



**BANGKOK BUS SERVICE IMPROVEMENT: A CASE
STUDY OF BUS LINE 8**

BY

MR. KRIT PHOORIPHOKHAI

**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE
SERVICE INNOVATION
COLLEGE OF INNOVATION
THAMMASAT UNIVERSITY
ACADEMIC YEAR 2016
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INDEPENDENT STUDY

BY

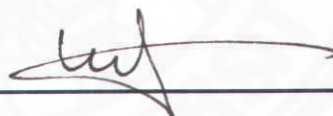
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BANGKOK BUS SERVICE IMPROVEMENT: A CASE STUDY OF BUS LINE 8

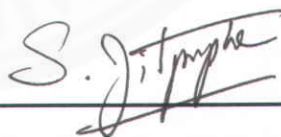
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ABSTRACT

Bus transport is the major mode of mobility in Bangkok, especially for low income people. Although buses are considered the main transport the service is not satisfactory, it is still questionable whether the quality is acceptable. This study aimed to explore passengers and service providers experience of the service quality of Bus Line 8, especially an ordinary bus, which is often complained the most. The factors contributing to its service quality as well as the constructive ways for improvement will be identified. This is a qualitative study, and data was collected through content analysis and face to face interview. The research participants are divided in 2 groups: Group 1 with 30 passengers and Group 2 with 10 service providers, included bus owners, bus drivers and ticket collectors, and BMTA officers. Concepts from the literature review are used to create the interview questions which are related to the objectives of the study.

The findings of the study indicate that the service quality of Bus Line 8 has been shown to be unsatisfactory from most passengers on the following items. Quality of service: the management, standard and service quality were poor. Condition of buses: the vehicles were old and not up to standard of service. Safety on board: The passengers felt unsafe and risky on board. Manners of bus drivers and ticket collectors: the drivers drove fast, competed with another bus and didn't stop at the corrected places while ticket collectors always in bad temper and used impolite words. For the service providers, they showed their opinions that ineffective management of the system, unfair working condition, heavy workloads with low salaries and commission are the factors for poor service and cause problems of decreasing numbers of drivers and ticket collectors. They suggested that higher daily wages and commission and appropriate welfare provided to the employees should be considered. The standards for service and compensation should be set for private employees as they are for public employees.

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Mr. Krit Phooriphokhai

EXECUTIVE SUMMARY

An Independent Study Title Bangkok Bus Service Improvement: A Case Study of Bus Line 8 is aimed to study the service quality of Bus Line 8, especially ordinary bus, which is the most complained bus line from passengers for many years. The researcher has proposed 3 objectives to study as the followings: 1) To explore passengers and service providers' opinions of Bus Line 8 service quality as well as their suggestion for its improvement. 2) To identify factors contributing to the service quality of Bus Line 8. 3) To provide constructive ways to improve Bus Line 8 service. The findings of this study are expected to further the understanding of passengers' perspective of its service quality and the proposed quality of service could provide an agenda for the authority concerned to operate Bus Line 8 service in a better and innovative way.

This is a qualitative study, data was collected through content analysis and face to face interview. The research participants are divided in 2 groups: Group 1 with 30 passengers, and Group 2 with 10 service providers, included bus owners, bus drivers and ticket collectors, and BMTA officers. Concepts from the literature review are used to create the interview questions which are related to the objectives of the study. The research findings can be presented in each of the following objective:

1) Passengers and service providers' opinions of Bus Line 8 service quality as well as their suggestion for its improvement:

Passengers' opinions: The passengers gave their views by categorized into 4 groups, quality of service, condition of buses, safety on board and manners of bus drivers and ticket collectors, itemized as the followings. Quality of service: Most drivers drove very fast in a frightening manner, competing with other buses to get as many passengers as they could. Moreover, they parked too long at the bus stop, causing passengers to waste time. Overall, most passengers thought that the management, standards and service quality of Bus Line 8 were poor. The overall service quality has been shown to be unsatisfactory. Condition of buses: The vehicles were old and dirty both inside and outside. Some were not up to standard and unfit for service. Some

basic facilities on the buses were not in good condition. The passengers felt uncomfortable when they were on crowded buses especially in heavy traffic or when it rained. Safety on board: The passengers felt unsafe and at risk, afraid of traffic accidents while on board. The employees were not concentrating on their work that might cause accidents. Manners of bus drivers and ticket collectors: Driving very fast and in a frightening way was always complained and they didn't care about passenger safety. The ticket collectors showed impolite manners and were always in bad temper. Neither drivers nor ticket collectors paid attention to their health and cleanliness.

Service providers' opinions: The highest numbers of passenger complaints were about problematic service conditions. They try to solve the problems and improve the service by strictly following the BMTA Development Plan in an attempt to improve Bus Line 8 service quality. Now, bus owners face a problem of decreasing numbers of bus employees (drivers and ticket collectors), especially for the ordinary bus, because of the very hard work, low income and no welfare. This causes them not to apply for work with the private bus companies that operate the ordinary buses. The bus employees (drivers and ticket collectors) have to work 4am to 10pm, making four round trips. They don't have regular pay. Their income relies on a daily wage the company pays and a percentage commission on ticket sales, 10 percent for bus drivers and 5 percent for ticket collectors. This causes the drivers to drive faster so that they can pick up as many passengers as they can, to get commissions from the fares. The low wages in private companies, especially for employees of the ordinary buses, means that they work hard and take risks. BMTA and The Land Transport Department have tried to solve these problems by issuing the Bus Line 8 Development Plan for private companies to use as guidelines for service improvement.

Suggestions for improvement: The passengers would like the private companies to change all ordinary buses to air-conditioned buses and bring them up to the standards for service. Public policy and government funding should support the private sector for their operation and management, and set the standards of both the Quality Standard of Service and the Operating Performance Standard. GPS and complaint boxes should be installed on every bus in order to receive passengers' suggestions and

follow them in real time while they are on the route. The government should consider helping the private companies that do not have much operating funds by providing loans to buy new vehicles because the companies currently have to use old vehicles for service, which are not fully functional and create unsafe conditions. Working hours should be reduced and appropriate welfare should be provided to the employees. Appropriate welfare should be provided to them so that they can earn a better living.

2) Factors contributing to the service quality of Bus Line 8: Unfair working conditions, low salaries with no regular pay, commission from ticket sales and heavy workloads are the main sources of poor service. The employees have to work hard to get additional wages. Working too-long hours without rest leads to health problems. The low wages in private companies is not enough for the employees so they have to work overtime. One top rank of complaints against Bus Line 8 is that the drivers drive very fast in a frightening manner. This is because they want to pick up as many passengers as they can per day, to get the most commission from selling tickets. The owners of buses seek to maximize their own profits and neglected the employees' welfare. These factors cause a decreasing number of drivers and ticket collectors, which is one of the problems bus owners face.

3) Constructive ways to improve the Bus Line 8 service: Companies must pay attention to their employees' livings, health conditions and low salaries. The companies should improve the system of management and establish clear standards of responsibility for repeated problems. Public data should be collected in order to raise public concern and awareness and help create a system of standards. A collective organization through which the employees can voice complaints and find just solutions to their problems should be set up. Employees and bus owners should work together to improve working conditions. Licenses issuing to work on public transportation should be improved. The basic standards of service for vehicles should be upheld and GPS installed on every bus, so that the companies are able to follow them on their routes. At present, BMTA has created a website (<http://test.traffy.xyz/busline8.html>) for Bus Line 8 only, which is accessible in real time.

Conclusion and Recommendations

From the findings of the study, it is found that some problems could be solved but many of them are existed. Poor service still be offered to passengers because of the ineffective operation and management as well as lacking of supporting from the public sector. All Bus Line 8 are run by private companies, under BMTA supervision. Most of the companies are small family-owned firms and have to support the bus operations by their own fund. They don't have capability to hire their employees with high salary or at the same rate as BMTA, so it is hard to recruit the quality employees while heavy workload with low income. For the vehicles, the bus owners have to provide service with old and poor condition vehicles because changing them to the new ones cost a lot of money. The vehicles have been re-bodied and re-engine many times, some buses are now over 20 years old. To enhance service improvement of Bus Line 8 the following recommendations are suggested:

- Public sector should help small private companies to have new vehicles by granting them lease buses instead of purchase.
- To ensure the viability of the services, the government should supports by providing appropriate bus terminal at the beginning and at the end of the route as well as basic facilities such as a rest room, drinking water and some recreation to help the employees relax and reduce their stress from the long route driving.
- The employees should be trained how to interact with passengers. Anything to help them understand their impact on passengers assessment of service quality.
- Besides a website for Bus Line 8 that already created, Call Centre of Bus Line 8 should be created so that service providers can response immediately.
- Customer satisfaction and expectation surveys should be done so that any lack in service or performance can be determined and improved.
- If the problem of employees, especially ticket collectors, decreasing, some innovative ideas or modern technologies like the automatic ticket box can also be used to solve problems.

- Bus Line 8 is a long route bus, on the traffic area, that causes of stress to the employees. It should be better to cut the route at half way and set the connection system for the passengers who want to go to the end of the route.
- Cancel the percentage commission on ticket sales system that cause the competition and use reward system instead.

Suggested for further study

From the experience of undertaking this study, it is found that there are many factors that cause problems and are behind many of the accidents. There are many needs of employees that the employers should pay attention to. The following issues could be the subject of further study since they help employers understand their employees more than they do, it could expose factors that cause problems in their operation to help them solve those problems and improve bus service quality:

1. The welfare of employees, that employers overlook and have not been improved, and that lead to accidents for both employees and passengers.
2. The heavy burden of servicing free bus employees.
3. The difference between public and private buses in service.
4. Female employees of private bus lines, their lives and work.
5. Investigation calling for the rights of employees of private bus lines.
6. The weakest point in hiring employees for private bus line.

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CHAPTER 1

INTRODUCTION

1.1 Overview

For decades, public mass transportation has played a vital role in enhancing people's moving capacity and can be viewed as a viable solution to traffic congestion problems. Buses are the principal means of transport in many countries including Thailand. In Bangkok, bus transport is the major mode of mobility, especially for low-income people. Bangkok bus services are provided by a public organization, Bangkok Mass Transit Authority (BMTA), and partially co-operated by the private sector. Although buses are considered the main transport in Bangkok the service is not very satisfactory.

In the year 2000 the rail mass transit system was introduced and another underground rail transit system was under construction. The rail transit system is not accessible to all public transport users and the combined capacity of the rail system is far less than the total demand for public transportation services. The demand for bus use in Bangkok continues to increase and improvements to the quality of services are needed by passengers. Bus services in Bangkok are provided by the BMTA under the jurisdiction of the Ministry of Transport. They have recently been enhanced by the ISO 9001: 2000 quality management system, but it is still questionable whether the quality is acceptable from the passengers' viewpoint, as is how they perceive bus service operations.

Statement of the problem

This study aims to explore passengers' experience of service quality of Bus Line 8, which is one of the oldest bus lines in Bangkok. Bus Line 8 is a shared public and private operation, that runs between Happy Land Market and Memorial Bridge (King Rama I Bridge). It is often complained about by the passengers because of the

bad service, pollution, and the bad manners of the drivers and bus conductors. It is known as the Racer of Lad Phrao. It was top ranked for bad service continually for many years, and in the year 2005 it was ranked as the poorest service bus run by the Ministry of Transportation. The service offered to passengers of Bus Line 8 is still poor, and has not been improved much over the intervening years. It is still ranked as the bus line most in need of improvement (Suksai, 2014).

These reasons make the researcher interested in studying the experiences of passengers who use this bus line as well as people from the organizations concerned, regarding the factors that make this bus line perform poorly, and how to improve the quality of its services. The findings of the study will help further improvement and can potentially be applied in efficiency planning as well as operation management, in order to match the needs of the passengers, and be ready for the ASEAN Community, in which high competition is a priority and good service should be offered to all.

1.2 Objectives

1.2.1 To explore passengers and service providers opinions of service quality of Bus Line 8, as well as their suggestions for its improvement.

1.2.2 To identify factors contributing to the service quality of Bus Line 8

1.2.3 To provide constructive ways to improve Bus Line 8 service

1.3 Research Questions

1.3.1 What are passengers and service providers experiences of Bus Line 8 services quality?

1.3.2 What are the suggestion to innovatively Improve Bus Line 8's service?

1.3.3 What are the key factors contributing to service quality of Bus Line 8?

1.4 Scope and Limitation

This study focuses on the experiences of passengers and service providers of Bus Line 8, only the ordinary buses, concerning its services, as well as their

suggestions for creative ways to improve the quality of the services. Data is collected from a target group, who are passengers and other service providers of Bus Line 8.

1.5 Contribution of the Study

The findings of this study are expected to further the understanding of passengers' perspectives of Bus Line 8 service quality and the proposed quality of service could provide an agenda for the authority concerned to operate Bus Line 8 service in an innovative way.



CHAPTER 2

LITERATURE REVIEW

2.1 An Overview of Transport in Bangkok

The city of Bangkok is served by multiple transport systems. Although Bangkok's canals historically served as the major mode of transport, they have long since been surpassed in importance by land traffic. Charoen Krung Road, the first to be built by Western techniques, was completed in 1864. Since then, the road network has vastly expanded to accommodate the sprawling city. A complex elevated expressway network helps bring traffic in and out of the city centre, but Bangkok's rapid growth has put a large strain on infrastructure, and traffic jams have plagued the city since the 1990s. Although rail transport was introduced in 1893 and electric trams served the city from 1894 to 1968, it was only in 1999 that Bangkok's first rapid transit system began operation. Older public transport systems include an extensive bus network and boat services which still operate on the Chao Phraya and two canals. Taxis appear in the form of cars, motorcycles, and tuk-tuk (Wikipedia, 2016a).

Bangkok is connected to the rest of the country through the national highway and rail networks, as well as by domestic flights to and from the city's two international airports. Its centuries-old maritime transport of goods is still conducted through Klong Toei Port. The Bangkok Metropolitan Administration (BMA) is largely responsible for overseeing the construction and maintenance of the road network and transport systems through its Public Works Department and Traffic and Transportation Department. However, many separate government agencies are also in charge of the individual systems, and much transport-related policy planning and funding is contributed by the national government (Wikipedia, 2016a).

2.2 Roads

Road-based transport is the primary mode of travel in Bangkok. Due to the city's organic development, its streets do not follow an organized grid structure. Forty-

eight major roads link the areas of the city, branching into smaller streets and lanes (soi) which serve local neighbourhoods. Eleven bridges over the Chao Phraya link the two sides of the city, while the Ratchadaphisek inner ring road encircles the inner city. Several roads linking Bangkok with neighbouring and distant provinces are designated as national highways, including the primary routes Phahonyothin (route 1), Sukhumvit (route 3), and Phetkasem (route 4). The outer ring road, Kanchanaphisek (motorway route 9), runs through Bangkok's suburbs, linking with Nonthaburi, Pathum Thani and Samut Prakan, while the Bangkok– Chonburi Motorway (route 7) runs to the eastern seaboard province, passing Suvarnabhumi Airport on the way.

