good internal validity. Finally, convenience sampling was used in the study to ensure and enhance the results of the simplified sampling. Convenience sampling is often utilized to improve results and simplify sampling and it also a simple and inexpensive way to collect initial data, but there is no way to determine if the sample is representative of the population, so it does not produce generalizable results. (McCombes, 2020) Besides that, convenience sampling is also a popular sampling method among students and is also relatively inexpensive because convenience sampling includes the people who happen to be most accessible to the researcher, and this sampling method reduces the time and cost of conducting this study.

3.3.4 Sampling size

According to Bhandari (2020), a sample is a subset drawn from the target population. The researcher will choose a sample size which is the number of respondents from the total population. Sample sizes are essential for researchers to gain consistent findings (Sekaran & Bougie, 2013). This research distributed the questionnaires to UMK PC campus FKP fourth-year students who have used online bus ticket booking platforms. The sample size was determined using the formula developed by Krejcie and Morgan (1970). According to data from faculty FKP, there are a total of 889 UMK PC campus fourth-year students from Semesters 7 and 8 in 2022. So, 265 respondents were chosen as the sample size for this study by looking at the table below by Krejcie and Morgan (1970) that shows how to figure out the sample size for a general population.

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.
Source: Krejcie & Morgan, 1970.

Figure 3.1: Table for determining sample size for a given population
Retrieved from: Krejcie and Morgan (1970)

3.4 Research Instrument

Research instruments are tools that are used for data collection and analysis. Questionnaire will be constructed and customized for research and data collection. The questionnaire will be created to study the service quality of online bus ticket booking platforms towards customer satisfaction. The questionnaire will be formulated based on research objectives.

3.4.1 Multiple Choice Question

Multiple choice questions provide respondents with multiple answer options. Respondents will be expected to select an answer from the answer option. In this study, multiple choice questions will be used to collect respondents' demographic data.

3.4.2 Likert scale

A Likert scale is an orderly scale from which respondents choose the option that best describes their opinion. Likert scale will be used in this study as it is easy to draw conclusions

from quantitative data. In this study, 5 points Likert scale will be used for respondents to specify their level of agreement from Strongly Disagree to Strongly Agree.

3.5 Data Analysis

3.5.1 Statistical Package for Social Science (SPSS)

In this study, SPSS, which meant by Statistical Package for Social Science is going to be use by researcher to implement descriptive analysis and to analyse the demographic data of 265 respondents so that researcher is able to interpret the data in a more convenient and efficient way. Meanwhile, descriptive analysis will be implemented to summarize the data of sample size in a more constructive way by using SPSS.

3.5.2 Structural Equation Modelling (SEM)

Structural Equation Modelling (SEM) is a set of statistical techniques that typically used to analyse and examine the interactions between latent and observable variables. It evaluates linear causal relationships between variables while also taking measurement error into account, making it similar to but stronger than other regression studies. According to Hair, et. al., (2011), Structural Equation Modelling partial least squares (PLS-SEM) can be defined as a causal modelling approach that able to maximizes the exposition variance of the dependent latent constructs. In the study, SEM method will be utilized to analyse the Cronbach Alpha for reliability test, construct reliability and convergent validity, Fornell-Larcker Criterion, Average Variance Extracted (AVE) and path coefficient and hypothesis testing.

3.5.3 Smart PLS

Other than SPSS, another software will be used throughout this study to analyse the reliability test and hypothesis testing between the variables which is SmartPLS4. SmartPLS4

is a latest version of SmartPLS software which for variance-based Structural Equation Modelling (SEM) using the partial least squares (PLS) path modelling method and it was with graphical user interface. SmartPLS4 give easy access to Structural Equation Modelling method, and it is differed from SPSS since it provided users a more attractive and flexible graphical outputs. Besides, SmartPLS4 provides users a more predictive accuracy and much lower risk of chance correlation. Also, Partial Least Square (PLS) approach was the best technique to construct SEM. It was capable to testing the relationship between indicators and latent variables, and relationships between constructs, even in complex models simultaneously. So, it can be explained as PLS is the best method to analyse data in this study.

3.5.4 Frequency Distribution

Frequency distribution is defined as an analysis method to summarize the variables, possible outcomes, and show the frequency of occurrence of respondents in each category on the scale of measurement. By carrying out frequency distribution, researcher could access the data and information of respondents conveniently.

3.5.5 Pilot Test

Pilot test was the very first step before researcher moving on for the evaluation of their research study. Pilot test is conducted to ensure the feasibility and validity of the final finding of the study before implementing the study in a larger-scale or widely distributed to the target of population so that it could reduce the risk of error, costs, and time, also make improvement on the omissions that were found through pilot testing. Researcher have conducted pilot test before implementing the large-scale study. Researcher distributed questionnaires to 30 respondents which were also UMK PC campus FKP fourth-year students to evaluate the feasibility of the questionnaires. The result of pilot test has proved that the questionnaires is feasible and valid due to all the variables is accepted and approved

and the respondents who joined the pilot test has given the feedback which the questionnaires is easy to understand. This means that the study is able to go on for the further steps.

3.5.6 Reliability Analysis

Reliability analysis was illustrated as an analysis to measure the consistency for the finding of the result. In this study, researcher have used Cronbach's alpha to evaluate the reliability of the result of pilot test. If the Cronbach's alpha value of the reliability test was 0, this means that there is no reliability, while the value which below 0.6 means there is poor reliability. On the other hand, Cronbach's alpha value 0.6 to 0.7 is generally satisfactory for the reliability, 0.8 and above is a high level of reliability and 1.0 is perfect reliability.

3.5.7 Descriptive Analysis

Descriptive analysis is typically a first step for implementing statistical analysis since it used to describe or summarize the basic features in data set. Researcher will be used descriptive analysis to summarize demographic data of respondents in the study to determine the trend and relationships between the demographic characteristics of respondents.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, the results of the data analysis will be presented and also discuss the findings based on data analysis of this study. A total of 265 sets of questionnaires were collected from FKP fourth-year students who have purchase bus ticket through online booking platform before. The purpose of this chapter is to examine the relationship between four dimensions of service quality which included reliability, assurance, responsiveness, and tangibles with student satisfaction that were state in research objectives. Researcher has used SPSS version 26.0 and Smart PLS software to determine the result for each hypothesis and implement the certain analysis.

The analysis which has implemented and will be discuss in this chapter consisting of:

- Reliability Test
- Ranking of Frequency of Seeking Support Based on Strongly Agree
- Descriptive Analysis
- Construct Reliability and Convergent Validity
- Discriminant Validity
- Structural Model Result

4.1 Reliability Analysis

Table 4.1: Reliability Test for Pilot Test

Variable	N of Item	Cronbach's Alpha	Strength of Association
Assurance	4	0.844	Very Good
Reliability	4	0.698	Moderate
Responsiveness	4	0.869	Very Good
Tangibles	4	0.867	Very Good
Student Satisfaction towards Service Quality of Online Bus Ticket Booking Platform	5	0.747	Good

Table 4.1 above has shown the reliability analysis for pilot test for this study. The Cronbach's Alpha value are all greater than 0.6. According to the University of Virginia Library, this can be explained as all the variable for this study is reliable. In details, the reliability test result shown that assurance, responsiveness, and tangibles was very good in strength of association since the Cronbach's Alpha value is greater than 0.8, students' satisfaction which the Cronbach's Alpha value is greater than 0.7 but lower than 0.8 was good in strength of association while reliability was moderate in strength of association in the study owing to its Cronbach's Alpha value is lower than 0.7 but greater than 0.6.

