



**PROMOTING PUBLIC TRANSPORT BY IMPROVING ITS SERVICE  
QUALITY**

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## ABSTRACT

Population in Kampar town ,Perak, increased by 2013 and it will cause traffic congestion and pollution. To protect Kampar town, public transportation need improvement so that people in Kampar town like to use public transport. Quality of bus service decrease by 2011 until now. People refuse to riding bus and it will make the bus company cannot survive and people who cannot afford private transport will lost benefit to use public transport. This study purpose are to investigate service quality of public bus at Kampar town, to know which service quality have influence to customer satisfaction and to find gaps and proposed improvement of public bus at Kampar town. Survey have been administered at Kampar town and its surrounding area to collect data. The data have been analyzed using Microsoft excel to get the percentage of service quality, level of customer satisfaction and gaps of proposed improvement. From the result, customer satisfy with seat, safety from harassment, cleanliness of the bus, staff attitude, staff appearance, bus driving style, service hours of the bus, bus routes, number of bus transfer and walking distance from bus stop from home. customer not satisfy with seat availability, security of customer,s belonging, bus temperature, cleanliness of the station, punctuality of the bus, bus frequency, bus fare and information about bus schedule. Finally recommendation to improve quality service of public bus have been suggested which is higher the frequency of the service. The findings help to understand customer demand in Kampar town and provide information and suggestion so that the responsible parties can enhance the quality of public bus service and can attract customer to ride public bus.

## **ABSTRAK**

Penduduk di bandar Kampar, Perak, meningkat pada tahun 2013 dan ia akan menyebabkan kesesakan lalu lintas dan pencemaran. Untuk melindungi bandar Kampar, pengangkutan awam perlu diperbaiki supaya orang di bandar Kampar suka menggunakan pengangkutan awam. Kualiti perkhidmatan bas awam mulai menurun pada tahun 2011 sehingga sekarang. Penduduk bandar Kampar tidak berminat untuk menunggang bas dan ia akan membuat syarikat bas tidak boleh menjalankan perniagaannya dan orang-orang yang tidak mempunyai kenderaan sendiri akan kehilangan manfaat untuk menggunakan pengangkutan awam. Kajian ini bertujuan untuk mengkaji kualiti perkhidmatan bas awam di bandar Kampar, untuk mengetahui adakah kualiti perkhidmatan bas awam mempunyai pengaruh kepada kepuasan pengguna bas awam dan untuk mencari jurang dan cadangan bagi memperbaiki kualiti bas awam di bandar Kampar. Kajian ini telah diadakan di bandar Kampar dan di kawasan sekitarnya untuk pengumpulan data. Data kajian dianalisis menggunakan Microsoft excel untuk mendapatkan keputusan peratusan kualiti perkhidmatan, tahap kepuasan pelanggan dan jurang untuk cadangkan penambahbaikan pengangkutan bas awam di bandar Kampar. Keputusan kajian menunjukkan pengguna bas berpuas hati dengan tempat duduk, selamat dari gangguan, kebersihan bas, sikap pekerja, penampilan pekerja, cara pemanduan bas, waktu perkhidmatan bas, laluan bas, bilangan bas yang perlu ditukar sebelum sampai ke destinasi dan jarak perjalanan dari rumah ke perhentian bas. Pengguna bas tidak berpuas hati dengan kekosongan tepat duduk, keselamatan barang-barang pengguna bas, suhu bas, kebersihan stesen bas, bas menepati waktu seperti jadual, kekerapan bas, harga tiket bas dan informasi mengenai jadual bas. Akhir sekali cadangan untuk meningkatkan kualiti perkhidmatan bas awam telah dicadangkan oleh responden iaitu untuk menambahkan kekerapan perkhidmatan bas awam di bandar Kampar. Penemuan daripada kajian ini bertujuan untuk memahami permintaan dan keinginan pengguna bas di bandar Kampar dan kajian ini juga bertujuan untuk menyediakan maklumat dan cadangan supaya pihak-pihak yang bertanggungjawab boleh meningkatkan kualiti perkhidmatan bas awam dan boleh menarik pelanggan untuk menaiki bas awam.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 BACKGROUND OF STUDY**

Public transport is the travel service provided that allows a lot of people to travel along together. Public transport modes are taxi, carpool, train, plane, ferries and bus. The most popular public transport is bus, taxi and train. Public transport between cities is present by airlines, train and bus. Most public transport runs to a scheduled timetable to make the journey and services smooth. Public transport usually funded by government subsidies and the fare charges to passenger is different depend on countries. Policy, decision and study about public transport are provided by the International Association of Public Transport (UITP) which is the international network for public transport and have 92 countries joined it.