2.3 Bangkok Traffic



Figure 2.1 Traffic in Bangkok

Source: Wikipedia (2016a)

Bangkok has become widely known not only as a centre of tourism, commercial, international trade and investment but also for its severe traffic congestion problem. Bangkok's rapid growth in the 1980s resulted in a sharp increase in vehicle ownership and traffic demand, which has since continued. In 2006 there were 3,943,211 in-use vehicles in Bangkok, of which 37.6 percent were private cars and 32.9 percent were motorcycles. These increases, in the face of limited carrying capacity, were expressed as severe traffic congestion evident by the early 1990s. The

extent of the problem is such that the Thai Traffic Police has a unit of officers trained in basic midwifery in order to assist deliveries which do not reach hospital in time. While Bangkok's limited road surface area (8 percent, compared to 20–30 percent in most Western cities) is often cited as a major cause of its traffic jams, other factors, including a high vehicle ownership rate relative to income level, inadequate public transport systems, and a lack of transportation demand management, also play a role. Efforts to alleviate the problem include the construction of intersection bypasses and an extensive system of elevated highways (including the expressway system and Don Mueang Tollway), as well as the creation of several new rapid transit systems. These actions, however, have not been successful in improving the city's overall traffic conditions (Tanaboriboon, 2001).

Traffic is the main source of air pollution in Bangkok, which reached serious levels in the 1990s. However, efforts to improve air quality by improving fuel quality and enforcing emission standards, among other schemes, have been reasonably successful. Atmospheric particulate matter levels dropped from 81 micrograms per cubic metre in 1997 to 43 in 2007. Although the BMTA created thirty signed bicycle routes along several roads totalling 230 kilometres (140 miles) cycling is still largely impractical, especially in the city centre. Most of the bicycle lanes share the pavement with pedestrians. Poor surface maintenance, encroachment by hawkers and street vendors, and a hostile environment for cyclists and pedestrians, make cycling and walking unpopular methods of getting around in Bangkok.

2.4 Bangkok Mass Transit Authority (BMTA)

2.4.1 BMTA History

Bus services were first introduced to serve commuters in Bangkok in 1907 by Phraya Phakdi Noraset (Lert Setthabutr). Originally transport services were provided by horse-drawn carriage and later three-wheeled Ford motorcars with two long parallel benches for seating. This public transport proved very popular, and by 1933 bus services were available throughout the major areas of the capital. Services expanded as the city and its population grew. Several new companies entered the

field. Bus routes grew in number and length and became more complicated. However, as traffic became more congested, private bus services proved unequal to rising public expectations. During the years 1973-1975 the country was hard hit by a high inflation rate. Bus operators began to demand increased fares. Eventually, the government decided to take over the task of providing mass transit (Bangkok Mass Transit Authority, 2016a).

A 1971 study of Bangkok traffic by a team of German experts recommended merging the then 24 private and two state bus companies, a total of 3,773 buses, into a single entity, to be operated by a private company or by the state, or alternatively by a joint private and state enterprise. The team suggested that if no private company was able to handle the merger, the government should do it by buying all the buses and not renewing licenses which were due to expire on 30 September 1975. The merger eventually took place in 1975 when the government, under the leadership of M.R. Kukrit Pramoj, came up with a plan to help Bangkok's urban poor. The prime minister proposed a free bus service for people in low income brackets, for their children and for students. Citing these reasons, the government decided to take over the bus service operated by private companies, joining them together into a non-profit company, i.e., the Mahanakhon Transport Company Limited. Operations began in 1975 (BMTA, 2016a).

Unfortunately, due to certain legal constraints and a change in the government, the Mahanakhon Transport Company Limited was soon scrapped. In August 1976, the Bangkok Mass Transit Authority was established by Royal Decree Establishing the Bangkok Mass Transit Authority, B.E. 2519. Bangkok Mass Transit Authority, also known as BMTA, is the main operator of public transit buses within the Greater Bangkok area. It is the largest city bus system in Thailand. The Bangkok Mass Transit Authority offers bus and van routes throughout the city and its suburban provinces. The BMTA is a state enterprise that started operations on 1 October 1976 under the control of the Ministry of Transport and Communications (BMTA, 2016a)

2.4.2 BMTA Operation

The BMTA remains the main operator of city buses. However, some private bus companies opted to continue their services on certain routes under joint service contracts with the BMTA instead of selling their assets to the state. Despite government subsidy, the BMTA suffered a loss of profits from day one, resulting in deteriorating quality of service. Pattranit Jitsamruay studied the quality of public transportation services and published her finding in the Prachathai Journal. She found that public transport is the most common means of travel for the population of Bangkok. According to the BMTA, around three million people use mass transportation each day. Alongside the BMTA are also a variety of state-run enterprise affiliated with the Ministry of Transportation, arranging motorized transport within Bangkok. The BMTA service area covers Bangkok Metropolis and its suburban areas in the adjacent provinces of Nonthaburi, Samut Prakan, Pathum Thani, Nakhon Pathom, and Samut Sakhon; altogether 114 routes with 7,253 vehicles, including 3,509 BMTA vehicles and 3,744 private vehicles. Today however, the number of vehicles in service is declining. According to the latest BMTA report (June 2014), there are only 5,226 vehicles in service, including 2,526 from the BMTA and 2,700 private. The service hours are 05:00 to 23:00, except for the 24hr night-owl service on some routes. There are 427 bus and vans routes across 8 zones (Jitsamruay, 2015).

- Zone 1: North (Hubs: Rangsit, Bang Khen)
- Zone 2: Upper East (Hubs: Bang Kapi, Min Buri)
- Zone 3: Lower East (Hubs: Samrong, Samut Prakan)
- Zone 4: South Central (Hubs: Khlong Toei, Sathu Pradit)
- Zone 5: Southwest (Hubs: Dao Khanong, Phra Pradaeng)
- Zone 6: West (Hubs: Bangkhae, Thonburi)
- Zone 7: Northwest (Hubs: Nonthaburi, Bang Sue)
- Zone 8: Central (Hubs: Huai Khwang, Lad Phrao)

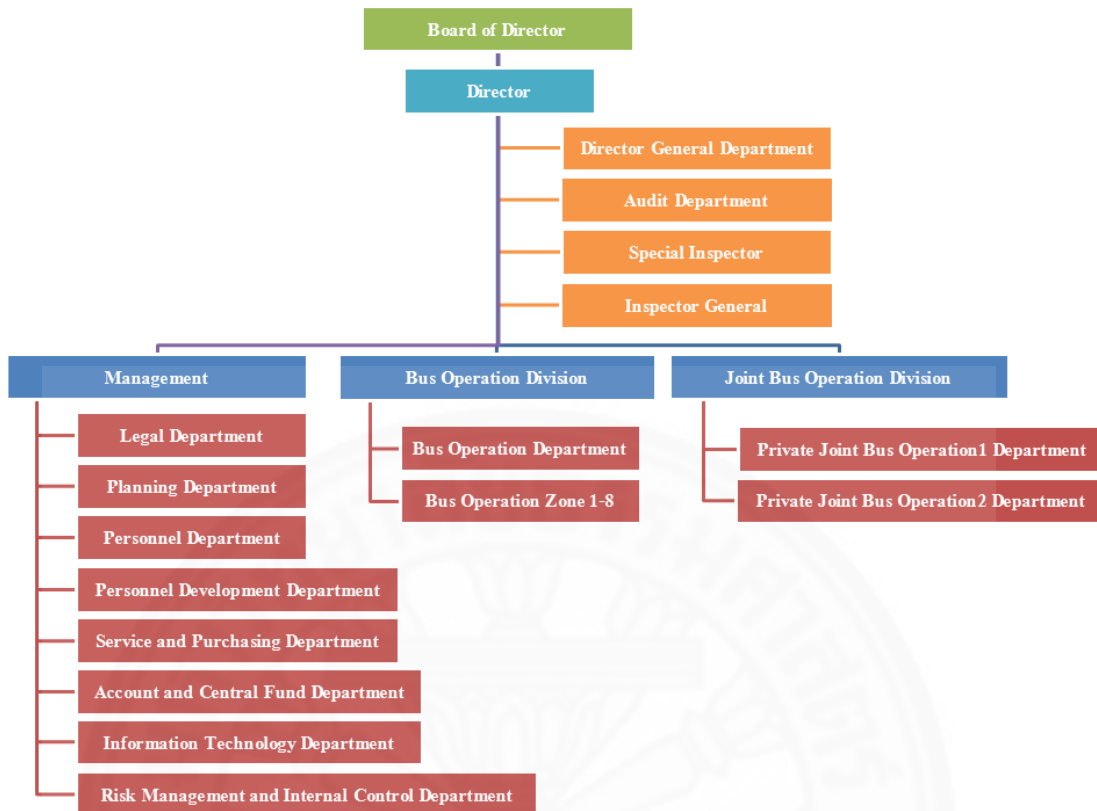


Figure 2.2 BMTA Organization Structure

Source BMTA (2016)

2.4.3 Bangkok Bus Service



Figure 2.3 an ordinary bus in Bangkok

Source: BMTA (2016)

Buses in Bangkok provide an extremely cheap way to travel from one side of the city to another. They are a great way to see the real Bangkok, not often seen when travelling by other means of transportation. Although buses give a ringside seat to experience and observe the locals and the city, they are not the favourite means of getting around. Obnoxious drivers, aggressive bus conductors, bad traffic, pollution and unpleasant fellow passengers are some of the things inevitably encountered (Bangkok, 2016).

The BMTA, under the jurisdiction of the Ministry of Transport and Communications, is responsible for providing bus services to people living and working in Bangkok and nearby provinces (Nonthaburi, Pathum Thani, Samut Sakhon, Samut Prakan and Nakhon Pathom). The BMTA operates over 100 routes, served by more than 3,000 buses (regular buses and air-conditioned). There are also privately-owned buses, and mini buses, both private and publicly operated by the BMTA (Bangkok, 2016).

Bangkok buses' daily operating hours are from 5am to 11pm. Night buses run 24 hours per day. There are many types of buses available in Bangkok, and bus routes are very extensive, which can be mind-boggling for first-timers (Bangkok, 2016). The main bus types are:

- **Mini bus**: Cramped, no air-con, no fan, famously suicidal drivers, usually not advisable for more than short hops. Run by private operators, they can be significantly faster than the BMTA run buses.

- **Red bus**: More spacious and fan-cooled (in theory). Unlike other buses, some of these run through the night). These buses are BMTA run.

- **White/blue** bus: Exactly the same as the red buses, but cost one baht more. These buses are owned by private entities operated in conjunction with the BMTA.

- **Blue/Yellow and Cream/Blue air-con**: These buses are quite comfortable. The blue/yellow striped buses are privately owned while the Blue/Cream buses are BMTA.

- **Orange air-conditioned (Euro II):** These are all BMTA-run, newer, and more comfortable.

- **Pink/white micro-buses:** not quite so common away from the city centre - these are air-conditioned, modern and only allow seated passengers. Fares are paid into a fare-collection machine located next to the driver - exact fare only.

Table 2.1 Vehicle Categories and Service Rates

Categories	Colour	Fare Rate	Service Period
Regular bus	Cream-Red	6.50 baht	05.00 -23.00 hrs.
Regular bus	White-blue	7.50 baht	05.00-23.00 hrs.
Regular Express Way	Cream-Red	8.50 baht	05.00-23.00 hrs.
Regular Overnight	Cream-Red	8 baht	23.00-05.00 hrs.
Air Conditioned	Cream-Blue	10 12 14 16 baht (depending on the distance Travelled)	05.00-23.00 hrs.
Air Conditioned (Euro2)	Yellow-Orange	11 13 15 17 19 21 23 baht (depending on the distance Travelled)	05.00-23.00 hrs.

Source: BMTA (2016)

2.5 Passengers' Perspectives of Bangkok Bus Service Quality

In a Facebook poll by the Transport Minister, Mr. Chadchart Sittipun, Bangkok Bus Line 8 was voted the worst bus service. Ranked second was Line 44 followed by Line 1, 16, 92, 75 and 122. The top 10 complaints the poll drew were (Sittipun, 2013):

1. Bus drivers speeding, reckless and road rage driving.
2. Bus drivers' inability to pick up and drop off passengers at bus stop.
3. Deterioration of bus condition.

4. Parking for too long, waiting for more customers, leading to traffic jams and waste of on-board passengers' time.
5. Insufficient amount of buses on some routes.
6. Inconsistency of bus availability at certain periods of the day.
7. Too short running time on some routes.
8. Rude ticket collectors who occasionally drink and smoke.
9. Taxis and public transport vans parking on left lane, causing traffic jams.
10. Lack of information at bus stops.

2.6 Bus Line 8

1) General information about Bus Line 8

Bus Line 8 is one of the oldest bus lines in Bangkok. It is a shared service bus, run by both government and private operators, It runs between Happy Land Market and Memorial Bridge (King Rama I Bridge). It is a long line bus that runs outbound from Memorial Bridge, Wat Saket, Department of Social Welfare, Ramathibodi Hospital, Victory Monument, Sanam Pao, Ari, Saphan Kwai, Mo Chit, Lat Phrao and Big C Bang Kapi (Lat Phrao Road). It runs inbound from Bang Kapi Market, The Mall Bang Kapi (Lat Phrao Road), Big C Lat Phrao, Lat Phrao, Mo Chit, Chatuchak Park, Saphan Kwai, Ari, Sanam Pao, Victory Monument, Ramathibodi Hospital, Department of Social Welfare, Wat Saket and Memorial Bridge.

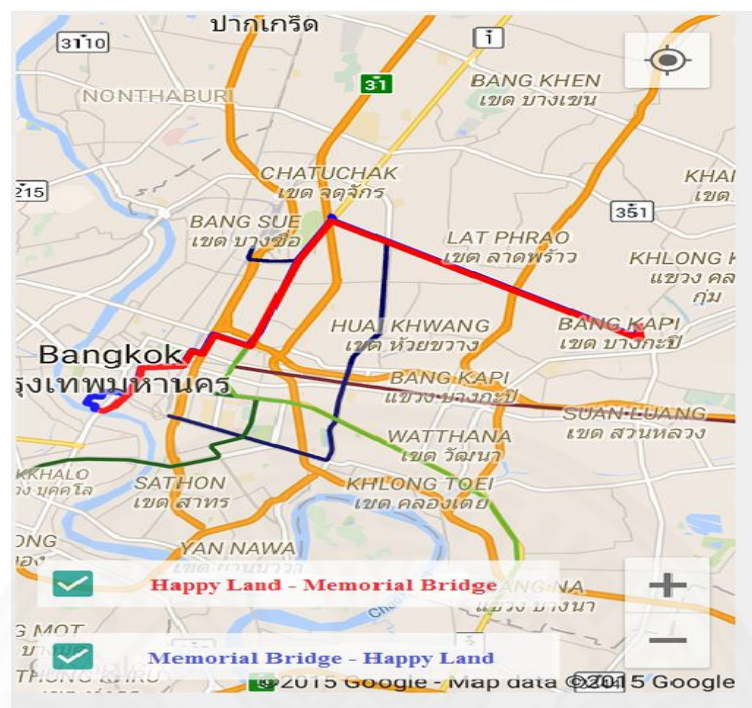


Figure 2.4 Bus Line 8 route map

Source: Bangkok Bus Pro APK (2016)

Most of the complaints from passengers directed to the private-run bus lines regard Bus Line 8, which passes through Bangkok's worst traffic from Bang Kapi in eastern Bangkok to Memorial Bridge in Central Bangkok. It has consistently ranked at the bottom for its service, which has seen no improvement despite having drawn the highest number of complaints in the 2015 fiscal year, according to a source at the Transport Ministry (Thanarak Khunton, 2015). It has always been complained about the most, for the bad service, pollution, bad manners of the drivers and ticket collectors, reckless driving, refusing to stop at some bus stops in heavy traffic, and refusing to take passengers to their destinations. Bus Line 8 is known as the Racer of Lad Phrao (Suksai, 2014)



Figure 2.5 Bus Line 8 accident

Source: Komchadluek (2016)

In June 2014, a speeding No.8 bus hit a BTS Sky-train pillar and three people were injured. It hit and crushed a motorcycle, instantly killing a 13-year-old boy. In 2011, one person was killed and another injured while waiting at a bus stop when a No. 8 bus was competing with another bus for space to stop at the bus stop. It has been at the top rank for bad service continually for many years, and in the year 2013 it was ranked as the poorest service bus by the Ministry of Transportation. The service offered to passengers by Bus Line 8 is still poor, and has not improved much over the years. It is still ranked at the bottom for its service and as the bus line in most need of improvement.