4.2 Characteristics of Demographic

Table 4.2: Respondents' Background

Particular	N	%
Age		
22 years old	33	12.5
23 years old	205	77.4
24 years old	25	9.4
25 years old	2	0.8
Gender		
Male	110	41.5
Female	115	58.5
Race		
Malay	150	56.6
Chinese	67	25.3
Indian	41	15.5
Bumiputera Sabah	4	1.5
Iban	3	1.1
Program		
SAL	96	36.2
SAR	52	19.6
SAB	34	12.8
SAK	68	25.7
SAE	15	5.7
Usage per year		
1-3 times	74	27.9
4-6 times	127	47.9
7 times above	64	24.2

The study first established that the majority of respondents are 23 years old with the percentage of 77.4, following by 12.5% of 22 years old, 9.4% of 24 years old and 0.8% of 25 years old. Furthermore, the study established that the majority of respondents were female with 58.5 % and the male represented 41.5% of the total respondents. In terms of race, 56.6% respondents are Malay, while 25.3% are Chinese, 15.5% are Indian, and the minority of respondents are 1.5% of Bumiputera Sabah and 1.1% of Iban. With regard to programs that the students' study, 36.2% are from SAL, 19.6% of the students are from SAR, 12.8%

students are from SAB, 25.7% students are from SAK, and the small percentage of respondents with 5.7% are the students from SAE. It is significant to note that the majority of students used online bus ticket booking platform 4-6 times a year the percentage of 47.9, following by 1-3 times a year with the total of 24.9% and 24.2% students used the platform 7 times above a year.

Table 4.3: State of Origin of Respondents

States	N	%
Johor	31	11.7
Kedah	27	10.2
Kelantan	14	5.3
Malacca	21	7.9
Negeri Sembilan	21	7.9
Pahang	20	7.5
Penang	19	7.2
Perak	39	14.7
Perlis	11	4.2
Sabah	7	2.6
Sarawak	4	1.5
Selangor	32	12.1
Terengganu	19	7.2

Table 4.3 above showed the state of origin of the respondents. The study established that the majority of respondents are from Perak with 14.7%. Following by 12.1% from Selangor. Respondents from Johor also have a big percentage of respondents with 11.7%, and Kedah with 10.2% respondents. Malacca, Negeri Sembilan and Penang, Terengganu have 7.9% and 7.2 respondents respectively. Pahang with 7.5% respondents, Kelantan with 5.3% respondents, Perlis with 4.2% respondents. Sabah and Sarawak with 2.6% and 1.5% respondents respectively.

4.2.1 Ranking of Frequency

Table 4.4: Ranking of Frequency of Seeking Support Based on Strongly Agree

Type of Support	N	Strongly				
		Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
User interface of online payment platform system is systematic and well organized.	265	0	0.4	6.8	34	58.9
System keeps accurate records of customer reservation.	265	0	0.4	9.1	32.5	58.1
Personal data is confidential during the transaction.	265	0	0	5.3	37	57.7
Platform mailing a transaction slip immediately and setting up booking quickly.	265	0	0.4	6.8	38.5	54.3
Platform shows an available seat on website.	265	0	0	9.4	37	53.6
Booking bus ticket through online platform due to the discount or promotion.	265	0	0.8	10.6	35.1	53.6
Service system of the platform is accessible to search and easy to access.	265	0	0	6	42.3	51.7
Service system is friendliness and guaranteeing customers' data security in its purchasing procedures	265	0	0.4	8.7	40	50.9
Experience using platform make me confidence on the next online booking.	265	0	0.8	11.3	37.7	50.2
Satisfied with the service quality that the platform provided.	265	0	1.5	7.5	44.9	46
Use the platform as main choice to book bus ticket.	265	0	1.5	9.1	43.8	45.7
Platform delivers effective communication and prompt service.	265	0.4	1.1	10.6	43.4	44.5
Platform has strong technical capability for customers to check data balance anytime even during the crowded period.	265	0.4	1.1	12.1	42.6	43.8
Customer service is always willing to solve customer problem.	265	0.4	1.5	6.8	48.3	43
Web page is attractive and organised.	265	0	0.8	8.7	47.5	43
Never encountered any problems when booking bus ticket through online platform.	265	0	5.3	10.2	41.5	43
Professional and skilled staff	265	0	0	10.9	46	43
Information provided is accurate and reliable	265	0	0.8	11.7	45.7	41.9

Customer service is easy to reach and respond to customer inquiries and feedback timely.	265	0	2.6	9.4	46.8	41.1
Time taken and destination for the journey is sustainable with info stated in the online platform.	265	0.8	2.6	20	37.4	39.2
Departure time that stated in the platform is always consistent and on time	265	1.1	6.4	20.8	37.7	34

Table 4.4 above showed the ranking of frequency of seeking support based on Strongly Agree from 265 respondents. Each respondent has answered the questionnaires by choosing from strongly disagree to strongly agree to express their level of agreement.

4.3 Descriptive Analysis

Table 4.5: Descriptive Analysis for Dependent Variables and Independent Variables

Variables	N	Mean	Standard Deviation
Customer Satisfaction towards Service Quality of Online Bus Ticket Booking Platform	265	4.3404	0.50294
Reliability	265	4.2142	0.57459
Assurance	265	4.3858	0.49134
Responsiveness	265	4.3396	0.53366
Tangibles	265	4.4349	0.46999

In this section, the researcher performed the analysis by using the mean of each part of the dependent and independent variables. The main purpose of applying descriptive analysis in the study was to determine the basic information about the respondents. In this study, 265 respondents were selected to answer this questionnaire. The results showed that the mean and standard deviation of each question were based on the variables.

Table 4.5 presented the total mean of the dependent variable which is Customer Satisfaction towards Service Quality of Online Bus Ticket Booking Platform and independent variables including reliability, assurance, responsiveness, and tangibles.

According to the table, all the independent variables have scored 4.0 above of the mean value where the respondents are agreeing that these four variables will become the factors that affecting the customer satisfaction towards Service Quality of Online Bus Ticket Booking Platform. Tangibles gain the highest mean value for all of the independent variables which is 4.4349 while reliability gain the lowest mean value with mean value 4.2142. In the other hand, Customer Satisfaction towards Service Quality of Online Bus Ticket Booking Platform gained 4.3404 mean value.

Table 4.6: Descriptive Analysis for Customer Satisfaction (Dependent Variables)

No.	Variables	N	Mean	Standard Deviation
1	I satisfied with the service quality that the online bus ticket booking platform provided.	265	4.35	0.687
2	I will use online bus ticket booking platform as my main choice to book bus ticket.	265	4.34	0.705
3	I choose to booking ticket bus through online platform due to the discount or promotion on bus ticket that offered by the online platform.	265	4.42	0.708
4	The experience using online bus booking platform make me confidence on the next online booking.	265	4.37	0.712
5	I never encountered any problems when I am booking bus ticket through online platform.	265	4.22	0.835

Table 4.6 represents the standard deviation and mean analysis of the responses to the dependent variable (Customer Satisfaction). The table shows that the overall mean value of responsiveness is 4.3404. According to the table, question 3 has the highest score of 4.42 followed by questions 4 and 1 with 4.37 and 4.35 respectively. this means that most of the respondents are satisfied with the service quality of the online bus ticket booking platform and they feel comfortable and confident in purchasing tickets online and believe that they will purchase tickets again online. In contrast, the lowest value mean rate falls into question 5 with mean value 4.22 that proved some of the respondents were not agree about the

statement “I never encountered any problems when I am booking bus ticket through online platform”.