Public transport in Malaysia is expanding to meet people's and population's demand. Currently, buses, taxis, train and airplanes are presenting the public transport modes in Malaysia. Nowadays, bus is more popular than other modes for short and long distance transportation because of the fare is cheap and affordable. There are two types of public bus transport in Malaysia which is express bus with air-conditioned for long distance and regular bus for short distance or known as local bus. These two types of buses are used to carry passenger from one destination to other destination. Besides that, public bus also important to reducing traffic congestion on road and saving the environment by reducing air pollution. However, problems with public buses service occur at some places and it will lead to public

bus's customers lost their interest to use public bus as their transportation. The local bus service and customer satisfaction at Kampar town will be used as subject in this study.

Kampar town is located at state of Perak with 15074 persons (Kampar District Council, 2010) population and divide into two regions which is new town and old town. This high number of population will have high number of travel demand at present and in the future. At Kampar town, people prefer to use private transport like car, motorcycle and bicycle as their transportation than public bus transport. According to (Rozmi et al. 2012), people prefer to use private transport than public transport for some reason. (Budiono 2009b) was summarized several studies into a report which state people prefer to use private car because public transport still not compete with the attractiveness of private car or motorcycle such as low flexibility, no direct asses, longer travel time and unsafe when using public transport for traveling.

Local bus at Kampar town is usually low performance and old. At Kampar town, the public bus service not good in terms of frequency and hours of service. At Kampar town the bus also have problem with the punctuality which the buses always out of schedule and this is will influence customer time travel and will upset the customer. According to (Felleson and Friman 2009), travel time is an important aspect for the traveler.

## **1.2 PROBLEM OF STATEMENT**

Most intracity buses in Kampar city is old and without air condition and this situation will make customer not comfortable to ride the bus. Bus time arrived not consistent with the bus schedule. Customer feel wasting time while waiting for the bus and customer who ride bus for work and school will late to go to work and school. Bus service at Kampar city close early around 7pm, this will make customer who finish work after 7pm or student who going home late after school cannot use this service. Lack of using public bus transport will make public bus companies hard to survive and customer who can't afford private transport will lost benefit to use public bus as their transport.

### **1.3 OBJECTIVE OF THE STUDY**

- To assessing the quality of service of public bus transport in Kampar and investigate which service quality attributes that have the most influence to customer satisfaction in Kampar town's public bus transport.
- To find gaps and propose improvement in Kampar town's public bus transport in order to make service quality improvement in the future.

### **1.4 SCOPE OF STUDY**

The scope of this study is to investigate public bus transport level of service in terms of hour of service and frequency of service and also to investigate public bus transport service quality based on customer satisfaction at Kampar town. The study will be conducted is important to measure local or intracity public bus transport services.

### **1.5 SIGNIFICANCE OF STUDY**

The improved quality of the bus service will drive people to use more public transport and less private vehicle and this situation will lead to substantial saving of resources in terms of space which is less vehicle on road and it will reduced congestion. Besides that, using public bus transport also will reduced gasoline usage and automatically will reduced pollution and will gives better environment at Kampar town.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Public Transport system in Malaysia**

##### **2.1.1 History of public transport**

Transportation in Malaysia started during British colonial rule. The country's transport network is now developed. Road network in Malaysia is covering 63,445 km and its including 1,630 km of expressways. The highway link network of the country extends over 800 km, and reaching the Thai border from Singapore. Link network of roads in peninsular Malaysia is in high quality, while the road system in east Malaysia is not as well developed. Types or modes of transport in peninsular Malaysia include buses, trains, cars and to an extent, airplanes.

Public transport in Malaysia existed together with private transportation in Malaysia. Public transport was divided into three types which are air, water and land. Malaysia has six international airports and the official airline of Malaysia is Malaysia Airlines. Malaysia Airlines providing international and domestic air service alongside two other carriers. There are two types of land public transport which is travel using road and travel using railway and for the railway system is state-run, and also covers a total of 1798 km, in peninsula Malaysia only. Light Rail Transit is popular within the cities. Using Light Rail Transit system will reduces the traffic load on other systems, comfortable, reliable and considered safe. Buses is one of land public transport aside of train. For water public transport, there are ferry and ship and ferry is the most popular among users.