2) Surveys and studies of Bus Line 8 services

Terry Fredricson surveyed bus drivers and ticket collectors on Bus Line 8. He found that unfair working conditions for drivers and ticket collectors were the main source of poor service. (Fredricson, 2013)

Patranit Jitsamruay investigated poor service on Bus Line 8. She studied the statistics in a 2014 report on bus transportation within the public sector, from the Land Transport Department, which indicated that there were 7,029 complaints, which can

be grouped into 3 basic categories: the bus did not stop at the appointed stop; the bus was driven in a frightening manner; and the bus staff were rude. In the private sector, there were 5,029 complaints in 3 categories: the driver drove in a frightening manner; the driver did not stop at the correct place; and the staff were rude. Clearly, the complaints in the public and private sectors are the same. Other studies find the same kinds of complaints against private buses (both regular and air-conditioned): 1) drivers drove in a frightening manner, 2) the bus did not stop at the appoint stop, 3) the staff were rude, 4) passengers were made to exit before the correct stop, and 5) drivers and conductors smoked cigarettes on duty. (Jitsamruay, 2015)

Among the complaint statistics for private bus lines, Bus Line 8 received the most. Passengers claimed that the conditions of the buses are old, the drivers and conductors always show bad manners to the passengers and don't care about them or their safety, the drivers hit the brakes hard and don't stop at the bus stops. Bus Line 8 and its poor services are often mentioned on social media, TV and radio, and these cases become widely cited, which has led to Bus Line 8 becoming a key point of criticism and investigation for the community. (Jitsamruay, 2015)

The nation presented the article "Anything but lucky, Bangkok's No.8 buses given a last chance", "eight is a lucky number, the Chinese tell us, since in Mandarin and other dialects it's a homonym for prosperity. But they might change their minds if they rode the No.8 bus in Bangkok and, if they did, they would probably suggest renumbering the buses to four, which sounds like their word for death. The No.8 buses plying the route between Pak Klongtalad and Happy Land are so accident-prone that the Bangkok Mass Transit Authority has given the operator of the line 'one last chance' to improve safety. Otherwise it will yank all the buses off the street, and there are more than 100 of them. One last chance sounds like the Chinese word for 'that will be the day', but at least there's some room for optimism. The passengers refer to their risky rides as 'the bus from hell', 'telephone-booth slammers' and 'the fast and the furious', and to themselves as 'ghost riders' (Nationmultimedia, 2016)

The No.8 easily tops the list of the most dangerous bus lines in Bangkok in the BMTA's 2015 operating report, based on commuter complaints accumulated over the

previous 10 months. The transit authority knows what the problem is and it's not about the wheels falling off. It all comes down to reckless driving. In June 2015, a No 8 slammed into concrete pillar near the Ari Sky-train station when the driver lost control while engaged in a race with a rival bus at breakneck speed. Injury prevented the driver from honouring his contractual obligation to flee the scene before the cops showed up. One morning, the menace turned truly tragic when a 60-year-old woman was killed in a bus mishap in Lad Phrao. (Nationmultimedia, 2016).



Figure 2.6 Bus Line 8 slammed into concrete pillar

Source: Sanook (2016)

Even when there are no outright collisions, riding the No.8 can be like enduring an earthquake. The centrifugal motion of sudden swerves tosses passengers out of their seats, knocking heads together. Commuters are routinely dropped off in the middle of the road and taken on mystery-tour detours that are anything but magical, a passenger said. And the ticket collectors are often surly and rude. One day, a young woman posted a terrified selfie taken aboard a No.8 between the Lad Phrao subway stop and Chatuchak Park. The young male ticket collector had sat next to her, ogling her thighs and bumping into her suggestively” (Nationmultimedia , 2016)

Social media shows poor behaviour of bus drivers and ticket collectors. A video showing a driver and a ticket collector on Bus Line 8 using impolite language and forcing passengers off the bus, was a reason for the Ministry of Transportation to

open a special investigation into Bus Line 8. The issue of service problems on the bus line had already been popular in the mainstream media, but the video reinforced the impression that there was a problem with the service. There is a popularly-shared image of people packing into the bus until the wheels lift off the road, and a case where a No.8 bus struck and killed a 13-year old bicyclist. In this last case, even though the driver of the bus was not found to be directly responsible, it later emerged that he did not have a driver's license valid for public buses. He had been working only three weeks, and was still in the process of changing his license from an ordinary one to one valid for buses. Normally such a driver wouldn't be working, but on the weekend there were simply too few drivers. (Jitsamruay, 2015)

This case became widely cited, and it led to Bus Line 8 becoming a key point of criticism and investigation by the online community, and infamous amongst the general population. But this case in turn led to a greater desire to understand the problematic service conditions of Bus Line 8. A passenger that uses Bus Line 8 regularly, said that "the condition of buses are old some of the windows can't be opened. The driver and ticket collector scold the customers and don't care about them or their safety as much as they should. They drive fast - frighteningly fast. They hit the brakes hard and don't stop at the bus stops. They don't close the door of the bus and talk on the phone when they should be on duty. This is a problem that has been going on for a long time".

3) Bangkok's fearsome Bus Line 8 ordered to improve

The management of the Bangkok Mass Transit Authority has warned operators of Bus Line 8 to improve services and ensure passenger safety or lose their licences after a rash of complaints of speeding and crashes. BMTA director Surachai Iamwachirasakul said he had issued the warning to the operators after a fatal crash involving a No.8 bus on March 25. He was referring to a crash with a motorcycle taxi on Lad Phrao Road. The bus ran over the head of its female passenger and killed her instantly. Mr. Surachai said he ordered the operators to report on their services every two weeks and meet the BMTA management monthly, and that BMTA would evaluate their services in three months. If problems remain, they will be evaluated

again. Afterwards if the image of No. 8 buses remains negative, the BMTA may not extend their licences. (Mahittirook, 2016).

The operators have to send the profiles of their bus drivers and ticket collectors to the BMTA. BMTA officials would brief the drivers and ticket collectors of the No. 8 buses at their terminals before their daily services. They would be told to stop at bus stops, not to race against one another, to follow traffic rules and not to leave left lanes. Drivers are paid on a daily commission basis, receiving a percentage of the day's takings instead of a fixed salary, an arrangement which encourages them to do as many runs during their shifts as possible to earn more money. Several private companies operate No.8 buses on the same route under the BMTA's concession. It has become so notorious that Bus Line 8 has been included in the action game Grand Theft Auto V. (Mahittirook, 2016)

2.7 Related Documents and Studies

The researcher has studied theories related to service quality, including research into service quality; the service quality model SERVEQUAL; bus services in Malaysia and Singapore in order to have an idea about their service operation, and the study on Alternative Methods for Investigating Bus Service Quality and Users Dissatisfaction in Bangkok and its Vicinity. The knowledge brought from the literature review is applied to analyzing the information collected in this study.

2.7.1 Service quality

Service quality is needed to create customer satisfaction and service quality is connected to customer perceptions and customer expectations. Service quality can be described as the result of customers' comparisons between their expectations about the service they will receive and their perceptions of the service company. This means that if the perceptions are higher than the expectations the service will be considered excellent, if the expectations equal the perceptions the service is considered good and if the expectations are not met the service will be considered bad. He argues that customer satisfaction can be described as a judgement of whether a product or service feature, or the product or service itself, provides pleasurable consumption. Satisfaction

can also be described as a fulfilment response to service and an attitude change as a result of the consumption. Gibson (2005) puts forward that satisfied customers are likely to become loyal customers and that means that they are also likely to spread positive word-of-mouth. Understanding which factors influence customer satisfaction makes it easier to design and deliver services that correspond to market demands.

Oliver (1997) states that during the past decades, in the marketing literature and marketing practices, the importance of the concept of service quality and service satisfaction has increased. Quality and satisfaction are indicators of corporate competitiveness and are explored by marketing academics and practitioners. The relationship and nature of customer evaluation remains unclear, though satisfaction and service quality have two major research paradigms, expectations and perceptions, which are considered key instruments. Zeithaml et al. (1993) mention that in empirical studies quality and satisfaction are introduced as synonymous within the service industry. Schneider and Bowen (1985) and Tornow and Wiley (1991) find a positive correlation between the attitude of employees, the attitude of customers and employee and customer perceptions of service quality. They also find that customer satisfaction is directly related to the attitude and perceptions of employees, in turn, the attitude and perceptions of employees relate to the organization and its management practices.

Customer satisfaction is not just related to the values and attitudes of employees, which means that the overall effectiveness of the organization has a direct impact on values and attitudes. According to Eskildsson (1994) over the past decades, many attempts have been made in both private and public sectors in the hope of making improvements in processes and services from the perspective of the customer. Many initiatives have targeted the satisfaction of external customers. Often, research has shown that these programmes fail to satisfy the first expectations. Consequently, consultants and experts aim for a broader focus within organizations in order to include the perspective of employees and their interrelationships with both managers and customers (Tornow and Wiley, 1991).

According to Oliver (1997) the customer satisfaction research literature concerns how well service delivery occurs in comparison with expectations. Today,

customer satisfaction is an important subject, often discussed in marketing literature. Satisfaction can be described as a number of post experience decisions. One reason for the big interest in this area is that researches believe that customer satisfaction is crucial for all business organizations. Research also shows that satisfaction has a positive impact on intention to repurchase. Andreassen (2001) mentions that customer satisfaction can be viewed as an evaluation where expectations and actual experience are compared. A service failure is when the service delivery does not manage to meet customer expectations. Often, service recovery begins with a customer complaint. The aim of service recovery is to move customers from a state of dissatisfaction to a state of satisfaction. Butcher and Heffernan (2006) discuss the relationship between customers and employees and say that social regard plays an important role in service delivery, for example in a situation where a customer has to wait. A number of studies show the importance of friendly behaviour from staff in order to improve service delivery and create long term relationships. (Md.Hussian and Carlsson, 2010).

2.7.2 SERVQUAL

The SERVQUAL service quality model was developed by a group of American authors, Parasuraman, Valarie Zeithaml and Len Berry, in 1988. It highlights the main components of high quality service. The SERVQUAL authors originally identified ten elements of service quality, but in later work, these were collapsed into five dimensions:

- **TANGIBLES** - Appearance of physical facilities, equipment, personnel, and communication materials
- **RELIABILITY**- Ability to perform the promised service dependably and accurately
- **RESPONSIVENESS** -Willingness to help customers and provide prompt service
- **ASSURANCE**- Knowledge and courtesy of employees and their ability to convey trust and confidence
- **EMPATHY**- Caring, individualized attention the firm provides its customers.

Not All Dimensions Are Equal

All dimensions are important to customers, but some more than others (Arlen, 2008). Service providers need to know which are which to avoid majoring in minors. At the same time they can't focus on only one dimension and let the others suffer. SERVQUAL research shows the dimensions' importance relative to each other by asking customers to assign 100 points across all five dimensions based on their importance.

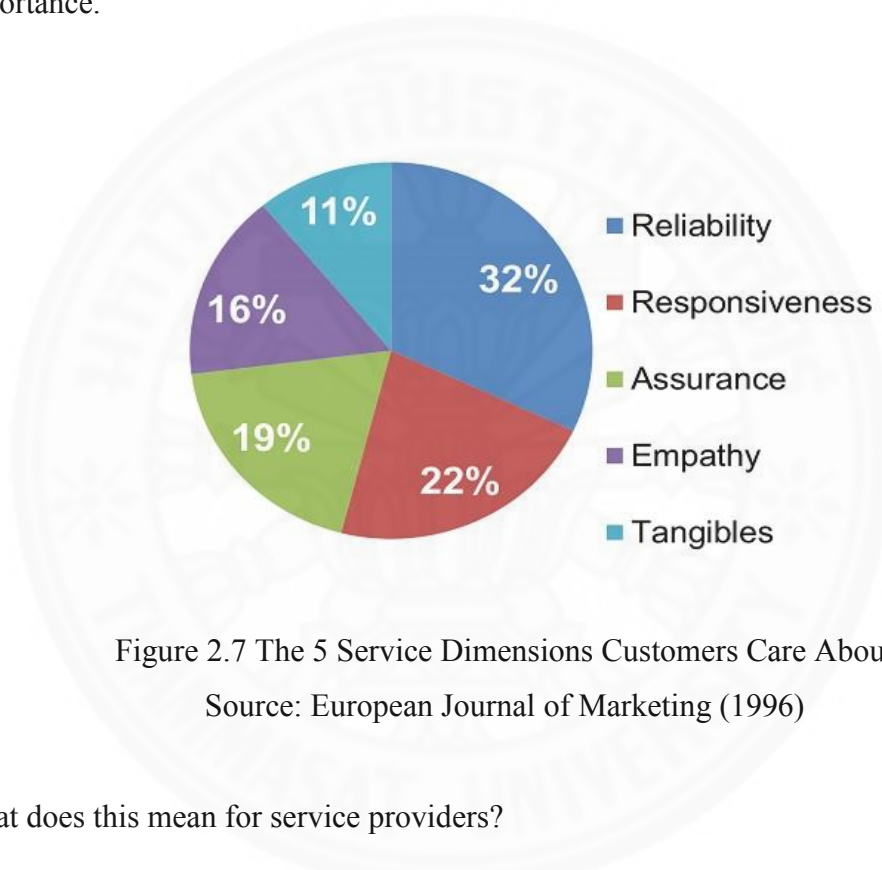


Figure 2.7 The 5 Service Dimensions Customers Care About
Source: European Journal of Marketing (1996)

What does this mean for service providers?

RELIABILITY: Do what you say you're going to do when you said you were going to do it (#1 Just do it).

Customers want to count on their providers. They value that reliability. Don't providers yearn to find out what customers value? This is it. It's three times more important to be reliable than have shiny new equipment or flashy uniforms. Doesn't mean you can have ragged uniforms and only be reliable. Service providers have to do both. But providers first and best efforts are better spent making service reliable.

Whether it's periodics on schedule, on-site response within service level agreements (SLAs), or work orders completed on time.

RESPONSIVENESS: Respond quickly, promptly, rapidly, immediately, instantly (#2 Do it now).

Waiting a day to return a call or email doesn't make it. Even if customers are chronically slow in getting back to providers, responsiveness is more than 1/5th of their service quality assessment. Service providers benefit by establishing internal SLAs for things like returning phone calls, emails and responding on-site. Whether it's 30 minutes, 4 hours, or 24 hours, it's important customers feel providers are responsive to their requests. Not just emergencies, but everyday responses too.

Reporting Responsiveness: Call centres typically track caller wait times. Service providers can track response times, and their attainment of SLAs or other key performance indicators (KPIs) of responsiveness. This is great performance data to present to customers in departmental performance reviews.

ASSURANCE: Service providers are expected to be the experts at the service they're delivering. It's a given. (#3 Know what you're doing)

SERVQUAL research shows that it's important to communicate expertise to customers. If a service provider is highly skilled, but customers don't see that, their confidence in that provider will be lower. And their assessment of that provider's service quality will be lower.

Raise customer awareness of your competencies: Service providers must communicate their expertise and competencies – before they do the work. This can be done in many ways that are repeatedly seen by customers, such as:

- Display industry certifications on patches, badges or buttons worn by employees
- Include certification logos on emails, letters and reports
- Put certifications into posters, newsletters and handouts

By communicating competencies, providers can help manage customer expectations and influence their service quality assessment in advance.