Table 4.7: Descriptive Analysis for Reliability (Independent Variable)

No.	Variables	N	Mean	Standard Deviation
1	The information of bus operator that provided by the online platform is accurate and reliable	265	4.29	0.697
2	It keeps accurate records of customer reservation.	265	4.48	0.675
3	The departure time that stated in the platform is always consistent and on time.	265	3.97	0.953
4	Time taken and destination for the journey is sustainable with the time and destination place that stated in the online platform.	265	4.12	0.869

Table 4.7 presents the mean and standard deviation analysis of the independent variable - reliability. The table shows that the overall mean of reliability is 4.2142, which indicates that this variable is acceptable, and most respondents agree that reliability can influence customer satisfaction with the quality of service provided by the online booking platform. Question 2 has the highest mean value of 4.48, which indicates that most respondents agree with the statement that “It keeps accurate records of customer reservation”. Conversely, the lowest mean was for question 3, “The departure time that stated in the platform is always consistent and on time”, implying that some respondents disagreed with this statement, saying that they believe the departure times are not accurate and consistent.

Table 4.8: Descriptive Analysis for Assurance (Independent Variable)

No.	Variables	N	Mean	Standard Deviation
1	My personal data is confidential during the transaction at the platform.	265	4.52	0.597
2	The customer service staff of the online bus ticket booking platform I used is professional and skilled to handle the issues that I have faced on the platform.	265	4.32	0.662

3	The service system of the online bus ticket booking platform is friendliness and guaranteeing customers' data security in its purchasing procedures	265	4.42	0.664
4	The online bus ticket booking platform has strong technical capability for customers to check data balance anytime even during the crowded period.	265	4.28	0.748

Table 4.8 has illustrated the Assurance variable. The table shows that the overall mean value of responsiveness is 4.3858. This indicates that most of the respondents agree that "assurance" has a relationship between customer satisfaction with the service quality of the online booking platform. From the table, we can see that the mean of question 1 is the highest which is 4.52 and followed by question 3 (4.42). The respondents are awesome in that they strongly agree with the statement “My personal data is confidential during the transaction at the platform”. The lowest mean rate is question 4 with a 4.28 mean value that shows some of the respondents faced the technical problem during the crowded period.

Table 4.9: Descriptive Analysis for Responsiveness (Independent Variable)

No.	Variables	N	Mean	Standard Deviation
1	The customer service is always willing to solve customer problem.	265	4.32	0.701
2	The customer service of the online bus ticket booking platform is easy to reach and respond to customer inquiries and feedback timely.	265	4.26	0.737
3	The online bus ticket booking platform deliver effective communication and prompt service to their customer.	265	4.31	0.734
4	The service system of online bus ticket booking platform mailing a transaction slip immediately and setting up booking quickly.	265	4.47	0.64

Table 4.9 shows the mean and standard deviation of the independent variable "responsiveness". The table shows that the overall mean value of responsiveness is 4.3396. This indicates that most of the respondents agree that "responsiveness" can influence customer satisfaction with the service quality of the online booking platform. Meanwhile,

the statement “The service system of online bus ticket booking platform mailing a transaction slip immediately and setting up booking quickly” has the highest mean value of 4.47, followed by questions 1 and 3 with mean values of 4.32 and 4.31, respectively. the lowest mean value for the responsiveness variable is “The customer service of the online bus ticket booking platform is easy to reach and respond to customer inquiries and feedback timely”, which only gets a mean value of 4.26.

Table 4.10: Descriptive Analysis for Tangibles (Independent Variable)

No.	Variables	N	Mean	Standard Deviation
1	The web page of the online bus ticket platform is attractive and organised.	265	4.33	0.664
2	The online bus ticket booking platform shows an available seat on website that able for me to choose.	265	4.44	0.661
3	The service system of the online bus ticket booking platform is accessible to search and easy to access.	265	4.46	0.608
4	The user interface of online payment platform system is systematic and well organized.	265	4.51	0.64

Table 4.10 illustrates the Tangibles variable. From the table, we can see that the total mean of Tangibles is 4.4349. Among the four independent variables (reliability, assurance, responsiveness, and tangibles), the total mean of tangibles is the highest. Question 4 had the highest mean value of 4.51, followed by question 3 (4.46). Respondents strongly agreed with the statements “My personal data is confidential during the transaction at the platform” and “The service system of the online bus ticket booking platform is accessible to search and easy to access”. On the other hand, the lowest mean rate was for question 1 with a mean of 4.33, which indicates that some respondents disagreed with the statement “The web page of the online bus ticket platform is attractive and organised”.

4.4 Results of Measurement Model

The measurement model is a component of the model that investigates the relationship between latent variables and reliability measures (Sarstedt et al., 2016). The relationship between the latent variables is represented by the structural model. Establishing a measurement model, which describes how to measure the construct using a collection of indicators. There are two major conceptual frameworks for measuring models which are the data reliability and validity were measured by examining items in latent variables.

4.4.1 Loading and Cross Loading

Furthermore, the reliability of each measuring item construct was investigated, and loading values greater than 0.4 are generally regarded as acceptable. Meanwhile, internal consistency was used to determine whether the scale used could measure the idea that needed to be measured. In general, a score of greater than 0.7 is regarded acceptable. According to Table 4.11 and Figure 4.1, the loading value achieved was greater than 0.7, indicating that no internal consistency issues were discovered during the investigation.

Table 4.11: Construct Validity

	Assurance	Reliability	Responsiveness	Student's Satisfaction	Tangibles
Assurance_1	0.688				
Assurance_2	0.75				
Assurance_3	0.813				
Assurance_4	0.693				
Reliability_1		0.738			
Reliability_2		0.552			
Reliability_3		0.766			
Reliability_4		0.778			
Responsiveness_1			0.805		

Responsiveness_2	0.776	
Responsiveness_3	0.758	
Responsiveness_4	0.689	
Student_Satisfaction_1		0.725
Student_Satisfaction_2		0.712
Student_Satisfaction_3		0.537
Student_Satisfaction_4		0.778
Student_Satisfaction_5		0.69
Tangibles_1		0.656
Tangibles_2		0.732
Tangibles_3		0.783
Tangibles_4		0.754