The public transport system in Malaysia is very poor and the private transport increasing along the time. Lynn and Boyle in 2008 found that there is observed was conduct in 1985 to 2005 and the result is the private transport flourished that about 24%. The public transportation facility in Malaysia is modern but lacks in service quality. Big city like Kuala Lumpur also having problem with late arrive busses. That's why Malaysia has low rate of public transport users.(Zakaria et al., 2010) finds that there is no different with train which is rail public transport system introduces in 1980s. Train also could not reduce the popularity of private vehicles. (Nurdden et al., 2007) state that the increase in vehicle ownership has created the road network insufficient at the present scenario and other factors like travel cost and travel time, distance from home to public transport and also distance from home to work are the contributing factors that influence the modal shift from car to public transport in Malaysia. People prefer cars because of passion for car and driving, the degree of freedom, accessibility, negative perception, and comfort or at times. Use of public transport may put them in between traffic and thus waste their time. The findings in two different case studies on choice of modal shift conducted in Malaysia that travel time and travel costs are the characteristics that favor car ownership was stated by ( Nurdden et al., 2008). Cities like Kuala Lumpur, Penang, Johor Bahru, Kuching and Kota have similar case which is an increased car population rate. There is more than 35% of the nation's oil consumption is by transportation sector was stated by (Kari and Rasiah, 2008).

## **2.2 Public transport in Kampar**

Kampar is situated in the Kinta Valley and was well known for its high tin ore reserves. The surroundings as well as abandoned mining-ponds are suitable for fishing and which has become a major attraction for anglers around the country and especially from Kuala Lumpur. There are two region at Kampar town and can be broadly divided between the 'old town' and 'new town' areas. Old town consists of two main streets, Jalan Gopeng and Jalan Idris with available shop houses along the road. The fronts of these shop houses are still mostly in its original appearance. The old town area mainly consists of coffee shops, goldsmiths and local retailers. New town area mainly consists of new residential

developments and some commerce servicing the education industry in Kampar. In 2009 ,On the 21st of May, the Sultan of Perak declared Kampar as the state's 10th district.

Public transport in Kampar has three modes of vehicle which is taxis, buses and train. The service are covered in both region.

### **2.2.1 Bus**

Bus services use buses on roads to carrying numerous passengers on short or long journeys. Buses operate with low capacity compared with trains and can operate on roads and with relatively inexpensive bus stops to serve passengers. Buses are commonly used in smaller cities and towns and in rural areas as well for shuttle services supplementing in large cities. Nowadays, bus rapid transit is an ambiguous term used for buses operating on dedicated right-of-way and similar to a light rail.

Coach services use coaches for long-distance buses for longer distance transportation. Buses or the vehicles are normally equipped with more comfortable seating with a separate luggage compartment, toilet and also video. The buses have higher standards than city buses and have a limited stopping pattern.

The Kampar local town bus station which serves Ipoh, Teluk Intan, Tapah, Malim Nawar, Chenderiang, Temoh and other areas in the vicinity is located within walking distance of less than 100 meters from the express bus station. The local bus companies that are operating in Kampar would be Kinta Omnibus Company which is serving routes north of Kampar all the way to Ipoh and Kamta Omnibus Company which is serving routes south of Kampar to Tapah, also Hup Soon Omnibus Company which is covered routes from Kampar to Teluk Intan. Bus station at Kampar is the local building and remained unchanged ever since it was built.

For long distance journey, intercity express serves Kampar and has routes to Butterworth, Singapore, Pahang, Kedah and Kuala Lumpur. The busses are located in the express bus station in the town area. There are Edaran Express, Utama Express, Transnational Express, Konsortium Express and others company have been served at

Kampar Express bus station. Universiti Tunku Abdul Rahman (UTAR) and Tunku Abdul Rahman (TAR) college buses are also available for pickup service of their students around the vicinity.

### **2.2.2 Rail**

The railway system is state-run and covers a total of 1,849 kilometres which consist 1,792 kilometres of it is narrow gauge and while 57 kilometres (35 mi) is standard gauge. 150 kilometres of narrow gauge tracks and all of the standard gauge tracks are electrified. Light Rail Transit systems are used in some cities, such as Kuala Lumpur and Passenger rail transport is the conveyance of passengers by means of wheeled vehicles specially designed to run on railways. Public Transport trains allow high capacity on short or long distance. Train public transport consist light rail, monorail and commuter. Train stations often being combined with shuttle bus or park and ride systems at each station.

Intercity rail is long-haul passenger services that connect multiple urban areas. The rail has few stops also have an aim at high average speeds and typically only making one of a few stops per city. High-speed rail is passenger trains operating significantly faster than conventional rail and typically defined as at least 200 kilometres per hour (120 mph).