EMPATHY: Services can be performed completely to specifications. Yet customers may not feel the provider's employees care about them during delivery. And this hurts customers' assessments of providers' service quality (#4 Care about customers as much as the service).

For example, a day porter efficiently cleans up a spill in a lobby. However, during the clean up doesn't smile, make eye contact or ask the customer if there is anything else they could do for them. In this hypothetical the provider's service was performed fully, but the customer didn't feel the provider employee cared, and it's not necessarily the employees fault. They may not know how they're being judged. They may be overwhelmed, inadequately trained, or disinterested.

Service delivery matters: A provider's service delivery can be as important as how it is done. Provider employees should be trained how to interact with customers and their end-users. Even a brief session during initial orientation helps. Anything to help them understand their impact on customers' assessment of service quality.

TANGIBLES: Even though this is the least important dimension, appearance matters. Just not as much as the other dimensions (#5 Look sharp).

Service providers should make certain their employees appearance, uniforms, equipment, and work areas on-site (closets, service offices, etc.) look good. The danger is for providers to make everything look sharp, and then fall short on reliability or responsiveness. They need to work on all five, but emphasize them in order of importance. If sacrifices must be made, these dimensions can be used as a guide for which ones to rework. Also, providers can use SERVQUAL dimensions in determining specific customer and site needs. By asking questions around these dimensions, providers can learn how they play out at a particular location/bid opportunity.

2.7.3 Bus Services in Malaysia



Figure 2.8 Bus in Malaysia

Source: Wikimedia (2016c)

Munzilah et al (2013) study of bus services, focuses on quality of service in bus operation that influences passengers' decisions and the role of bus providers and bus drivers. They outline the important role played by public transport in meeting the demands of business and social life. An improved understanding of bus operation is important for a well managed bus services. Maintaining a high standard of quality in service and performance is of paramount importance to encourage people to make public transport their preferred choice.

Across the world, public bus operation plays an important role in providing transport for commuting passengers. Bus services are provided by bus agencies with their own specific aims. For instance, in Hampshire, UK, it is reported that 70% of public buses are operated and run by private commercial companies, while 30% are funded wholly or partly by Hampshire County Council or the local district. The commercial bus companies need to make a profit from the bus services. However, the funded bus services may not necessarily be commercially viable but fulfil a social need of the community. In some cases, buses are operated under the management of multiple agencies. One such example is the bus service for students and staff (known

as the University Bus Link or Uni-Link) offered by the University of Southampton in partnership with the BlueStar bus company. The bus route connects the airport, university campus, general hospital, railway station and the city centre of Southampton. Uni-Link provide services not only for students and staff but also for the public (Sciencedirect, 2013). In Malaysia, most public bus services are fully managed by private companies. However, to ensure the viability of the services, the government supports the bus companies by providing bus terminal facilities and a subsidy for diesel. (Munzilah Md.Rohani et al., 2013).

1). Bus Operation Services

Bus operation depends on various factors such as population, culture, environment and economics. In London, UK, buses are by far the most used mode of public transport due to their flexibility, high availability and accessibility. However, in Kuala Lumpur, Malaysia, public bus services are normally preferred because of their cheaper cost and better coverage compared to other types of public transport such as trains and air travel. Types and features of bus services are designed according to local needs. With special purpose built technology appropriate to the local climate or passenger needs, such as air conditioning in Asia, or cycle carrier mounts in the United Kingdom, various types of bus services target and appeal to specific user groups.

2) Bus Rapid Transit (BRT) Service

BRT is an innovative and flexible bus transit system that is widely used in city areas. The BRT connects passengers with other types of public transit such as train or tram. It is a fast, efficient, safe, cheap and user friendly bus, compared to traditional bus systems. The use of BRT with integrated systems and specialized vehicles on dedicated bus lanes can significantly improve city mobility. BRT was first implemented in Curitiba, Brazil in 1974. It has now become a global application in the twenty-first century. In Europe, BRT is widely used to provide higher quality performance of transport with effective cost. However, in some Asian countries like Malaysia, the use of BRT system is considered new and growing. The Malaysian

government established National Key Results Area (NKRA) initiatives to encourage BRT. The NKRA project is aimed to improve morning peak traffic in Klang valley areas by increasing the modal share and improving public transport in Johor Bahru and Penang by providing a good quality public transportation system and planning.

The aim is to improve reliability and journey times, enhance comfort and convenience and improve accessibility and connectivity. The Malaysia Land Public Transport Commission participated in the Malaysia BRT project and is responsible for implementing a five bus expressway transit service, bus lanes and a BRT network, refurbishing 634 bus stops, building 306 new covered bus stops, improving bus networks, and establishing performance standards for bus operators. One early achievement of the NKRA project is that around 2.21 million more commuters took the LRT in the first 11 months of 2010 than the same period in the previous year. It has reduced the journey time by about around 30 minutes along the four Bus Expressway Transit routes in the Klang Valley with an increased number of riders on all routes. The Integrated Transport Terminal (ITT) in Bandar Tasik Selatan was completed at the end of 2010 and diverts approximately 500 to 600 express buses from the city centre. The ITT also acts as a key transportation hub as it is served by buses, the light rail transit (LRT), Keretapi Tanah Melayu (KTM) Komuter, express rail link and taxis. The implementation of the BRT system is complex and has high costs to provide basic facilities such as routes, stations and systems. However, when it operates it can give various advantages to the user through the improvement of bus facilities, performance and service (Munzilah et al., 2013).

3) Express Bus Service

Express bus service operation is different from BRT service. The services are intended to run faster than normal bus services and are extensively used for long journeys which use the fastest route to reach the destination. Express bus services typically serve trip patterns that have common origins and destinations and do not make as many stops as normal bus services to maintain high travel speeds and levels of service. The bus service only stops at dedicated areas. Compared to rail travel for long journeys, travel by express bus is much cheaper and provides links not offered by

rail networks. A report by the International Road Transport Union indicates that between 1995 and 2002, buses and coaches (express bus) were the second favoured mode of transport in Europe, after passenger vehicles. Specifically, in several countries in Europe, express buses are operated on a commercial basis. In Malaysia, express buses are operated by private companies such as Sani Express, Transnational Express, and KKKL Express on a basis of scheduled and unscheduled services. Express bus services are popular for personal reasons, holiday travel during big celebration holidays such as Eid and Chinese New Year. Other than that, Malaysian express bus services are also used for business and work purposes. The operation service of express buses in Malaysia is available 24 hours. Some of the bus services, especially for long distance travel are operated during the small hours of the morning.

4) Shuttle Bus Service

Shuttle bus service is a service that uses small buses or vans for public mobility. It is used for shorter trips along busy corridors. In Singapore, shuttle bus services are introduced to support the road pricing scheme known as the Area Licensing Scheme (ALS). The Singaporean government initiated shuttle bus service to encourage public bus commuting in Singapore city areas. Various cities such as Hong Kong, Buenos Aires, Calcutta (India), Manila (Philippines), Istanbul (Turkey) and Cairo use a mini bus operation service as a city shuttle service. The introduction of minibus services is to cater for short distance with higher frequency service. In Malaysia minibuses were the most popular public transport for inter-city travel in Kuala Lumpur and the Klang Valley since they were introduced in 1975. With cheaper fares of RM0.60 (£0.12) in 1993, a minibus passenger could use the service for unlimited distance within the coverage route. However, minibus services were terminated in 1998 and today the service has been replaced with a more sophisticated service under a new brand, Rapid KL. Free shuttle bus services are available in many countries. Free airport shuttle services are provided by Air Express Bus company. It is the quickest and most convenient way to travel freely between Eindhoven airport or Airport Weeze to the city centre of Amsterdam. The University of Edinburgh provides a free shuttle bus service for staff at an interval of between 15 and 30 minutes which takes approximately 10 minutes to travel between the central area and the King's

Building. One of the free shuttle services operated in Malaysia is Hop On Free Central Area Transit.

The shuttle service operating in Penang was introduced in 2009 as an initiative of the Penang Island Municipal Council (MPPP) and Rapid Penang, for tourist attraction. The service covers a route from Weld Quay to Penang Road and back from 06:00 to midnight. Shuttle bus services support park and ride schemes and reduce the volume of traffic on the roads in Singapore. A park and ride scheme was introduced in 1975 in Singapore to complement the use of the Area Licensing Scheme. The scheme involves over 50,000 parking places provided in strategic locations. Shuttle buses operate to transport park and ride users from parking areas to various destinations within the restricted zone.

5) Internal and Private Bus Service

Some organisations own and operate buses for their own needs. University Tun Hussein Onn Malaysia (UTHM), for example, provides a unique on-campus bus for private internal use of its students. The UTHM off-campus bus service is an internal bus service, to transport students from university residential areas to the main and city campus of UTHM. The operation of the bus is under the management of The Development and Property Management Office of UTHM. The bus operation is free for all students and is available from 07:00 to 23:00 daily. The cost of bus operation is partially met from the annual student levy.

6) Tour Bus Service

A tour bus service is a service provided for tourists for sightseeing tours. The marked difference between tour buses and other types of bus service is the design of the bus. Regular buses (coaches) are sometimes used as tour buses, however open top double-decker buses are now commonly and popularly used as tour buses in big cities such as London, Amsterdam, Hong Kong, Kuala Lumpur and Melaka. Tour bus services in various countries support tourism industries and normally operate on a commercial basis. City Sightseeing and Big Bus Tours are examples of large operators of tour buses. They operate on a franchised basis all over the world. Services are

offered by bus operators that are normally based within the city sightseeing areas. Malaysia has a unique tour bus operation service for long distance travel, known as Executive Bus operated by Transnational Express Sdn. Bhd. company. The idea of bus operation was first initiated by Tun Dr. Mahathir Mohammed, a former Malaysian Prime Minister, to provide tourism transport services during the Visit Malaysia campaign in 1994 and the Commonwealth Games of 1998. The ten buses (Type I and Type II) used for the executive service are double-decker buses (Daewoo BH 120 models) supplied by Daewoo Motor Co. Ltd., Korea.

7) Factors Affecting Public Bus Ridership

There are two categories of factors that affect public bus ridership highlighted in the report published by the Transportation Research Board, internal and external factors. External factors have a direct influence on transit demand and supply. They are factors outside bus agencies' direct control. For example, population growth can change public bus transit service demand. Other factors, such as economic conditions, fuel prices, congestion charges and car parking charges also affect the transit demand. Although, private vehicles are the first choice mode of travel in most city areas, public policy and government funding initiatives show a significant influence on public transit use (Munzilah Md. Rohani et al., 2013).

Internal factors that influence public bus ridership are those factors over which bus agencies have some control, such as quality of services, and service orientation. Bus operation service quality can be measured based on specific criteria such as accessibility, availability, and reliability. Fare pricing level is highlighted by researchers such as Taylor and Fink (2003) and Paulley et al. (2006) as a factor that has an effect on public ridership.

8) Bus Service Quality

The choice of public transport as a preferred mode of travel in the city is mainly influenced by the quality of bus services. Previously, users were satisfied with basic services, the availability of routes and the location of service. However, transit users today are more demanding from bus providers, demanding fast and reliable

service, shorter walking distance to stops, low floor buses, cheaper services and friendly safe drivers. Bus operators are responding to such demands with the aim of increasing the number of customers, and their profile. Bus service quality can be defined using various attributes that cover items such as service coverage, frequency of service, hours of service, and service reliability. Customer satisfaction surveys and expectation surveys in particular are the best methods of measuring bus service quality. From the survey, any lack in service or performance can be determined and improved. Blue Mountains Bus, a bus company from Australia, for example conducted a formal passenger satisfaction survey in 2012. The survey was undertaken by the Australian Department of Transport with the aim of measuring the level of bus passenger satisfaction with various bus services. One of the main survey objectives was to know the experience of passengers when travelling with the company. Overall, the travelling public had a very high level of satisfaction with drivers. From an operational perspective, the company found that they had to consider improving aspects relating to frequency of service with relevance to other transport modes. In the survey, the bus company received written comments on drivers, bus shelters, the buses and the timetables, and all these were taken into consideration as part of the continuous operational improvement. From the satisfaction survey the bus company planned strategies to increase patronage of the bus (Munzilah Md. Rohani et al., 2013).

2.7.4 Bus transport in Singapore

Buses form a significant element of public transportation in Singapore, with over 3.8 million rides taken per day on average, as of 2015. There are more than 300 scheduled bus services, the vast majority operated by SBS Transit and SMRT Buses. There are around 4,200 buses currently in operation. (Wikipedia, 2016c)



Figure 2.9 Bus in Singapore
Source: Riverview (2016)

History

When Singapore first gained independence in 1965, the public transport system was inadequate to cope with the population, while the buses were old and slow. The system was beleaguered with frequent problems such as poor management and substandard services and quality. The main bus operator was the Singapore Traction Company (STC), plying routes in the city area. There were many small individual Chinese private bus companies, each plying a small part of the rural and fringe areas of the island, with only a few routes each. Therefore, a simple journey from the East to the West of the island could involve several bus transfers, and could last a few hours aboard noisy and rickety buses.

As the Singapore Traction Company had a 30-year monopoly and no direct competition, its services were usually substandard, while the small Chinese bus companies had a shortage of resources and funds. Many bus companies had labour problems. There were quite a few cases of labour unrest. In the late 1950s, the situation deteriorated. Militant bus workers, manipulated by communist-controlled unions, resorted to strikes in a demand for better work conditions and pay. These work stoppages plunged the entire bus system into chaos.

A famous bus strike was the Hock Lee bus riots of 12 May 1955, when workers from the Hock Lee Amalgamated Bus Company went on strike. They were members of the Singapore Bus Workers' Union (SBWU) and were protesting against bad working conditions, long working hours and low pay. Students from Chinese middle schools even came to join and support the strikers. The situation was so bad that in 1955, the Chinese bus companies were hit by a total of 57 strikes. In 1956, the Great STC Strike lasted 146 days. The strikers crippled the country's transport system. The chaotic conditions left commuters in the lurch.

In the early 1970s the government stepped in to reorganize the bus system. Many small bus companies were amalgamated into three larger bus companies, namely the Amalgamated Bus Company, Associated Bus Services, and United Bus. They were grouped into three regional sectors. The STC continued its monopoly in the central area of Singapore. Notwithstanding the reorganization, bus services still did not improve much. There were still frequent breakdowns, overcrowded buses, and irregular fares and route structures. During this time, the protectionism of the STC by the government was also removed. The STC could not cope with this new environment and closed down its operations due to large financial losses.

In 1973, the three main bus companies were merged into a one single organization. The new company formed from this merger was the Singapore Bus Service (the predecessor of SBS Transit), which came into operation in November 1973. It was hoped that this would create economies of scale and ultimately improve bus services. The government mooted the idea of a second bus company in the early 1980s. The idea was to provide some degree of competition to SBS. Therefore, Trans-Island Bus Services (TIBS) was formed on 31 May 1982, as the second major public bus operator. Trans-Island started operations on 3 April 1983.

Ong Teng Cheong, the then Minister for Communications, remarked that “Each company will act as a natural impetus to enhance the performance and efficiency of the other in the spirit of healthy competition and in the process help bring about a better level of service”. In August 1994, the government announced the transfer of 17 SBS services to Trans-Island bus services. This was to help TIBS in its

early years. In 1999, the government announced the final transfer of bus services to Trans-Island bus services in place of SBS who had won the right to the whole North East Line. In 2001, Singapore bus service changed its name to SBS Transit Limited, to reflect its status as a multi-modal transport operator, as it had won the tender to operate the new North East Line, the Punggol LRT Line and Sengkang LRT Line. In late 2001, Trans-Island became a subsidiary of the Singapore Mass Rapid Transit Corporation (SMRT). Trans-Island Bus Service was renamed SMRT Buses Ltd. on 10 May 2004.