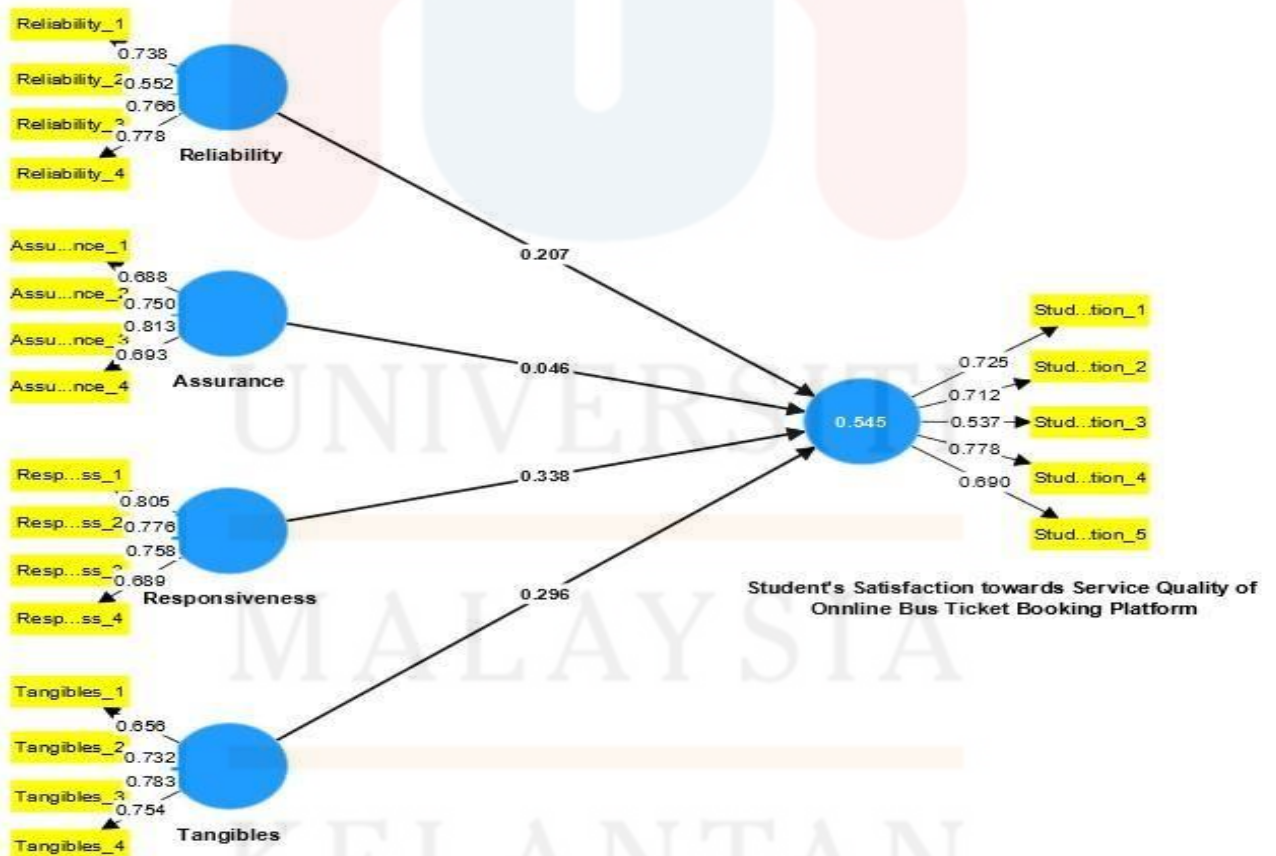


Figure 4.1: Structural Model (Standardized Estimates)

Construct validity is determined when all items have loadings that are greater than 0.7, lower on other constructs, and greater on their own constructs (Hair et al., 2011). If there is a strong correlation between the constructs, the model may experience multicollinearity issues. Although no issues with multicollinearity were discovered, the results show that the measurement items were subsequently accurate.

Based on figure 4.1, the correlation between the reliability of each construct which is 0.738 for reliability_1, for reliability_2 the value is 0.552, for reliability_3 with the value result is 0.766 and 0.778 for reliability_4. This is showed the result of analysis between the reliability (Independent variable) and the student's satisfaction towards service quality of online bus ticket booking platform (dependent variable) has strong correlation.

In the construct of assurance, the value of analysis result was 0.7 and above. The value for assurance_1 is 0.688, for assurance_2 is 0.750, for assurance_3 is 0.813 and for assurance_4 is 0.693. The result analysis of construct assurance (independent variable) between the student's satisfaction towards service quality of online bus ticket booking platform (dependent variable) is no multicollinearity problem that contribute to the measurement items were ultimately valid.

Moreover, each construct of responsiveness value is greater than 0.7. For responsiveness_1 the value is 0.805. For responsiveness_2 the result is 0.779, for responsiveness_3 is 0.758 and responsiveness_4, the value is 0.689. These construct of responsiveness (independent variable) and the student's satisfaction towards service quality of online bus ticket booking platform (dependent variable) result analysis show that there is strong correlation for the measurement subsequently accurate.

Furthermore, the construct of tangibles shows the value analysis result is also greater than 0.7. For tangibles_1 the value is 0.656, tangibles_2 value is 0.732, tangibles_3 the value

is 0.783 and tangibles_4 the value is 0.754. The result shows that there is a significant relationship between the construct tangibles (independent variable) and the student's satisfaction towards service quality of online bus ticket booking platform (dependent variable). It is because the value is greater than 0.7 would lead to the strong correlation without any problem with multicollinearity. Lastly, the analysis result value of student satisfaction construct is 0.6 and above. However, the value of student satisfaction has a strong correlation between the independent variables and dependent variables. Based on table 11, the value of student satisfaction_1 (0.725), student satisfaction_2 (0.712), student satisfaction_3 (0.537), student satisfaction_4 (0.778) and student satisfaction_5 (0.69). These constructs for student satisfaction analysis result value are shown that the correlation validity is strong and significant.

4.4.2 Convergent Validity

Convergent validity is a test that determines whether the measurements of the items are positively correlated with the measurements of other items measuring the same construct. The factor loadings average variance extracted (AVE) and composite reliability (CR) are commonly used to determine convergent validity. Convergent validity is achieved when the AVE value is 0.5 or greater and the CR value is 0.7 or greater.

Table 4.12 shows that all factor loadings (CR and AVE) exceeded their cut-off values. As a result, it can be concluded that the convergent validity assumption for this study was reached. The result of Assurance showed there are positively correlated between the CR which is greater than 0.7 (0.721) and AVE (0.544) greater than 0.5. Moreover, for reliability results showed there also positively correlated between the CR with the value 0.686 and 0.51 for AVE. Next, for the responsiveness result showed value of CR is 0.758 and 0.575 of AVE. Furthermore, the student satisfaction value of CR is 0.727 and AVE is 0.48. Lastly, the value

result of tangibles showed that there are positively correlated between the CR value (0.712) and AVE value (0.537).

Table 4.12: Construct Reliability and Convergent Validity

Construct	Label	Std Loading	CR	AVE
Assurance	Assurance_1	0.688	0.721	0.544
	Assurance_2	0.75		
	Assurance_3	0.813		
	Assurance_4	0.693		
Reliability	Reliability_1	0.738	0.686	0.51
	Reliability_2	0.552		
	Reliability_3	0.766		
	Reliability_4	0.778		
Responsiveness	Responsiveness_1	0.805	0.758	0.575
	Responsiveness_2	0.776		
	Responsiveness_3	0.758		
	Responsiveness_4	0.689		
Student Satisfaction	Student_Satisfaction_1	0.725	0.727	0.48
	Student_Satisfaction_2	0.712		
	Student_Satisfaction_3	0.537		
	Student_Satisfaction_4	0.778		
	Student_Satisfaction_5	0.69		
Tangibles	Tangibles_1	0.656	0.712	0.537
	Tangibles_2	0.732		
	Tangibles_3	0.783		
	Tangibles_4	0.754		

4.4.3 Discriminant Validity

Discriminant validity examines the correlations between possible overlapping constructs using the Fornell-Lacker criterion analysis to determine the extent to which items in each construct are different from items in other constructs. This tool compares each construct's AVE to the square correlation of all other constructs. To obtain discriminant validity, the established AVE value must be greater than the square correlation value. Table 4.13 shows the square correlation of each construct and validates the discriminant validity.