At Kampar town, Keretapi Tanah Melayu (KTM) has introduced a shuttle train between Ipoh and Kuala Lumpur Sentral and the Kampar Railway Station is in between of the two places. It would take two and half hours between Ipoh and Kuala Lumpur Sentral. Kampar Train Station is located at the south-eastern part of town and in the vicinity of a housing estate known as Taman Melayu Jaya.



### **2.2.3 Taxis**

Taxi is a public transport which consist a car, motorcycle and also van. Taxis take only four passengers in one time which is lesser than bus. At Kampar town, taxis which mostly of old E-Class Mercedes and also other types of car are available around the local town bus station and also available at train station.

## **2.3 Service quality of public transport**

### **2.3.1 System**

Public transport system meets three sets of objectives effectively by contributing to economic development, Social justice and environmental sustainability. Public transport services must work together to make a public transport system as a whole work well. A good public transport system links well with private transport but there still effect on the whole system as well as individual passengers. As a public service with benefits to both individuals and to society as a whole, public transport requires democratic planning and accountability, and that the financial burden is shared between public subsidy and fare revenue, and distributed fairly. The price mechanism should be used to make public transport an affordable alternative to private car use, both through subsidize fares and the use of congestion and parking charges and fuel taxes.

### **2.3.2 Service**

Service quality is defined as the relationship between what customers expect and what they experience but in public transport it's not as simple as that. In Public transport service, they has to serve the whole community and its different need with different people. There is no agreed international methodology for measuring public transport quality, but there some issues need to consider which are accessibility, affordability, availability,

communication, convenience enjoyment, integration, reliability, respect, responsiveness, safety, and speed.

Quality of public transport system requires good management. Management systems that enable the people who plan, design and operate public transport to do a good job and to improve continuously with customer relationships, labour relations, workforce development, vehicle maintenance, communications strategies and much more besides. Good management also means providing all the supports required for democratic planning and oversight of transport systems, and involving transport workers in ways that enable them to keep learning and improving.

### **2.3.3 Customer satisfaction**

Customer dissatisfaction and satisfaction in public transportation as one of the research subjects of the present dissertation comprise urban transportation and the degree of customer's satisfaction through the utilization of the urban buses in the city. (Edvardsson 1998) showed that customer dissatisfaction and satisfaction depends on the usage of the information that the business can dig out from its customers and one of the way is through complaints. Edvardsson found that the driver plays a significant role on the (dissatisfaction and satisfaction of the customer, and that because the driver and usually does not know the customers needs and expectations and in many cases it is something that leaves the driver indifferent. He showed that the combination of information and the driver is the key success for customer satisfaction, as the driver is the main means of interaction with the customers. He noticed that the unhappy and dissatisfied customers continued to utilize public transportation and that was because of the nature of public transportation. Friendliness of the personnel especially bus driver behavior in relation to service frequency has an impact on customer satisfaction. (Nkurunziza.et.al.2012) find that friendliness behavior of the bus driver can satisfy customers by developing better communication and knowledge of its customers needs . Frequent services increase satisfaction and urban transportation patronage (Kostakis,2009) in his study claimed that customer dissatisfaction and satisfaction in public

transportation depends on three things which is ticket price, price level and, finally, the layout of the platform or the station, especially for buses. He also separates customers in two categories, one category are the ones who use public transportation very often and they are considered expertise users, to those who are not often users and they are not considered expertise.

For Kostakis-Ipsilandis, 260-275 MIBES 2009 - Oral 263 conclude, underlining that public transportation is an area with low utility due to low rate of accordance between customer needs and the provided services. Reliability, travel time and comfort are considered to have a great impact on customer satisfaction in relation with the type of the trip. For those who utilize buses for professional reasons consider time as the most important dimension and particularly in buses. Besides that, interesting result is that the price of the ticket is not considered being significant and does not affect customer satisfaction directly (Friman and Fellesen, 2009). Other thing, according to Anderson et al., (2013) which affects customers satisfaction is the operation failures of the services. If an operation failure, such as a possible delay of a transportation means, creates bias to customers, resulting to unsatisfied customers. He showed that, customers have the trend to blame the service provider for everything that happens, even if the service failure is affected by external or internal factors.

Yaakub and Napiah (2011) related customer satisfaction with destination. In particular, ease of use of public transportation is the most significant factor which affects directly customers satisfaction in relation to the destination and the result finally show that time and safety are not considered as being crucial for customer satisfaction in relation to the destination.

## **2.4. Customer needs**

There is several factors to consider when determining customer satisfaction. There is:

### **2.4.1 Punctuality**

According to Trompet, Parasram and Anderson (2013) for service within the city center, any vehicle that is late by 10 minutes or more prompts an audio announcement at the transit centers, informing passengers of the delay. Outside of the city center, a delay of 20 minutes triggers a similar announcement. There will have dissatisfaction to customer who have been waiting for long time to ride a bus. It will be considers trams and buses to be on time if they are no more than 3 minutes behind schedule.