On 23 April 2013, the Land Transport Authority announced that a new Bulim Bus Depot would be built by the authority itself, located off Jurong West Avenue 2. It would be the first depot that LTA developed and funded, as part of the review of the enhanced structural assistance that the government provided the bus industry, as announced in Committee of Supply (COS) 2012. The depot was intended for SMRT Buses Ltd. to accommodate the additional buses that it would be bringing in over the next few years. The operator's existing bus depots and bus park had reached full capacity, and the new facility was necessary to support the higher number of buses as the overall bus capacity progressively increased under the Bus Service Enhancement Programme (BSEP). Subsequently announced by LTA on 29 May 2013, a new SBS Transit bus depot was to be developed, the Loyang Bus Depot located off Loyang Avenue. On 21 May 2014, the Land Transport Authority announced that there would be a transition to a government contracts model, which would attract competitiveness. All the Bus Services Enhancement Programme buses would be consolidated into the three new depots beginning in 2016. Cross-carriaged SBS Transit and SMRT bid for all operations.

In 2016, the government adopted a new contracting model with the Land Transport Authority determining the bus services to be provided, the service standards, and the bus operators tendering for the right to operate these services. Fare revenue was retained by the government who also retained ownership of all buses and bus related infrastructure. Bus contracting was implemented in phases over several years. Services in Singapore were bundled into twelve packages with about 300-500 buses each. Initially, three packages were tendered for five years, which could be

extended by another two years if performance criteria were met. The three packages comprised about 20% of existing buses. The other nine bus packages continued to be operated by the existing operators as negotiated contracts, for a duration of about five years. After these negotiated contracts expired, more bus services were gradually tendered.

On 3 October 2014, the Land Transport Authority called for tenders to operate the Bulim package of 26 routes based on Bukit Batok Bus Interchange, Clementi Bus Interchange and Jurong East Bus Interchange. Eleven parties including Busways, Go-Ahead Group, Keolis, RATP Group, SBS Transit, SMRT, Transit Systems and Transdev lodged bids. The contract was awarded to Transit Systems trading as Tower Transit Singapore in May 2015. On 25 November 2014, the Land Transport Authority announced expansion works for Sengkang Bus Interchange and Tampines Bus Interchange. The expansion consisted of additional parking bays for another 12 buses to support the Bus Service Enhancement Programme (BSEP), passenger boarding and alighting facilities, a concourse area, offices, a staff lounge and a canteen. It was scheduled to be completed in the second quarter of 2016.

In April 2015, the Land Transport Authority called for tenders to operate 25 routes based on Changi Airport Bus Terminal, Changi Village Bus Terminal, Pasir Ris Bus Interchange, and Punggol Bus Interchange out of Loyang Bus Depot as part of its new contracting model. Busways, Go-Ahead Group, Keolis, RATP Group/Transdev, SBS Transit, SMRT Buses, Tian Tan Shipping/Kumho Construction and Woodlands Transport lodged bids. In November 2015, the Land Transport Authority awarded Go-Ahead the contract with Go-Ahead Singapore to commence operations in quarter 3 of 2016

Vehicles

Singapore's buses consist of single-decker and double-decker buses on routes operated by SBS Transit and SMRT Buses, and articulated buses on routes operated by SMRT Buses. SBS Transit once operated two articulated buses, but they were sold to New Zealand's Bayes Coachlines because of failing driving tests. These buses were SBS998Y and SBS999U. Singapore's buses also consist of types that are not seen in Singapore, called Demonstrators. SBS Transit had a bus called the Superlong. The single-decker bus is about 16m long, while the double-decker is 12m long. The registration number is SBS997A. After a 17 year lifespan, the Superlong finally retired in 2012. The last service was No.83.

Quality of Service (QoS) Standards for Basic Bus Services

The QoS standards have two categories:

Operating Performance Standards (OPS) which measure minimum daily or monthly operational deliverables, either at the bus network or route levels. They cover the aspects of bus reliability, loading and safety; and

Service Provision Standards (SPS) which measure overall bus route planning and provision of services. They cover the aspects of service availability, integration and information.

2.7.5 Alternative Methods for Investigating Bus Service Quality and User Dissatisfaction in Bangkok and its Vicinity

Charad Piriyawat and Sorawit Narupiti, (n.d.) studied the above subject with the aim of investigating bus users' perceptions and examining their dissatisfaction with the quality of bus service by introducing alternative approaches to the quality of Bangkok Mass Transit Authority (BMTA) bus services and revealing the causes of service inefficiency and user dissatisfaction. The target group of the study was riders on buses. The results suggest that comfort, modernity of vehicles, travel time, waiting time, cleanness, drivers' behaviour, ticket collectors' behaviour, availability of seats,

and convenience were the most problematic service attributes that affect the overall satisfaction of passengers and should be improved. These attributes are not classified as serious problems by riders but they are problems that are frequently experienced. Because riders perceive these problems regularly, they define them as ordinary events that they are able to tolerate. As riders get used to these problems, they suffer from them less.

These attributes are not identified as critical factors that cause unsatisfying bus travel environments. Attributes defined as critical must have a strong impact and be frequently experienced by riders simultaneously. Additionally, attributes identified as crucial to dissatisfaction imply that these attributes will be important factors that create unsatisfactory travel environments for riders (low service quality attributes) and are frequently encountered by them. Because of the regularity of experiencing these problems, they feel the problems are common events in daily life. Therefore the gap values of these attributes are randomly located across a wide range (from low to high). The results of the attribute selection suggest that, to encourage travelling by bus, transportation agencies should select appropriate strategies for investigating bus service quality. The results of both alternative analyses give not only general characteristics of bus users such as the proportion of riders who experience problems from any attributes, but also the occurrence rate. The findings of this research and its methodology can be applied to assessing bus service quality in Bangkok and its vicinity and anywhere else having urban characteristics similar to these areas. Moreover, the alternative approaches introduced in this research make transportation agencies reconsider their existing methods of assessment.

CHAPTER 3

RESEARCH METHODOLOGY

This research is a qualitative study. Data is collected through content analysis and face-to-face interview with a number of Bus Line 8 passengers and persons concerned with its operation, to obtain their opinions and experience of Bus Line 8 services as well as the appropriate ways to improve its service quality.

3.1 Population and Sample

The sample of this paper are divided into 2 groups:

Group 1 are passengers of Bus Line 8 who will be selected by quota sampling from different professions such as government service officers, employees, workers, school and university students. Therefore, the sample size is around 30. Similarly, Group 2 are service providers of Bus line 8. The sample will also be selected via quota sampling from various people such as administrators, persons concerned in operating Bus Line 8, bus drivers and ticket collectors. The number of Group 2 sample is approximate 10 -15.

3.2 Research Design

The first step is to integrate the findings of several surveys, research and studies from journal articles, books, newspapers, TV, radio and social media regarding Bus Line 8 in order to create the interview questions, which are divided into 2 categories:

Appendix A for participants in group 1 to investigate their experiences of Bus Line 8 service quality and their suggestions for the improvement of its service quality.

Appendix B for participants in group 2 to investigate their ideas concerning the experience of Bus Line 8 service from group 1 as well as the factors that have influenced Bus Line 8 service quality improvement. Their suggestions about

appropriate ways to improve the service quality of Bus Line 8 are welcome.

Secondly, the interview participants are divided into 2 groups:

Group 1: Participants will be selected from the target group, who are school and university students, government service officers, employees, workers and others (interview questions in Appendix A will be used for this group). After collecting data from group 1, the researcher will analyze the data and use the results to create interview questions for group 2.

Group 2: Participants will be selected from the target group who are administrators, persons concerned in Bus Line 8 operation, from both public and private sectors, bus drivers and ticket collectors (interview questions in Appendix B will be used for this group).

Thirdly, after analyzing the data from the group 1 interviews, the results will be used to create the interview questions for group 2.

3.3 Research Instrument

The interview technique is primarily employed in this research. Concepts from the literature review are used to create the interview questions. The questions are open-ended in order to gather detailed information from participants.

An interview sheet is created and divided into 3 parts for each group. All interview questions are related to the objectives of the study.

1) Group 1 interview questions (see Appendix A)

Part 1: General information about the interview participants.

Part 2: Passengers' experience regarding service quality of Bus Line 8.

Part 3: Their suggestions to improve the service quality of Bus Line 8.

2) Group 2 interview questions (see Appendix B)

Part 1: General information about the interview participants.

Part 2: Their ideas concerning the experience of Bus Line 8 services from group 1 as well as the factors that have influenced Bus Line 8 service quality improvement.

Part 3: Their suggestions concerning appropriate ways to improve the service quality of Bus Line 8.

Note: The interview Sheets of both groups are translated into Thai because the majority of the interview participants are Thai.

The questions for the interview are as follows:

Study Objectives	Interview Questions
1. To explore passengers and service providers opinions of service quality of Bus Line 8, as well as their suggestions for service improvement.	See Appendix A and Appendix B
2. To identify factors contributing to service quality of Bus Line 8.	See Appendix B
3. To provide constructive ways to improve Bus Line 8 services.	See Appendix A and Appendix B

3.4 Data Collection

The interviews will be divided into 2 phases. Group 1 interviews will take place in mid May 2016 for 2 weeks. The interviews for group 2 are expected to take place in the third week of May, for around two weeks.

3.4.1 For group 1 interviews, the researcher will introduce himself, inform the interview participants of the objectives of the study and ask them for their permission to interview them. The interview will be done on board or at the bus stop. The interviewees are to be asked for voice-recording permission. A voice recording

and short notes will be taken during the interviews. The researcher focuses on examining the passengers' experience of the Bus Line 8 service and their suggestions to improve Bus Line 8 service quality. Each interview will take approximately 10 - 15 minutes.

3.4.2 For group 2 interviews, the researcher will formally contact administrators of BMTA and persons concerned in operating Bus Line 8 services, private bus owners, employees (bus drivers and ticket collectors) to acquire permission to interview. An official letter from Thammasat University will be acquired for their permission. Before collecting data, the interview questions will be given, along with a letter for their approval. Prior to the interview, all interview participants will be informed about the study objectives. Then, recording permission will be requested. If the recording is allowed, the researcher will start interviewing, but if not, the researcher will ask them to explain slowly and take notes so that any important data is not missed.

3.5 Data Analysis

When the data collection process is complete, data analysis will be made. The researcher will analyze data through content analysis. The survey conclusions of group 1 will be formed into interview group 2, in order to gain informative suggestions about the problems and improvements of Bus Line 8 services. After collecting data from the two groups, the data will be referred into categories. Concepts from the literature review will be applied to analyzing the information collected.

CHAPTER 4

FINDINGS AND ANALYSIS

The results of the study are presented in this chapter. The researcher collected data by studying articles from social media and news concerning the poor bus service offered to passengers in Bangkok and found that most of the complaints from passengers were directed to the privately run buses (Prachatai English, 2015). Common problems are that buses do not stop at the appointed stops, buses are driven in a frightening manner and bus staff are rude. The most notorious bus line is Bus Line 8 (ordinary bus) which drives through Bangkok's worst traffic from Bang Kapi in eastern Bangkok to King Rama I Memorial Bridge (Saphan Phut) in Central Bangkok (Jitsamruay, 2015). Complaint statistics about problems on private bus lines from 1 October 2013 until 30 September 2014 (collected from emergency phone line 1384) reveal that, amongst private regular buses, Bus Line 8 received the most complaints, about 20 per month. The issue of service problems on Bus Line 8 was already popular in the mainstream media and reinforced the impression that there was a problem with the service, which led to Bus Line 8 becoming a key point of criticism and investigation by the online community and its infamy amongst the general population.

Because the survey was done two years ago, the researcher would like to re-do the study, in order to find out what has changed about the service quality of Bus Line 8. The researcher set 3 research objectives for the study:

1. To explore passengers and service providers' opinions of the service quality of Bus Line 8, as well as their suggestions for its improvement.
2. To identify factors contributing to the service quality of Bus Line 8.
3. To provide constructive ways to improve the Bus Line 8 service.

Interviews were used as a means of data collection, conducted from June to September 2016. The population of the study is divided into 2 groups, Group 1 consisting of Bus Line 8 (regular bus) passengers, and Group 2 consisting of service

providers of Bus Line 8, i.e. employees (bus drivers and ticket collectors), bus owners and administrative staff of BMTA. The interviews explored their opinions about Bus Line 8 service quality, the problematic service conditions and ways to improve the service quality.

4.1 Findings

4.1.1 Demographic Profiles

The Group 1 interviews were undertaken with 30 Bus Line 8 passengers, as shown in Table 1.

Table 4.1: Demographic information of the research participants (Group 1)

Sex	Male	11 people	Total 30 people
	Female	19 people	
Age	Younger than 20	2 people	
	20 - 30	17 people	
	31 – 40	8 people	
	41 - 50	2 people	
	51 - 60	1 person	
Nationality	Thai	all	
Profession	Students	7 people	
	Company Employees	16 people	
	Government Service Officers	4 people	
	Others (merchants and housewives)	3 people	

Table 4.1 shows that all the participants were Thai. They included students, company employees, government service officers and others (merchants and housewives). Their ages were 17 to 55. Most were female. The majority of the participants were company employees, followed by students (school and university), government service officers, merchants and housewives. Most were 20 – 30 years old, followed by 31 – 40, 41 – 50 and younger than 20. Their frequency of using Bus Line 8 is shown in Table 4.2

Table 4.2: Information about the frequency of using Bus Line 8

Daily	13 people
Twice or more a week	10 people
Once a week	4 people
Twice or more a month	3 people

Table 4.2 shows that most of the participants used Bus Line 8 daily, followed by twice or more a week, once a week, and a few have used it twice or more a month.

4.1.2 Group 1 opinions of Bus line 8 service quality, and suggestions for its improvement

The researcher interviewed passengers about their experiences of Bus Line 8 service quality. The interview questions are grouped into 4 categories, quality of service, condition of buses, safety on board, and manners of bus drivers and ticket collectors. The passengers expressed their feeling, as shown in Table 4.3, below.

Table 4.3: Opinion of passengers regarding Bus Line 8

Quality of service	Condition of buses	Safety on board	Manners of bus drivers and ticket collectors
<p>1) Most bus drivers drove fast, competing with other buses, and didn't stop at the bus stops</p> <p>2) The doors were opened while the bus was running, before the bus stop, that might have caused accidents as passengers might have fallen off the bus</p> <p>3) Parking for too long caused passengers on board a waste of time</p> <p>4) There was inconsistent bus availability at certain periods of the day</p> <p>5) Some drivers and ticket collectors didn't care about passenger safety</p> <p>6) Poor management and substandard service quality</p> <p>7) No complaints boxes on buses</p> <p>8) The drivers dropped passengers down along the way, or passengers were made to exit before the correct stop</p> <p>9) Some bus drivers and ticket collectors were helpful and had service mind</p> <p>10) The service had some good and bad points</p>	<p>1) The vehicles were old and not up to the standard of service</p> <p>2) Some windows could not be opened or closed</p> <p>3) Some vehicles were unfit for service</p> <p>4) When it rained, water came in from the roof</p> <p>5) Fans were out of order in some buses, it was very hot and uncomfortable when the bus was crowded</p> <p>6) Some seats on the bus were dirty and not stable</p> <p>7) Bus floors were dirty and dusty</p>	<p>1) Passengers felt unsafe and risky when they were on board</p> <p>2) Some drivers didn't have driver's licenses valid for public buses</p> <p>3) Passengers felt a bad impression when they got on the bus for the first time</p> <p>4) Sometimes the driver didn't close the door and drove very fast</p> <p>5) Passengers felt afraid of traffic accidents</p> <p>6) If passengers could have chosen, they would definitely have avoided Bus Line 8</p>	<p>1) The bus driver played and talked on the phone while driving</p> <p>2) They drove fast in a frightening manner</p> <p>3) They usually didn't stop at the correct place</p> <p>4) They smoked while they were on duty</p> <p>5) The ticket collectors were impolite</p> <p>6) They yelled at the passengers and didn't care about them</p> <p>7) They didn't pay attention to passenger safety</p> <p>8) Both drivers and ticket collectors' uniforms were quite dirty and smelly</p> <p>9) Their performances were dissatisfactory</p>

Table 4.3 shows the passengers' experiences of the service quality of Bus Line 8 in 4 categories.