The result of this test also shows that there were no multicollinearity issues in the model used in this study.

Based on table 4.13 below, the value of assurance is 0.738 which is greater than the value of reliability (0.714). Meanwhile, the value for responsiveness is 0.758 which is above than the value of tangibles with 0.733. However, the value for student satisfaction is slightly less than independent variables with the value 0.693. From these analysis results, the discriminant validity is validating due to the no multicollinearity problem from the value of construct.

Table 4.13: The Fornell-Larcker Criterion

	Assurance	Reliability	Responsiveness	Student's Satisfaction	Tangibles
Assurance	0.738				
Reliability	0.571	0.714			
Responsiveness	0.684	0.481	0.758		
Student's Satisfaction	0.572	0.548	0.645	0.693	
Tangibles	0.596	0.514	0.591	0.63	0.733

4.5 Structural Model Result

The second part of the PLS analysis was focused on evaluating the structural model applied for hypothesis testing. Throughout this step, the link between the constructs was closely studied using the path coefficient (β) and t-statistics. The hypothesis test results are shown in Table 4.14 which include T-value, P-value, hypothesis supported and standardized estimates. Meanwhile, Figure 4.2 shows the results of the coefficient path analysis.

Table 4.14: The Path Coefficient and Hypothesis

Hypothesis	Regression Path	Standardized Estimates	T-Value	P-value	Hypothesis Supported
H1	Assurance -> Student's Satisfaction	0.046	0.529	0.597	No
H2	Reliability -> Student's Satisfaction	0.207	2.675	0.007	Yes
H3	Responsiveness -> Student's Satisfaction	0.338	2.732	0.006	Yes
H4	Tangibles -> Student's Satisfaction	0.296	3.121	0.002	Yes

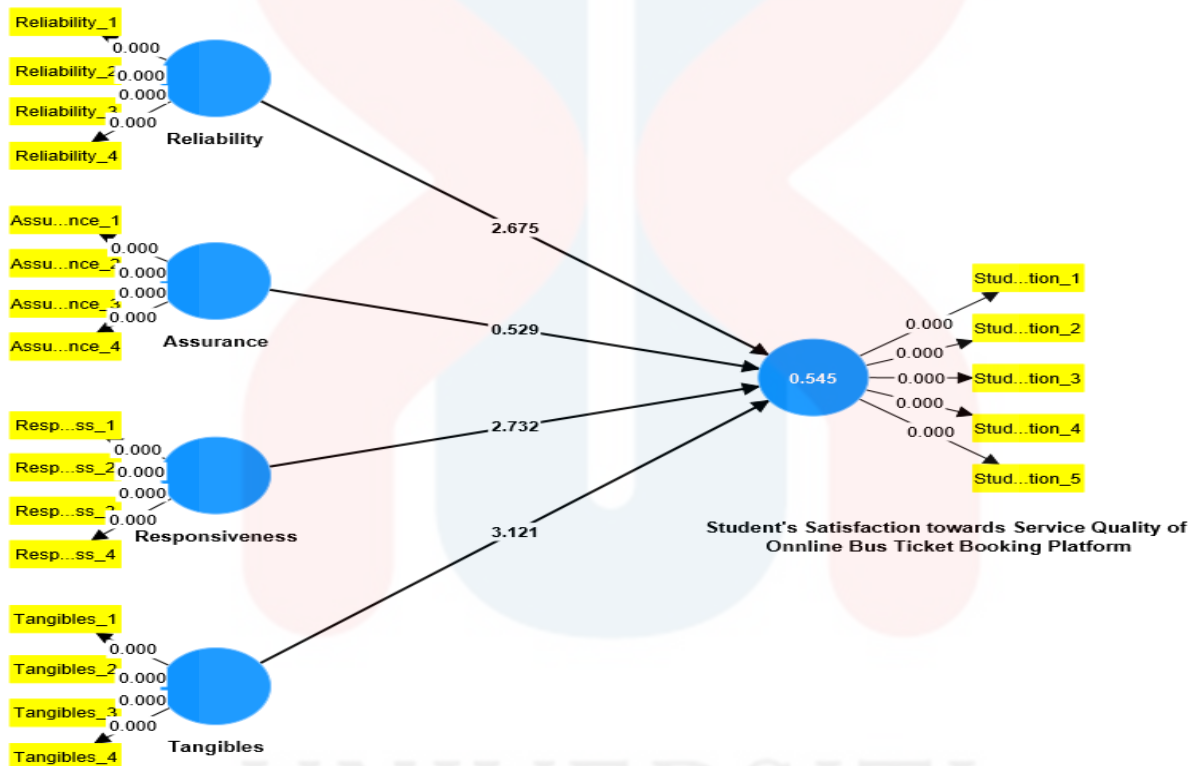


Figure 4.2: Structural Model (T-Value)

Based on table 4.14 and figure 4.2 the path coefficient and hypothesis result analysis are shown. The results of the analysis study are shown in table 4.14 and found that three of four independent variables of this study had a significant positive relationship with dependent variable. Reliability, Responsiveness and Tangibles, which are the construct had positive significant relationship with students' satisfaction (dependent variables). The standardized estimates value for variables were assurance (0.046), reliability (0.207), responsiveness (0.338) and tangibles (0.296). The result has found that the hypothesis for Reliability,

Responsiveness and Tangibles were supported and have positive significant relationship with students' satisfaction while assurance was not. T-value of reliability, responsiveness and tangibles were (2.675), (2.732) and (3.121) respectively. This record value of hypothesis is generally considered high. On other hand, there's no significant relationship between assurance and students' satisfaction due to the t-value was 0.529. The closer T is to 0, the more likely there isn't a significant difference. T-Values is significant only if it was higher or equal to 1.65.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter reviews the summaries of statistical analysis in the past chapter, a discussion of data analysis for independent variables (reliability, assurance, responsiveness, and tangibles) and dependent variable (customer satisfaction) among UMK PC campus FKP fourth year students on online bus ticket booking platform, limitation of the research and recommendation for the future research. Furthermore, the conclusion was made to conclude the whole chapter of the research.

5.1 Findings & Discussion

This study has applied Servqual Model to determine the relationship between dimensions of the model (reliability, assurance, responsiveness, and tangibles) and students' satisfaction. Based on the study, researchers have been practiced Reliability Test, Descriptive Analysis, Construct Reliability and Convergent Validity, Discriminant Validity, Structural Model Result. Researchers have exploited SPSS 26.0 and SmartPLS4 to implement the analysis in order to identify whether the hypothesis is accepted or not and the relationship between the variables.

All analysis results can be glance in table 4.1 to table 4.14 and figure 2.1 to figure 4.2. Structural Equation Model (SEM) was the research method that applied on this study and to identify the objectives. 265 students have been chosen through convenience sampling technique to answer the questionnaire. The Cronbach's Alpha value that shown in Table 4.1 has been proved that the questions in questionnaires for respondents to answer is reliable

since all the Cronbach's Alpha value were greater than 0.6 and it was valid to implement further analysis.