### **2.4.2 Service Levels and Frequency**

All of the transit systems adjust service levels and frequencies to match supply with demand. The standards for making these adjustments were often not explicit. Frequency also gives problem to customers who need a ride on that time. They have to wait to go to their destination.

### **2.4.3 Seat availability**

Public bus transport service should make sure that crowding does not reach unacceptable levels during peak and off to peak travel times on bus station. According to Premium research, for intercity buses, there should not more than 50% passengers stand and the minimum of passengers should not less than 20%. If 50% passengers stand, it will make customer dissatisfied with the service. To make customer satisfy, seat availability should not less than 50% during the ride and the seat should be enough space for customer to sit so that customer will feel comfortable during the ride.

#### **2.4.4 Safety and Security**

Safety while on board and safety while in bus station is important to customer to stick to public transport service. There should have two major objectives to combat the perception that the station and public bus service was not safe to use:

1. Provide customers with a safe ride and fair service. It is important an individual is not allowed to board any form of public transportation if he or she is perceived to be a security risk or fare evader. Safety of customer belonging also important to make customer comfortable with the service.
2. Guarantee drivers that they can work their shifts without fear and in a safe environment. Factors of Safety, deterrence, cooperation, and repression are four components of the policy that help to accomplish the above stated objectives and this will make the bus is well driven and customer satisfy with bus driving style.

#### **2.4.5 Cleanliness of The Bus and Bus Station**

Cleanliness of the bus is important to make sure customer comfortable during the ride. Bus company need to clean the bus before bus depart from bus station. Any rubbish need to be collected and bus company need to prepare dustbin in side the bus. Bus station also need to be clean. Customer will feel comfortable during the waiting time if the bus stop is clean. Bus company need to prepare dustbin and collect all rubbish around the bus station and also inside the dustbin.

#### **2.4.6 Inside bus temperature**

Inside bus temperature is one of the factor that will make customer feel comfortable. Customer prefer cool temperature more than hot temperature. Company need to improve their vehicle with adding air condition in their bus.

#### **2.4.7 Staff**

Staff attitude and appearance is important for customer to feel comfortable using the bus service. Customer will satisfy with the service if the staff entertain their needs and solve their problem. Staff appearance important in order to make customer comfortable to talk or asking question to the staff.

#### **2.4.8 Bus Fare**

Bus fare need to suitable with customer's economy. Customer will feel burden if the fare is high than what they can afford. This situation will make customer not satisfy with the service and riding bus will not become their favorite.

#### **2.4.9 Service Hours**

Service hours should suitable with the customer's demand. For example, bus no need to be operate at late night service if there is no demand on it. Bus company will loss their money on driver and fuel if there is no or less customer during the service period.

#### **2.4.10 Bus Routes**

Bus routes need to cover all of customer's destination. Customer will upset if the bus routes not including their home or any destination that important to them like school or workplace. To make customer satisfy with bus routes, company need to do a survey on routes that they need to further their service.

#### **2.4.11 Number of Bus Transfer**

The less number of bus transfer, customer will feel more happy and satisfy. Customer feel satisfy because they do not need to transfer bus and carry their belonging to other bus. If they bring heavy things, it will become a problem for them to transfer from one bus to other bus.

#### **2.4.12 Information**

Information about bus schedule and any problem occur during the bus trip are important for customer to know. Customer will satisfy with the information if the information is enough for them to plan their trip.

#### **2.4.13 Walking Distance**

Customer satisfy with short distance from their destination to bus stop. Customer will happy if they not tired on their trip. Bus company need to survey on place that they need to placed a bus stop so that they no need to walk in long distance.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research method used in this study, research questionnaire design, sample size, data collections and data analysis method. At the end of this methodology part, the customer satisfaction and service quality issues will be discussed according to responses from respondents.

#### **3.2 Questionnaires Design**

The question used in this study is about quality and customer satisfaction with Kampar Public bus transport service. Public transport specific service quality attributes in Kampar town which consist of public bus transport condition, information, service provided, punctuality and safety during on board and at the station. Data were collected using questionnaire. This tool is usually used to evaluate this similar purpose. (Nkurunziza et.al,2012) and (Friman and Markus,2009) using the same method and divide the questionnaire into three parts but in different way in the study. In this study, the questionnaire also divided into three parts:

1. Service provided by the public bus company which include public bus frequency, punctuality, conditions, safety, fare and service that be served by the public bus staff.