4.1.2.1 Quality of service: Some bus drivers drove very fast in a frightening manner, competing with other buses to stop at the bus stops and get passengers. Sometimes they didn't stop at the bus stops, passengers were dropped down along the way or made to exit before the correct stop. Some drivers opened the door while the bus was running, or before the bus stop, which might have caused accidents; passengers might have fallen off the bus. The drivers and ticket collectors did not seem to care about passenger safety. The buses parked too long, which caused passengers on board wasted time. There was poor management, substandard service quality and inconsistency of bus availability at certain periods of the day, which should be improved. Complaints boxes should be installed on the buses for the suggestions of passengers, but they could scarcely be found. However, the passengers' experiences were not all bad. They indicated that some bus drivers and ticket collectors were helpful and had service mind. The service had some good and bad points, depending on the behaviour of the bus drivers and ticket collectors.

4.1.2.2 Condition of buses: The vehicles were old and not up to the standards of service. Some windows could not be opened or closed. When it rained, water came down from the roof onto the seats, that meant passengers could not sit. Fans on some buses were out of order, making it very hot and uncomfortable when the bus was crowded. Some seats on the bus were dirty or unstable. Bus floors were dirty and dusty. The passengers said that some vehicles were unfit for service.



Figure 4.1: Condition of Bus Line 8, outside
Source: Researcher, 25 June 2016

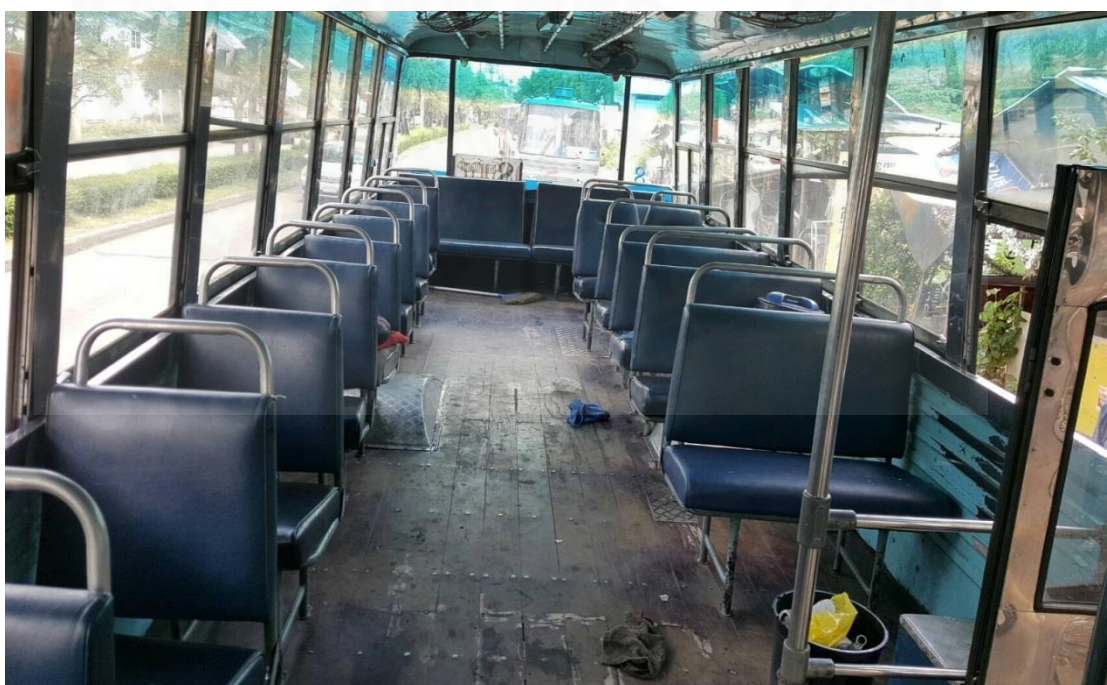


Figure 4.2: Condition of Bus Line 8, inside
Source: Researcher, 25 June 2016

4.1.2.3 Safety on board: The passengers felt unsafe and at risk when on board. Some drivers didn't have driver's licenses valid for public buses. Sometimes the driver didn't close the door and drove very fast. One passenger said that she had a very bad impression when she got on the bus for the first time; she felt afraid of traffic accidents and frightened all the time she was on board. If she could choose, she would definitely avoid Bus Line 8. She was a regular passenger of Bus Line 8 because it provided services along the route she needed to travel.

4.1.2.4 Manners of bus drivers and ticket collectors: The bus drivers played and talked on the phone while driving. They drove fast in a frightening manner. They usually didn't stop at the correct place. They smoked, and sometimes drank, while they were on duty. The ticket collectors were impolite, yelled at the passengers and didn't seem to care about them. Both bus drivers and ticket collectors used impolite words. They didn't pay attention to passenger safety. Their uniforms were quite dirty and smelly. Their manners were dissatisfactory to the passengers. However, they were not all bad. Some of the ticket collectors showed good manners to passengers, talking with them in polite words, and helping old people get on and off the bus.



Figure 4.3: Bus driver playing on the phone while on duty

Source: Newsfresh, 28 December 2015

4.1.3 Group 1 suggestions

From the experiences of the Group 1 participants shown above, suggestions are given for the improvement of Bus Line 8.

- 1) Change all ordinary buses to air-conditioned buses.
- 2) Provide pre-service training for bus drivers and ticket collectors before they work, and in-service training for them once a year.
- 3) Do not allow people who do not have a valid license for buses to be bus drivers or ticket collectors.
- 4) Reduce the working hours of bus drivers and ticket collectors to reduce the pressure on them.
- 5) Install GPS on every bus in order to be able to follow them in real time.
- 6) Make the employees' appearances, uniforms and equipment look good, and show polite manners to passengers.

4.1.4 Group 2 opinion of passenger experience, feedback on Bus Line 8 service quality, the factors contributing to service quality and how to improve Bus Line 8 service quality.

Following the analysis of the data from Group 1, Group 2 were asked their views on passenger experience, feedback on Bus Line 8 service quality, the factors contributing to service quality, and how to improve Bus Line 8 service quality.

Table 4.4: Demographic information of the research participants (Group 2)

Sex	Male	5 people	Total 10 people
	Female	5 people	
Age	31 - 40	2 people	
	41 - 50	4 people	
	51 - 60	4 people	
Profession	BMTA Officer	3 people	
	Bus Owner	2 people	
	Bus Driver	3 people	
	Ticket Collector	2 people	

Table 4.4 shows the participants of Group 2, who were made up of service providers, BMTA officers, bus owners, bus drivers and ticket collectors. There were 10 participants (5 male and 5 female), 3 BMTA officers, 2 bus owners, 3 bus drivers and 2 ticket collectors. Their ages were 31 to 60. Most were 41 - 60 years old, followed by 31 - 40.

The researcher collected data from Group 2 participants, by dividing them into 3 sub-groups, private bus owners, bus drivers and ticket collectors, and BMTA officers. The researcher went to the Bus Line 8 station at Happy Land in Bangkok, Bangkok on 25 June 2016 to interview the bus owners, bus drivers and ticket collectors.

4.1.4.1 Private bus owners

The bus owners informed the researcher that Bus Line 8 is operated by 3 private companies, 39 Group Transport, Sup 888 and Thai Bus Transport, under Bangkok Mass Transit Authority's (BMTA) supervision. It runs along Bangkok's Happy Land and Memorial Bridge. In total, the Bus Line 8 fleet comprises 72 vehicles

with 100 bus drivers and 100 ticket collectors. Because of the high number of passenger complaints about the problematic service conditions, the private bus owners had tried to solve the problems and improve the service by following the BMTA Development Plan. Meetings were held among the 3 private companies to consider ways to develop and improve the Bus Line 8 service in line with the BMTA Development Plan for the Bus Line 8 Service Improvement which the recommendations made were (BMTA, 2015c):

1) Provide training for bus employees (bus drivers and ticket collectors) before they go on duty, regarding service manners and good relationships with passengers.

2) Check the bus employees' health conditions, alcohol levels, and driving licenses for public buses. If their health condition is not ready or they don't have a driving license, they are not allowed to work.

3) The bus driver should inspect the condition of the bus before leaving on its route. If it is found not to be in good condition, it is to be fixed immediately.

4) Bus employees must take care of passenger safety and stop at every bus stop.

5) The bus drivers must not drive in a fast or frightening manner or compete with other buses to stop at the bus stops for passengers.

6) The bus drivers must stop at the bus stops and wait until passengers have got on or off the bus.

7) The employees must help disabled people, monks and novices, pregnant women and the elderly by providing seats for them.

8) Ticket collectors should inform passengers of the next bus stop to prevent them getting off at the wrong place.

9) Bus drivers should not park for too long at the bus stops causing passengers on board to waste time.

10) The drivers must not drop passengers down along the way or make them exit before the correct stop.

11) Good employees are to be rewarded to motivate them to provide good service.

All three private companies agreed to reduce fares for those who are 60 years or over to 4 baht, from 4.50 baht. They agreed to install complaint boxes on each bus and put numbers at the front of the buses to prevent them competing with each other. Bus drivers who are criticized in a complaint are to face a fine of 500 baht, if they do not drive according to the company's orders, meaning their daily wages are also cut.

4.1.4.2 Private bus owners' suggestions

Solving the problems would be quite difficult, because of the traffic conditions and the poor quality of the buses. These factors especially worry drivers and ticket collectors, creating stress that can cause a lot of health problems. Also, the number of buses on the roads has decreased because of the large number of buses under repair. Some companies do not have operating funds to buy new vehicles, so use old ones for service, which means buses in public service are not fully functional and create unsafe conditions for employees, passengers and those on the road. Along with the decrease in bus numbers, the number of drivers and ticket collectors has also decreased, as old workers retire or resign without sufficient new employees to replace them. However, the companies are pleased to follow the rules and regulations of BMTA and The Land Transport Department, so that services can be improved.

4.1.4.3 Bus employees (bus drivers and ticket collectors)

After interviewing the private bus owners, the researcher interviewed bus employees (bus drivers and ticket collectors) to learn, from their side, why Bus Line 8 was attracting the highest number of complaints from passengers.

Sombut (pseudonym), a bus driver, reported that employees of Line 8 lacked regular pay, so their daily wage relies on commissions from ticket sales. The company pays drivers a daily wage of about 130 - 300 baht depending on the conditions of employment of each company. In addition, bus drivers are able to keep a ten percent commission on ticket sales, while ticket collectors bring home a daily wage of 110 - 300 baht and five percent commission. On average, a bus driver is able to drive the route about four times in an average 14 - 15 hour a day, from 4am to 10pm, with each trip lasting anywhere from 3.5 to 7 hours, depending on the traffic congestion. Each

trip differs depending on a number of factors, the condition of the traffic on the roads, the condition of the bus, and the time of departure. The average number of tickets sold per day is 5,000 – 6,000. Many Bus Line 8 drivers try to drive faster to get ahead of other buses and pick up as many passengers as they can at bus-stops, in order to increase their commission from fares.

Pimol (pseudonym), a former bus driver, added that working 15 hours a day influences the experiences of each bus driver and ticket collector. Being a private bus line employee means a high level of everyday stress; so she resigned. She added that the low wages in private companies especially for employees of the ordinary bus, mean they have to work overtime, showing that they do not earn enough. The income of the employees of ordinary Bus Line 8 is different from the air-conditioned Bus Line 8. The A/C Bus Line 8 employees receive a monthly salary from the company and are able to get commission on tickets according to the rate the company sets, which means they get a monthly income as well as a daily one. Therefore, employees' salaries on private buses, especially ordinary buses, are low, while the work is hard and there are many risks.

Chai (pseudonym), a bus driver, shared his view that employees of private bus lines do not have any collective organization through which they can voice complaints, find just solutions to their problems, or protect their individual rights. This reduces the numbers of employees.

Suree (pseudonym), a ticket collector, reported that she has to bear a heavy burden, servicing all kinds of passengers that cause her stress. In addition, there are problems that come from a lack of concern for the welfare of the employees, such as not having a place for them to rest, shops, bathrooms etc. The time the employees spend on the buses is exhausting. They cannot eat at regular hours, and are unable to choose the time that they use the restrooms. When they reach the start and end points of the route, they still do not have a good place to rest. All this means employees have to search for their own ways of maintaining their personal comfort. Some of them face health problems such as digestive problems, urinary tract diseases, strokes, kidney

stones and muscle problems, caused or worsened by their work. Because of the long working hours, some employees wear diapers to work.

Lumyai (pseudonym), a ticket collector, added that we can see the difference between the welfare of those working for BMTA and those working for private bus lines. The BMTA workers are under a government system, so they have a regular salary, can take leave from work, and have health care, family support and retirement benefits. This differs from the employees of private bus lines, who do not have a regular income, do not get paid if they do not work, and usually get most of their income from commission on ticket sales, causing them to drive fast in order to get the maximum number of passengers. All these factors cause private bus line employees to work more hours than BMTA workers, and ultimately contribute to the difference in service between BMTA and private bus lines.

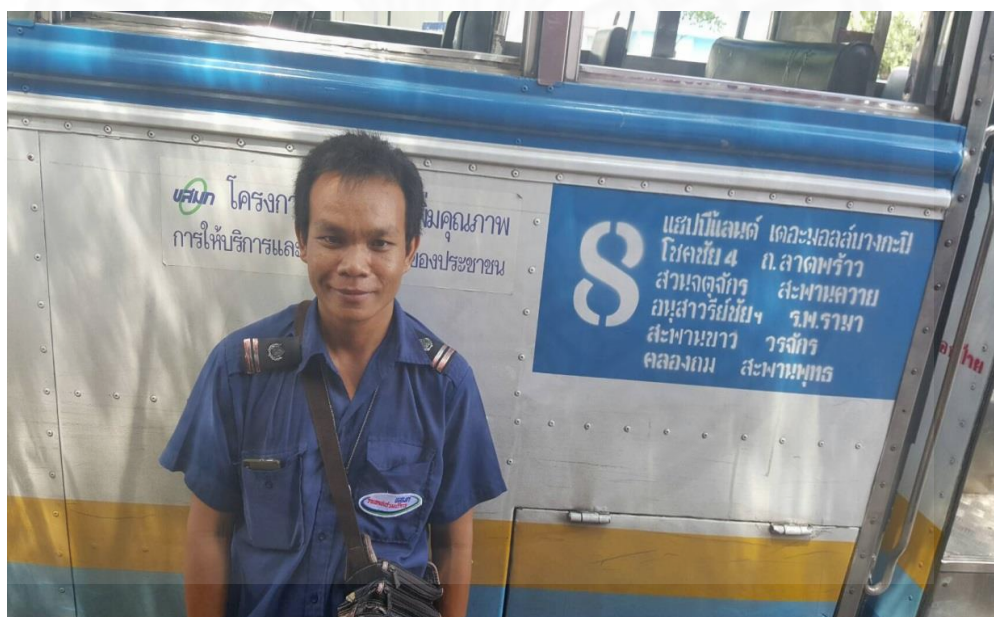


Figure 4.4: Bus driver's uniform

Source: Researcher, 25 June 2016



Figure 4.5: Bus Line 8 station

Source: Researcher, 25 June 2016

4.1.4.4 Bus employees' suggestion

The responsibility of owning companies, and the rules that they establish for vehicle maintenance and the welfare of their employees, is quite low. The companies should pay more attention to the employees' basic welfare. More facilities should be provided at the beginning and end of routes such as a clean toilets, rooms to rest, food shops and water to drink. Companies should have insurance for their employees. Hourly employees work for too long, have heavy workloads and too small salaries and commissions, which leads to service problems and passenger complaints. Higher commission should be considered and the amount of time that they work each day should be reduced. For public employees, wages come from a mutual agreement with unions, and thereby set a standard for service and compensation, but for private bus line employees, this system is lacking, leading to a sense of uncertainty.