It is worth noting that the result has proved that 3 hypotheses made early in the study were supported while 1 hypothesis was not. In details, hypothesis for Reliability, Responsiveness and Tangibles were supported and have positive significant relationship with students' satisfaction while assurance was not. T-value of reliability, responsiveness and tangibles were (2.675), (2.732) and (3.121) respectively. This record value of hypothesis is generally considered high. On other hand, there's no significant relationship between assurance and students' satisfaction due to the t-value was 0.529. The closer T is to 0, the more likely there isn't a significant difference. T-Values is significant only if it was higher or equal to 1.65 (Cross Validated). Indeed, these meant by reliability, responsiveness and tangibles have significant relationship with students' satisfaction towards the service quality of online bus ticket booking platform, but assurance has no relationship with it.

The construct of reliability, responsiveness and tangibles verified that these dimensions were playing a vital role and give significant impact on students' satisfaction. According to the result of this study, hypothesis for assurance was rejected. This means that assurance was not given significant impact on students' satisfaction. This result may be influence by a few factors which consisting of the environment, sample size was too small to detect the effect and more. This can be explained as assurance of the platform provided would not influence the students' satisfaction significantly among UMK PC campus fourth-year students, but it might have significant impact on students' or customers' satisfaction in other scope, area or countries.

In other words, reliability, responsiveness, and tangibles with students' satisfaction were strong and significant, these could be explained as the online bus ticket booking

platform is necessary to provide the service which are reliable, responsive and tangibles to ensure and maximize the customers' satisfaction. Although assurance has no significant impact to students' satisfaction in the result of this study, but the platforms is still need to provide services which is assured to customers in order to increase the customer retention and word-of-mouth as well.

5.2 Limitation and Recommendation

Several limitations on this study are related to the sample of research and the research design. This study is focused on specific population which is students from UMK in Pengkalan Chepa (PC) students. A sample of 265 respondents from fourth year student of Faculty of Entrepreneurship and Business were selected as the respondents for this study might not be representatives of the total students that study at UMK in PC. It is recommended that the future study to widen the sample in order to make it more representatives and to increase the credibility of the results and thus obtain a more exact outcome in the data analysis of students' satisfaction towards online bus booking platform.

Another limitation is methodological limitation. In this study, the questionnaires are distributed to several WhatsApp group. Although this method was time-and cost-saving for data collection, but its coverage bias is limited (bias due to sample choosing not answer properly-or not accessing the Google Form). Alternatives to minimize the problem in future research would be survey interviews, although it is time- and cost consuming. Therefore, whenever possible, inperson surveys or survey interview should be given priority in future research rather than online questionnaires.

Other than that, difficulty controlling all variables. The difficulty of controlling all variables that could influence the central construct of the study. It may be that there are other

variables that influences students' satisfaction on online bus booking platform that were not covered in this study. In this light, future researchers must care in hypothesizing and testing potential variables that could affecting students' satisfaction. This study has used 5-points Likert's scale with 4 questions each part. Generally, short scales are good because they require less time from respondents. However, very short scales can affect the reliability of the instruments (Raykov 2008). To the extent that the researchers remove items of the scale, the Cronbach's Alpha tends to decrease. In this context, future research should prioritize scales with enough items to keep the alpha within the acceptable range.

Last but not least, this study used SERVQUAL model that may have shortcomings because of level satisfaction vary from one to another. It is also difficult to evaluate whether the respondents are answering truthfully if using one method. Future study should use multiple methods for verification to overcome shortfalls in measuring 2 in 1 such as SERVPERF model. This method is a research scale that developed to help measure more clearly the elements of quality of service.

5.3 Conclusion

Service quality of online bus ticket booking platform is contributed to the student's satisfaction based on the level of service quality provided by online bus ticket booking platform. As a student, the service provided by online bus ticket booking platform expected to high level of service quality for the students purchase retention. High quality service of online bus ticket booking platform will attract new potential consumers especially student. In this study, the service quality (SERVQUAL MODEL) is divided into four dimensions which is responsiveness, tangibles, assurance, and reliability.

The research framework was developed and supported according to literature that had been viewed from the previous article and journal. The theoretical framework used in this

study found that the hypothesis was supported by past studies and previous studies. Most of the articles and journal reviewed by researchers are related to the study conduct and also for future studies. In this study, the data collected from the result of data analysis based on the questionnaire that has been distributed to 265 respondents which are students who are from UMK PC FKP fourth-year that have used the online bus ticket booking platform before. In this study, data were collected using the primary data and quantitative method. Thus, the data were collected and analyses by SPSS software version 26.0 and SmartPLS4 that supported descriptive statistics, reliability analysis and hypothesis testing. The results of analysis are aimed to determine the relationship between the four of dimension service quality with student satisfaction toward online bus ticket booking platform. Three hypotheses were accepted which including responsiveness, reliability, and tangibles while the hypothesis for assurance was rejected.

Besides that, the service quality of online bus ticket booking platform issues are important to be discussed. This is because the improvement needs to be implemented to ensure a high level of service quality for students while purchasing the bus ticket on an online bus ticket booking platform. Therefore, the quality service improvement contributes to the high demand for purchasing bus tickets through online bus ticket booking platform.

The conclusion of the study will be beneficial to students because it can enhance their awareness about the service quality of online bus ticket booking platforms. Most of the students will use the online platform because it easier and faster than purchase at counter ticket. All the hypotheses in this study are accepted except the assurance hypotheses is not supported due to the P-value is less than the significant value.

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APPENDIXES



FKP

Dear Respondents,

We are final year student of University Malaysia Kelantan (UMK Campus Kota) in Bachelor of Entrepreneurship, major in Logistic and Distributive Trade. We are conducting research on "Service Quality of Online Bus Ticket Booking Platform Towards UMK PC FKP Year 4 Student Satisfaction" for our final year project. The questionnaire is designed for year 4 undergraduate students who study at UMK PC Campus. This survey form will take approximately 5-6 minutes to complete and contains five (5) parts. The information provided by you will be kept confidential and used for academic and research purposes only. Your cooperation and kind service is greatly appreciated. Thank you for spending your valuable time to fill in this questionnaire and cooperation!

Kami merupakan pelajar tahun akhir Universiti Malaysia Kelantan (UMK Kampus Kota) dalam Sarjana Muda Keusahawanan, jurusan Logistik dan Perdagangan Pengeedaran. Kami sedang menjalankan kajian mengenai "Kualiti Perkhidmatan Platform Tempahan Tiket Bas Dalam Talian Ke Arah Kepuasan Pelajar UMK PC FKP Tahun 4" untuk projek tahun akhir kami. Soal selidik ini direka untuk pelajar tahun 4 sarjana muda yang belajar di Kampus PC UMK. Borang kaji selidik ini akan mengambil masa lebih kurang 5-6 minit untuk disiapkan dan mengandungi lima (5) bahagian. Maklumat yang anda berikan akan dirahsiakan dan digunakan untuk tujuan akademik dan penyelidikan sahaja. Kerjasama dan jasa baik anda amat dihargai. Terima kasih kerana meluangkan masa yang berharga untuk mengisi soal selidik dan kerjasama ini!

SECTION A: DEMOGRAPHIC PROFILE

BAHAGIAN A: PROFIL DEMOGRAFI

Please specify your answer by placing on the relevant answer provided.

Sila nyatakan jawapan anda dengan menanda pada jawapan yang telah disediakan.

1. Age / Umur:

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> 21 years old | <input type="checkbox"/> 24 years old |
| <input type="checkbox"/> 22 years old | <input type="checkbox"/> Other_____ |
| <input type="checkbox"/> 23 years old | |

2. Gender / Jantina:

- Male / *Lelaki*
- Female / *Perempuan*

3. State of Origin / Negeri Asal:

- | | |
|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> Penang | <input type="checkbox"/> Malacca |
| <input type="checkbox"/> Perlis | <input type="checkbox"/> Terengganu |
| <input type="checkbox"/> Johor | <input type="checkbox"/> Perak |
| <input type="checkbox"/> Selangor | <input type="checkbox"/> Kedah |
| <input type="checkbox"/> Pahang | <input type="checkbox"/> Sabah |
| <input type="checkbox"/> Sarawak | <input type="checkbox"/> Labuan |

4. Race / Bangsa:

- | | |
|---|--|
| <input type="checkbox"/> Malay/ Melayu | <input type="checkbox"/> Chinese/ Cina |
| <input type="checkbox"/> Indian / India | <input type="checkbox"/> Other/ Lain-lain_____ |

5. Program / Programe:

- | | |
|------------------------------|-------------------------------------|
| <input type="checkbox"/> SAB | <input type="checkbox"/> SAK |
| <input type="checkbox"/> SAL | <input type="checkbox"/> SAR |
| <input type="checkbox"/> SAE | <input type="checkbox"/> Other_____ |

SECTION B: GENERAL INFORMATION**BAHAGIAN B: INFORMASI UMUM**

This section is about the general information of respondents towards the online bus ticket booking platform. Respondents are required to fill in all the questions in this section.

Bahagian ini adalah mengenai maklumat umum daripada responden terhadap platform tempahan tiket bas atas talian. Responden dikehendaki untuk mengisi kesemua soalan pada bahagian ini.

1. Have you ever used online booking bus ticket platform before? / Adakah anda pernah menggunakan platform tiket bas tempahan dalam talian sebelum ini?

Yes

No

2. How many times did you used online bus ticket booking platform in a year?

Berapa kali anda menggunakan platform tempahan bas dalam talian setahun?

1-3 times/ 1-3 kali

4-6 times/ 4-6 kali

7 times above/ 7 kali keatas

SECTION C: Study on Service Quality and Customer Satisfaction on Online Bus Ticket Booking Platform Among UMK PC Campus FKP Fourth-year Students

Bahagian C: Kajian Kualiti Perkhidmatan dan Kepuasan Pelanggan atas platform tempahan bas tiket dalam talian dalam kalangan pelajar tahun empat yang belajar di UMK PC Campus FKP

The following sets of statements are the dimensions of service quality that used to study customer satisfaction on online bus ticket booking platform among UMK PC Campus FKP fourth-year students. Respondents are required to express their level of agreement with the statement based on five points Likert scale (from 1 to 5).

Di bawah ini adalah kenyataan dimensi untuk kualiti perkhidmatan yang digunakan untuk menyelidik kepuasan pelanggan atas platform tempahan bas dalam talian dalam kalangan pelajar tahun empat yang belajar di UMK PC Campus FKP. Responden dikehendaki untuk menyatakan tahap persetujuan terhadap pernyataan berdasarkan lima mata skala tersebut (dari 1 hingga 5).

- 1 - Strongly disagree / Sangat tidak setuju (SD)
- 2 - Disagree / Tidak setuju (D)
- 3 - Neutral / Neutral (N)
- 4 - Agree / Setuju (A)
- 5 - Strongly Agree / Sangat setuju (SA)

RELIABILITY / KEBOLEHPERCAYAAN

	SD	D	N	A	DA
<p>1.The information of bus operator that provided by the online platform is accurate and reliable.</p> <p><i>Informasi daripada operator bas di platform dalam talian adalah tepat dan boleh dipercayai.</i></p>					
<p>2. It keeps accurate records of customer reservation.</p> <p><i>Data tempahan pelanggan disimpan dengan tepat.</i></p>	1	2	3	4	5
<p>3. The departure time that stated in the platform is always consistent and on time.</p> <p><i>Masa bertolak yang dipamerkan dalam platform adalah konsisten dan tepat pada masa.</i></p>	1	2	3	4	5
<p>4. Time taken and destination for the journey is sustainable with the time and destination place that stated in the online platform.</p> <p><i>Masa yang diambil dan destinasi untuk perjalanan adalah mampan dengan masa dan tempat destinasi yang dinyatakan dalam platform dalam talian.</i></p>	1	2	3	4	5

ASSURANCE / JAMINAN

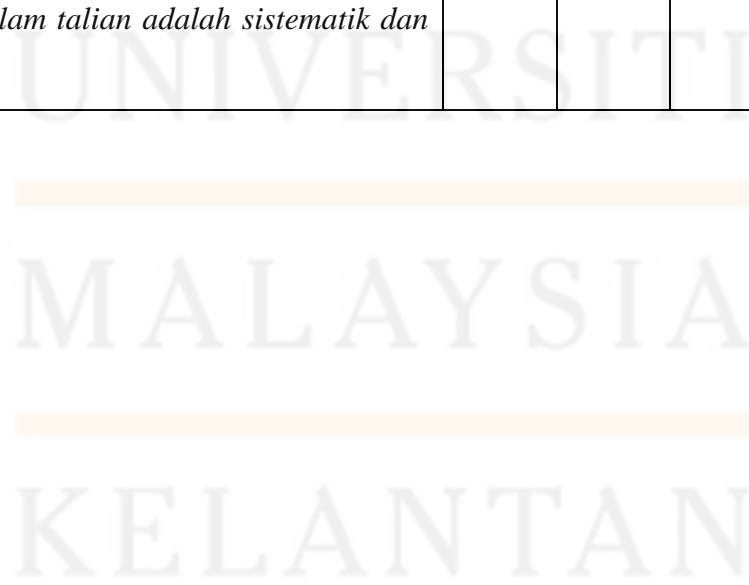
	SD	D	N	A	DA
<p>1. My personal data is confidential during the transaction at the platform.</p> <p><i>Data peribadi saya adalah sulit semasa transaksi di jalankan dalam platform.</i></p>					
<p>2. The customer service staff of the online bus ticket booking platform I used is professional and skilled to handle the issues that I have faced on the platform.</p> <p><i>Kakitangan perkhidmatan pelanggan platform tempahan tiket bas dalam talian yang saya gunakan adalah profesional dan mahir dalam menangani isu-isu yang saya hadapi di platform.</i></p>	1	2	3	4	5
<p>3. The service system of the online bus ticket booking platform is friendliness and guaranteeing customers' data security in its purchasing procedures.</p> <p><i>Sistem perkhidmatan platform tempahan tiket bas atas talian adalah mesra dan menjamin keselamatan data pelanggan dalam prosedur pembeliannya</i></p>	1	2	3	4	5
<p>4. The online bus ticket booking platform has strong technical capability for customers to check data balance anytime even during the crowded period.</p> <p><i>Platform tempahan tiket bas atas talian mempunyai keupayaan teknikal yang kukuh untuk pelanggan menyemak baki data pada bila-bila masa walaupun dalam tempoh sesak</i></p>	1	2	3	4	5