4.1.4.5 BMTA officers

The researcher interviewed BMTA administrative officers, who are in charge of private joint bus operation, at BMTA Head Office, Huaykwang, Bangkok, on 22

September 2016, to collect data on their opinion about the service quality of Bus Line 8, and how to develop its improvement.

A BMTA administrator (Joint Bus Operation Division) said that the poor service was mainly due to the ineffective management of the system overall. Low pay for bus drivers and ticket collectors forced them to compete with each other on the roads, resulting in an unpleasant service. Drivers and ticket collectors from the BMTA and the various private lines receive different commissions. Some commissions depend upon the length of time each employee has spent working, and others depend on the various agreements set by each company. For the most part, employees of private bus lines do not receive a regular salary, meaning that their income largely rests on commission on tickets, meaning they must try to get the most passengers in order to gain the most commission.

A BMTA administrator (Private Joint Bus Operation 1 Department, Joint Bus Operation Division) added that the welfare of the employees is often overlooked. Their workload is heavy, and low salaries and commission mean a lack of people apply to be drivers or ticket collectors. Accidents occur for a variety of reasons, the poor condition of the buses which often lack critical parts, bus drivers and ticket collectors who are negligent in their duties, passengers who are not mindful of their own safety, and the traffic conditions along the route. BMTA have tried to solve these problems by issuing the Bus Line 8 Development Plan for the private companies that operate Bus Line 8, as guidelines for service improvement so that the number of complaints would be reduced. There are also regulations offered by BMTA in cooperation with the National Electronics and Computer Technology Center (NECTEC). Every bus, both BMTA and private, has to have a GPS box installed so that BMTA and the private bus owners can check what happens while the buses are on the route. The private bus companies have to buy the GPS boxes.

A BMTA officer (Bus Operation Zone 1-8, Bus Operation Division) said that the image of Bus Line 8 is not good for passengers, and has not been for some time. Some problems occur without intention but some happen because of the negligence of employees. The causes of problems are related to workload and low income, meaning

employees have to fight to earn their living. BMTA and The Land Transport Department try to solve these problems by setting rules and regulations for the private bus owners and their employees to follow.



Figure 4.6: BMTA administrative officer interview

Source: Researcher, 22 September 2016



Figure 4.7: BMTA administrative officer interview

Source: Researcher, 22 September 2016

4.1.4.6 BMTA officers' suggestions

The BMTA officers gave their view that there was indeed one pressing issue that needed correction, posting the number of the bus in large letters so that passengers and the general population could see it clearly, and make more clear complaints about the service. Installing GPS and a complaints box on each bus is needed. The business owners should be more strict with their employees, especially in terms of uniforms and manners. The company should carefully investigate the permits of drivers and ticket collectors before hiring them, and make sure that these permits are renewed in a timely manner. The employees should be given a physical examination before departing on a route, including a check for alcohol. There should be a transportation inspector, as well as a special inspector from the BMTA, for the vehicles from private companies which are on the road constantly.

4.2 Discussion

The researcher analyzed the data collected from the 2 groups of research participants according to the 3 research objectives. Discussion of each objective follows.

4.2.1 Passengers and service providers' opinions of the service quality of Bus Line 8, and their suggestions for its improvement

4.2.1.1 Opinions on service quality

The experiences of passengers and service providers of the service quality of Bus Line 8 are shown by the study to be unsatisfactory. Passengers gave their opinion, that most drivers drove very fast and in a frightening manner, and usually did not stop at the bus stop. These complaints are relevant to the top ten complaints drawn up by the former Transport Minister, Mr. Chatchart Sittipun's, Facebook poll (Sittipun, 2013). Passengers were always made to get off the bus before or after the correct bus stop. Buses were parked for too long, causing passengers on board to waste time. Sometimes they were unavailable for certain periods of the day. No complaint boxes were installed on the buses. The bus drivers and ticket collectors had

bad manners and used impolite words. They did not pay attention to passenger safety. The passengers' opinions were consistent with one of the 5 dimensions of the SERVEQUAL service quality model, 'empathy', which means caring for customers as much as the service. Even if the service is performed completely to specifications, customers may not feel that the provider's employees care about them during delivery, and this affects customers' assessment of providers' service quality (Wikipedia, 2016b).

Furthermore, passengers complained about the condition of the buses, saying that the vehicles were old, dirty and not up to the standard of service. Some vehicles were unfit for service. Fans and seats were not in good condition. Passengers felt uncomfortable and hot when the buses were crowded or in heavy traffic. Most passengers felt unsafe and at risk. One passenger told the researcher that she felt afraid of traffic accidents and frightened all the time she was on board. If she could choose, she would definitely avoid Bus Line 8.

The passengers felt dissatisfied with the manners of the bus drivers and ticket collectors. They complained that the drivers drove very fast, in a frightening manner, and usually didn't stop at the correct place. The ticket collectors were impolite. They were always in bad temper and sometimes yelled at the passengers. Neither bus drivers nor ticket collectors paid attention to passenger safety. Sometimes they talked on the phone or smoked while on duty. Their uniforms were quite dirty and smelly. This is consistent with one of the five dimensions of SERVQUAL model, 'tangible', meaning the appearance of physical facilities, equipment, personnel and communication material. Service providers should make certain their employees appearance, uniforms, equipment and work areas on-site (closets, service offices etc.) look good (Wikipedia, 2016b).

However, not all of them had bad manners. Some were helpful, had service mind and talked to passengers in polite words. Bucher and Heffernan (2006) discuss the relationship between customers and employees and say that social regard plays an important role in service delivery, for example in a situation where a customer has to wait. This is consistent with the SERVQUAL model dimension of 'responsiveness',

which means willingness to help customers and provide prompt service. The service had both good and bad points, depending on the behaviour of the bus drivers and ticket collectors, as well as the environment that put pressure on them, such as heavy traffic, hot weather, their health condition and the passengers.

For the service providers of Bus Line 8, bus owners, bus drivers, ticket collectors and BMTA officers, their overall experience of Bus Line 8 service quality shows that the highest number of passenger complaints are about problematic service conditions. The private bus owners try to solve the problems and improve their service by strictly following the BMTA Development Plan in order to improve Bus Line 8 service quality (BMTA, 2016). They should provide pre-service and in-service training for employees, reward good employees in order to motivate them to offer best service, install complaint boxes on each bus and put a large number at the front and back of each bus to prevent them from competing with each other. Bus drivers who are criticized in a complaint would face a fine of 500 baht.

Bus employees (drivers and ticket collectors) gave their opinion that a bus driver is able to drive about four round trips in an average 14 - 15 hour day, from 4am to 10pm. They lack regular pay, and their income relies on a daily wage from the company of 130 to 300 baht, depending on the conditions of employment of each company, plus a percentage commission on ticket sales, 10 percent for bus drivers and 5 percent for ticket collectors. There is an average of 5,000 – 6,000 tickets sold per day, and many Bus Line 8 drivers try to drive faster so that they can get ahead of other buses, pick up as many passengers as they can at bus-stops, and get commission from the fares they collect. The low wages in private companies, especially for the employees of the ordinary bus, mean they have to work overtime to earn enough. The employees' salaries on private buses, especially ordinary buses, are low, while the work is hard and has many risks. The researcher learned that the income of the ordinary Bus Line 8 employees is different from the air-conditioned Bus Line 8 employees. The A/C Bus Line 8 employees receive a monthly salary from the company and get commission on tickets according to the rate that the company sets, which means they get a monthly income as well as a daily one. These factors have lead to the number of ordinary bus employees decreasing.

The BMTA officers had the view that the poor service was mainly due to the ineffective management of the system overall. Drivers and ticket collectors from the BMTA and the various private lines all receive different commissions, resulting in unpleasant service. Low pay for private bus drivers and ticket collectors forces them to compete with other buses on the roads. Their income largely rests upon commission on tickets, which means they try to get the most passengers and therefore the most profit. Accidents had various causes, the poor condition of the buses, bus drivers and ticket collectors being negligent of their duties, passengers not being mindful of their own safety, and traffic conditions along the route. The welfare of the employees is often overlooked, heavy workloads and low salaries and commission make for a lack of applicants to be drivers or ticket collectors. BMTA and the Land Transport Department have tried to solve these problems by issuing the Bus Line 8 Development Plan for the private companies that operate Bus Line 8, as guidelines for service improvement.

4.2.1.2 Suggestions

For the problematic service conditions discussed above, the research participants from both Group 1 and Group 2 gave suggestions for improvement, as follows.

Group 1 participants suggested that all ordinary buses should be changed to air-conditioned buses, bringing them to the standard of service seen in Malaysia and Singapore. In Malaysia, most public bus services are fully managed by private companies. However, to ensure the viability of the services, the government supports the bus companies by providing bus terminal facilities, and a subsidy for diesel (Rohani et al., 2013). In Singapore, there are 2 categories for the QoS (Quality Standard of Service): Operating Performance Standards (OPS) which measure minimum daily or monthly operational deliverables, either at bus network or route level, including aspects of bus reliability, loading and safety; and Service Provision Standards (SPS) which measure overall bus route planning and provision of services, covering aspects of service availability, integration and information (Wikipedia, 2016).

Providing pre-service and in-service training to remind employees to offer good service to passengers is necessary. People who do not have valid licenses for buses cannot be allowed to be bus drivers. Working hours should be reduced to reduce employee pressure. Complaint boxes and GPS should be installed on every bus in order to get passengers' suggestions and follow the busses in real time while they are on the route. Companies should make sure their employees' appearance, manners, uniforms, and equipment are good, as well as promoting in them a sense of providing good service to passengers by rewarding good employees.

Group 2 participants suggested that bus owners try to solve problems by following the rules and regulations of BMTA and The Land Transport Department. Public policy and government funding should support the private sector to operate their services (Rohani et al., 2013). Solving the problems would be quite difficult, because of the traffic conditions and the poor quality of the buses. Some companies do not have the operating funds to buy new vehicles, and have to use old ones which are not fully functional and create unsafe conditions. In addition, employees' health should be considered by the companies, and appropriate welfare provided. The stress they are under causes a lot of health problems.

The bus employees suggested that basic welfare facilities should be provided by the companies as well as insurance for them. Higher daily wages and commissions should be considered, and the amount of time that they work each day should be reduced. Furthermore, standards of service and compensation should be set, as they are for public employees. Lack of this, leads to a sense of uncertainty (Boonchai, 2014).

The BMTA officers suggested that to help clarify the buses that complaints apply to, the number of the bus should be posted in large letters, so that passengers and the general population could see it clearly and make more clear complaints about the service. Installing GPS and complaint boxes on each bus is necessary. The business owners need to be more strict with their employees, especially in terms of their uniforms, manners and the permits of drivers and ticket collectors. The employees' physical condition, including their alcohol level, should be checked before

departing on a route. The transportation inspector, as well as a special inspector from the BMTA, should examine the vehicles of the private companies on the road.

4.2.2 Factors contributing to the service quality of Bus Line 8

According to the data collected, there are many factors that contribute to the service quality of Bus line 8.

4.2.2.1 The main factors are low salary and heavy workload. The employees do not have regular pay, so their incomes rely on commission from ticket sales and a daily wage, which depends on the company's conditions of employment. This is consistent with Terry Frederickson's (2013) survey that found that unfair working conditions for drivers and ticket collectors on Bus Line 8 were the main sources of poor service.

An investigation into "the lives and work of female employees in the BMTA", done by the Women and Men Progressive Movement Foundation, reported that the base costs of hiring and employment at the BMTA are extremely low. This is because of the low minimum wage. Ideally, the minimum wage should be sufficient to support a family. Some employees, both women and men, are the only people working in their family, and they must support their entire family on their wages. This makes these employees work harder, in order to make additional money from overtime. This in turn leads to health problems for these employees, as well as problems in their families. For women, if they must work late, this also presents a safety problem when travelling back home, as they risk sexual assault. The hiring conditions of the BMTA and private companies, where employees do not bring home the minimum wage of 300 baht per day, forms a natural point of comparison. The low wages in private companies mean that employees have to work overtime, showing that they are not earning enough. (Boonchai, 2014)

4.2.2.2 Since the employees get commission from selling tickets each day, many drivers try to drive faster so that they can pick up as many passengers as they can, to get the most commission from the fares. Many have to fight to earn their living.

4.2.2.3 The employees do about four round trips in an average 14 - 15 hour day. This causes them to feel fatigue and stress from being in traffic jams for most of the day. Working too-long hours without rest leads to health problems such as weakness, urinary tract diseases, strokes, kidney stones, back pain caused by driving for long hours, muscle inflammation etc.

4.2.2.4 The owners of the buses seek to maximize their own profits and do not care for the employees' welfare.

4.2.2.5 Bus owners don't have sufficient operating funds to buy new vehicles, and have to use old ones, which are not fully functional or up to the standard of service.

4.2.3 Constructive ways to improve the Bus Line 8 service

Given the problems and factors contributing to the service quality of Bus Line 8, the research participants made suggestions for constructive ways to improve the service.

1) The companies must look into why their employees are not doing well. They must see that their employees work hard for little money, and their working hours are unjustly long, longer than the law allows. If employees of Bus Line 8 made just an hourly wage, they wouldn't have to work overtime, or fight for the number of passengers and the commission on their tickets.

2) The system of management should be improved, including establishing clear standards of responsibility for repeated problems. BMTA should collect, and make public, data every three months in order to raise public concern and awareness and help create a systems of standards. This database would have both drivers and managers' records, improving the issuance of permits and making a better system by minimizing risk.

3) A collective organization for employees of private bus lines should be established, through which they can voice complaints, find just solutions to their problems, and protect their individual rights.

4) The appropriate welfare and basic needs of the employees should be improved.

5) Employees and bus owners should work together to improve working conditions, because the different conditions of employment between public and private buses has an effect on the number of complaints.

6) The organizations concerned should increase the efficiency of issuing licenses to work on public transportation, and private bus lines should be more concerned with this.

7) Vehicles must be improved up to the basic standards of service.

8) GPS should be installed on every bus in order to follow them on the route in real time.

9) BMTA has created a website (<http://test.traffy.xyz/busline8.html>), for Bus Line 8 only, that is accessible in real time.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusions

This study of Bangkok bus service improvement, using the case study of Bus Line 8 is concluded according to 3 study objectives.

5.1.1 Passengers and service providers' opinions of the service quality of Bus Line 8 and suggestion for service improvement.