RESPONSIVENESS / RESPONSIF

	SD	D	N	A	DA
<p>1. The customer service are always willing to solve customer problem.</p> <p><i>Perkhidmatan pelanggan sentiasa bersedia untuk menyelesaikan masalah pelanggan.</i></p>	1	2	3	4	5
<p>2. The customer service of the online bus ticket booking platform is easy to reach and respond to customer inquiries and feedback timely.</p> <p><i>Khidmat pelanggan di platform tempahan tiket bas atas talian mudah dicapai dan menjawab pertanyaan serta maklum balas pelanggan tepat pada masanya.</i></p>	1	2	3	4	5
<p>3. The online bus ticket booking platform deliver effective communication and prompt service to their customer.</p> <p><i>Platform tempahan tiket bas dalam talian menyampaikan komunikasi yang berkesan dan perkhidmatan segera kepada pelanggan mereka.</i></p>	1	2	3	4	5
<p>4. The service system of online bus ticket booking platform mailing a transaction slip immediately and setting up booking quickly.</p> <p><i>Sistem perkhidmatan platform tempahan tiket bas dalam talian menghantar slip transaksi dengan segera dan menyediakan tempahan dengan pantas.</i></p>	1	2	3	4	5

TANGIBLES / KETARA

	SD	D	N	A	DA
<p>1. The web page of the online bus ticket platform is attractive and organised.</p> <p><i>Halaman web platform tiket bas dalam talian adalah menarik dan teratur.</i></p>	1	2	3	4	5
<p>2. The online bus ticket booking platform shows an available seat on website that able for me to choose.</p> <p><i>Platform tempahan tiket bas dalam talian menunjukkan tempat duduk yang tersedia di laman web yang membolehkan saya untuk pilih.</i></p>	1	2	3	4	5
<p>The service system of the online bus ticket booking platform is accessible to search and easy to access.</p> <p><i>Sistem perkhidmatan platform tempahan tiket bas dalam talian boleh diakses untuk carian dan mudah diakses.</i></p>	1	2	3	4	5
<p>4. The user interface of online payment platform system is systematic and well organized.</p> <p><i>Antara muka pengguna sistem platform pembayaran dalam talian adalah sistematik dan teratur.</i></p>	1	2	3	4	5

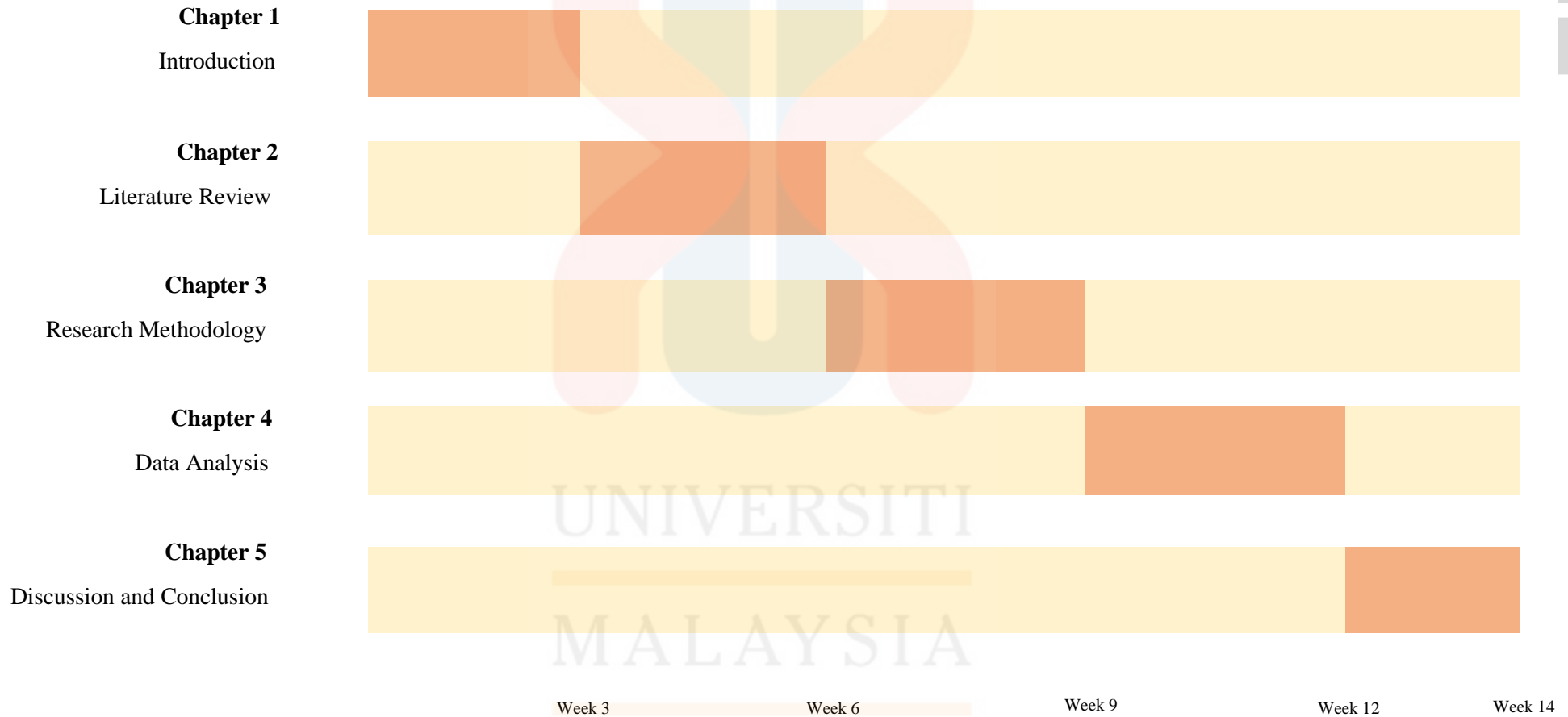


SECTION D: Student Satisfaction on Online Bus Ticket Booking Platform**BAHAGIAN D: Keuasan Pelajar Atas Platform Tempahan Bas Tiket Dalam Talian**

	SD	D	N	A	DA
<p>1. I satisfied with the service quality that the online bus ticket booking platform provided.</p> <p><i>Saya berpuas hati dengan servis kualiti yang diberikan oleh platform tempahan bas dalam talian.</i></p>	1	2	3	4	5
<p>2. I will use online bus ticket booking platform as my main choice to book bus ticket.</p> <p><i>Saya akan menggunakan platform tempahan tiket bas dalam talian sebagai pilihan utama saya untuk menempah tiket bas.</i></p>	1	2	3	4	5
<p>3. The experience using online bus booking platform make me confidence on the next online booking.</p> <p><i>Pengalaman menggunakan platform tempahan bas dalam talian membuatkan saya yakin pada tempahan dalam talian seterusnya.</i></p>	1	2	3	4	5
<p>4. I choose to booking ticket bus through online platform due to the discount or promotion on bus ticket that offered by the online platform.</p> <p><i>Saya pilih untuk menempah tiket bus melalui platform atas talian disebabkan diskaun atau promosi yang disediakan platform atas talian.</i></p>	1	2	3	4	5
<p>5. I never encountered any problems when I am booking bus ticket through online platform.</p> <p><i>Saya tidak pernah hadapi sebarang masalah ketika menempah tiket bus menggunakan platform dalam talian.</i></p>	1	2	3	4	5

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