The overall service quality has been shown to be unsatisfactory for several reasons, as follows:

Passengers: the researcher has categorized their views into 4 groups, quality of service, condition of buses, safety on board and manners of bus drivers and ticket collectors, itemized below:

1) Quality of service:

- Bus drivers drove very fast in a frightening manner and competed with other buses to stop at the bus stops to get passengers.
- Sometimes they did not stop at the bus stops.
- Passengers were dropped down along the way or made to exit before the correct stop.
- Drivers and ticket collectors did not care about passenger safety.
- Buses parked too long causing passengers to waste time.
- There was poor management and substandard service quality.
- There was inconsistent bus availability at certain periods of the day.
- There were no complaint boxes on the buses.
- Not all employees were bad, some were helpful and had service mind.

The passengers gave their opinions of the quality of service, that most drivers drove very fast in a frightening manner, competing with other buses to get as many passengers as they could. Because of this fast driving and competing, they usually didn't stop at the bus stops, and sometimes dropped the passengers down along the way or made them exit before the correct stop. It seemed that they didn't care about passenger safety.

Moreover, they parked too long at the bus stop, causing passengers to waste time. There were no buses available at certain times. The bus owners should install complaint boxes on the buses to receive passengers' suggestions. Overall, most passengers thought that the management, standards and service quality of Bus Line 8 were poor.

2) Condition of buses:

- Vehicles were old and not up to the standard of service.
- Some equipment was old and out of order.
- Seats on the buses were dirty and not stable.
- Bus floors were dirty and dusty.
- Most vehicles were unfit for service.

The passengers complained about the condition of the buses, that the vehicles were old and dirty both inside and outside. Some were not up to standard and unfit for service. Some basic facilities on the buses such as fans and seats were not in good condition. The passengers felt uncomfortable when they were on crowded buses especially in heavy traffic or when it rained.

3) Safety on board:

- Busses were unsafe and risky for those on board.
- Some drivers didn't have driver's licenses valid for public buses.
- Passengers felt afraid of traffic accidents and frightened while on board.
- Passengers avoided Bus Line 8 if they could.

- Drivers and ticket collectors talked on the phone while on duty, and some smoked.

The passengers felt unsafe and at risk, afraid of traffic accidents while on board. Some drivers had driving licenses, but not valid for public buses. They don't have expertise in driving buses, which might cause accidents. Drivers and ticket collectors talked on the phone while on duty. This means they were not concentrating on their work. Some passengers told the researcher that if they could, they would avoid getting on Bus Line 8 and change to another bus line on the same route.

4) Manners of bus drivers and ticket collectors:

- Some bus driver played and talked on the phone while driving.
- Bus drivers drove fast in a frightening manner and didn't stop at the correct places.
- They smoked and drank (not much) while on duty.
- Ticket collectors were impolite and didn't care about passengers.
- Both bus drivers and ticket collectors usually used impolite words.
- did not pay attention to passenger safety.
- Their uniforms were quite dirty and smelly.
- Some of them showed good manners to the passengers, talking with polite words, and helping old and disabled people get on and off the bus.
- Some good and bad service depended on the behaviour of the bus drivers and ticket collectors themselves and the environment that put pressure on them.
- Most passengers felt dissatisfied with the bus drivers and ticket collectors' manners.

Driving very fast and in a frightening way was always complained about. They usually didn't stop at the correct place, and didn't care about passenger safety. The ticket collectors showed impolite manners and were always in bad temper, sometimes yelling at passengers. Neither drivers nor passengers paid attention to their health or cleanliness. Their uniforms were smelly and not clean. However, not all of them showed bad manners, some were helpful and had service mind. They talked to

passengers with polite words, and helped them get on and off. “Some good and bad points depended on the behaviour of the bus drivers and ticket collectors themselves, and the environment that puts pressure on them”, one passenger said.

The service providers are divided into 3 sub-groups, bus owners, bus employees (drivers and ticket collectors) and BMTA officers. Their opinions are as follows.

Bus owners:

- The highest number of passenger complaints are about problematic service conditions.
- Bus owners try to solve the problems and improve the service by strictly following the BMTA Development Plan for Bus Line 8.
- Good employees should be rewarded to motivate them to offer best service.
- Complaint boxes should be installed on each bus and a number put in large letters at the front and the back of the bus to prevent them competing with each other.
- Bus drivers who are criticized in a complaint should face a fine of 500 baht.
- The bus condition, employees’ health and alcohol level should be checked before they go on the route.
- The number of ordinary bus employees has decreased.

The bus owners had the opinion that the highest number of passenger complaints were about problematic service conditions. They try to solve the problems and improve the service by strictly following the BMTA Development Plan in an attempt to improve Bus Line 8 service quality. Pre-service training will be provided for employees before they begin work, and after they have worked for a period of time. In-service training will also be provided for them for the evaluation of their work. Good employees will be rewarded, in order to motivate them to offer the best services to passengers. Checking the condition of the buses, the employees’ health and their alcohol levels before they leave on the route have been implemented. Now, bus owners face a problem of decreasing numbers of bus employees (drivers and ticket collectors), especially for the ordinary bus, because of the very hard work, low income

and no welfare. This causes them to not apply for work with the private bus companies that operate the ordinary buses.

Bus employees (drivers and ticket collectors)

- Bus drivers are able to make about four round trips of the route in an average 14 - 15 hour day, from 4am to 10pm.

- They lack regular pay. Their incomes rely on a daily wage the company pays, depending on the conditions of employment in each company, and a percentage commission on ticket sales, 10 percent for bus drivers and 5 percent for ticket collectors.

- Many Bus Line 8 drivers try to drive faster so that they get ahead of other buses and pick up as many passengers as they can at the bus-stops, to get commission from the fares.

- The wages from private companies are low, while the work is hard and entails many risks.

- The ordinary Bus Line 8 employees compensation are different from the air-conditioned Bus Line 8 employees.

The bus employees (drivers and ticket collectors) have to work an average 14 - 15 hours a day, from 4am to 10pm, making four round trips. They don't have regular pay. Their income relies on a daily wage the company pays and a percentage commission on ticket sales, 10 percent for bus drivers and 5 percent for ticket collectors. This causes the drivers to drive faster so that they can pick up as many passengers as they can, to get commissions from the fares. The low wages in private companies, especially for employees of the ordinary buses, means that they work hard and take risks, but still do not earn enough, so they have to work overtime. The income of the ordinary Bus Line 8 employees is different from the air-conditioned Bus Line 8 employees, who receive a monthly income from the company as well as a daily commission on tickets sales. These factors have led to the number of ordinary bus employees decreasing.

BMTA officers:

- The poor service is mainly due to the ineffective management of the system overall.

- Employees of BMTA and various private lines all receive different commissions, resulting in an unpleasant service.

- Low pay for private bus employees forces them to compete with other buses on the roads to get the most passengers and gain the most profit.

- Accidents have various causes, poor condition of the buses, employees who are negligent of their duties, passengers who are not mindful of their own safety, and the traffic conditions along the route.

- The welfare of the employees is often overlooked

- Heavy workloads and low salaries and commission make for a lack of people applying to be drivers or ticket collectors.

- The Bus Line 8 Development Plan for the private companies who operate Bus Line 8, is used as a guideline for service improvement.

The BMTA officers, viewed poor service as mainly due to ineffective management of the system overall. Drivers and ticket collectors from the BMTA and the various private lines all receive different commissions, resulting in an unpleasant service. Low pay for employees forces them to compete with other buses on the roads. They have to get the most passengers in order to gain the most profit. Accidents have various causes, poor conditions of the buses, negligent employees, passengers themselves, and traffic conditions. Heavy workloads, low salaries and commission, and welfare being overlooked, cause decreasing numbers of drivers and ticket collectors. BMTA and The Land Transport Department have tried to solve these problems by issuing the Bus Line 8 Development Plan for private companies to use as guidelines for service improvement.

5.1.1.1 Suggestions to improve the service quality of Bus Line 8

Based on the experiences described above, there are suggestions from the research participants in both groups, for the improvement of Bus Line 8 service quality.

Group 1:

- Passengers want the bus owners to change all the ordinary buses to air-conditioned buses, and make them standard for the service.
- Training should be provided to employees before they work, both pre-service and in-service training.
- People who do not have valid licenses to be bus drivers or ticket collectors should not be allowed to work on the route.
- Working hours for bus drivers and ticket collectors should be reduced to lessen the pressure on them.
- GPS should be installed on every bus in order to follow them in real time.
- Companies should make their employees' appearance, uniforms and equipment look good, and have them show polite manners to passengers.
- Public policy and government funding should support the private sector to operate the service.

Group 2:

- Bus owners should strictly follow the rules and regulations of BMTA and The Land Transport Department.
- Appropriate welfare and basic facilities should be provided for employees.
- Higher daily wages and commission should be considered, and the amount of time that they work each day should be reduced.
- The number of each bus should be posted in large letters in order for passengers and the general population to be able to see it clearly, so that they can make clear complaints about the service.
- Standards for service and compensation should be set for the employees as they are for public employees.

- The business owners should be more strict with their employees, especially in terms of their uniforms, manners and the permits of drivers and ticket collectors.

- Employees' physical examination including their alcohol level should be carried out before they depart on a route.

The above suggestions show that the passengers would like the private companies to change all ordinary buses to air-conditioned buses and bring them up to the standards for service. Public policy and government funding should support the private sector to operate their service, and set the standards of both the Quality Standard of Service and the Operating Performance Standard. The companies should not allow people who do not have valid licenses for buses to be bus drivers. GPS and complaint boxes should be installed on every bus in order to receive passengers' suggestions and follow them in real time while they are on the route. To reduce employee pressure, working hours should be reduced. The companies should improve their employees' appearances, with polite manners, clean uniforms and equipment and awards for good employees to promote good service to passengers.

The service providers suggested that private companies should strictly follow the rules and regulations of BMTA and The Land Transport Department to reduce problems. The government should consider helping the private companies that do not have much operating funds by providing loans to buy new vehicles. Companies currently have to use old vehicles for service, which are not fully functional and create unsafe conditions. In addition, employees' health should be considered by the companies, as their stress levels can cause a lot of health problems. Appropriate welfare should be provided to them so that they can earn a better living.

In addition, higher daily wages and commission should be considered, and standards for service and compensation should be set for employees as they are for public employees. The lack of this system leads to a sense of uncertainty. The number of each bus should be posted in large letters in order for it to be seen more clearly, so that passengers can make more clear complaints about the service. The business owners should be more strict with their employees, especially in terms of uniforms, manners and the permits of drivers and ticket collectors. Employees' physical

condition, including their alcohol level, should be checked before they depart on a route.

5.1.2 Factors contributing to the service quality of Bus Line 8

According to the data collected, there are many factors that contribute to the service quality of Bus Line 8.

- Low salaries and heavy workloads are the main factors that lead to unfair working conditions and are the main sources of poor service.

- The low wages in private companies mean that employees have to work overtime, in order to make additional wages. This in turn leads to health problems as well as problems within their families.

- Many drivers drive faster to pick up as many passengers as they can, to get the most commission from selling tickets. Many of them have to fight to earn their living.

- The employees work about four round trips in an average 14 - 15 hour day. This causes them feel fatigued and stressed. Working too-long hours without rest leads to health problems.

- The owners of the buses seek to maximize their profits and don't care for the employees' welfare. They don't have sufficient operating funds to buy new vehicles. They have to use the old ones that are not fully functional and are not up to the standard of service.

- Heavy workloads, low salaries, and lack of welfare cause a decrease in the number of drivers and ticket collectors.

The researcher finds that unfair working conditions, low salaries with no regular pay, commission from ticket sales and heavy workloads are the main sources of poor service. The employees have to work hard to get additional wages. Working too-long hours without rest leads to health problems. The low wages in private companies is not enough for the employees so they have to work overtime. One top rank of complaints against Bus Line 8 is that the drivers drive very fast in a

frightening manner. This is because they want to pick up as many passengers as they can per day, to get the most commission from selling tickets.

In addition, the bus owners do not have sufficient operating funds to buy new vehicles. The old vehicles which are not fully functional and are not up to the standard are used for service. The owners of buses seek to maximize their own profits and neglected the employees' welfare. These factors cause a decreasing number of drivers and ticket collectors, which is one of the problems bus owners face.

5.1.3 Constructive ways to improve the Bus Line 8 service

To help reduce the problems of Bus Line 8, constructive ways to improve the service were suggested by the research participants.

- The companies must pay attention to their employees workloads and health conditions, and provide basic facilities and welfare for them.
- The companies should improve the system of management, establishing clear standards of responsibility for repeated problems.
- Public data should be collected by BMTA, every 3 months, in order to raise public awareness and help create a standard system.
- A database of bus drivers and ticket collectors should be recorded for the issuance of permits and to minimize risk.
- A collective organization should be set up for the employees of private bus lines, through which they can voice complaints, find just solutions to their problems and protect their individual rights.
- Employees and bus owners should work together to improve working conditions.
- The organizations should be concerned with private bus lines increasing the efficiency of issuing licenses to work on public transportation.
- Bus owners should be concerned about their vehicles' conditions and the basic standards of service.
- GPS should be installed on every bus in order to follow them on their route in real time.

Based on the suggestions above, companies must pay attention to their employees livings, health conditions and low salaries. Their heavy workloads should be reconsidered and their welfare and basic needs should be provided for. The companies should improve the system of management and establish clear standards of responsibility for repeated problems. Public data should be collected and made available by BMTA every three months, in order to raise public concern and awareness and help create a system of standards. A database of bus drivers and ticket collectors should be recorded for the issuance of permits and to minimize risk.

To protect the employees of private bus lines, a collective organization through which they can voice complaints and find just solutions to their problems should be set up. Employees and bus owners should work together to improve working conditions, because the different condition of employment have an effect on the number of complaints.

The efficiency of issuing licenses to work on public transportation should be improved. The basic standards of service for vehicles should be upheld and GPS installed on every bus, so that the companies are able to follow them on their routes in real time. At present, BMTA has created a website (<http://test.traffy.xyz/busline8.html>) for Bus Line 8 only, which is accessible in real time.

The findings of the study show that, up to now, some problems have been solved but nothing has changed very much; many still exist. Inappropriate services are still offered to passengers because of ineffective operation and management as well as a lack of support from the public sector. All Line 8 busses are run by private companies, under BMTA supervision. Most of the companies are small family-owned firms, and have to support the bus operation through their own funds. They do not have the capability to hire their employees with high salary or at the same rate as BMTA, so it is hard to recruit quality employees while workloads are heavy and income is low. The bus owners have to provide services with old and poor condition vehicles, because replacing them with new ones costs a lot of money. Most of the vehicles have been re-bodied and re-engined many times; some buses are now over 20 years old.

These issues should be reconsidered by those involved: How to establish acceptable service quality? How to raise funds for better operations and service improvement? Should the bus fare be increased in order for the bus owners to obtain more money for efficient management and good service? If they do increase bus fares, which have to be set by the Land Transport Department and submitted to the Cabinet for approval, would there be an impact on low income passengers? Will this lead to any other problems?

5.2 Recommendations

The researcher proposes the following ideas to improve the service of Bus Line 8:

5.2.1 The public sector should help small private companies to get new vehicles by granting them leases on buses instead of purchase.

5.2.2 To ensure the viability of the services, the government should show support, by providing appropriate bus terminals at the beginning and end of the route, as well as basic facilities such as a rest room, drinking water and recreation to help the employees relax and reduce their stress.

5.2.3 Employees should be trained in how to interact with passengers, in order to help them understand their impact on passengers' assessments of service quality.

5.2.4 Alongside the website for Bus Line 8 that has already been created, a call centre for Bus Line 8 should be set up, so that service providers can respond immediately to customers.

5.2.5 Customer satisfaction and expectation surveys should be carried out, so that any shortfall in service or performance can be identified and improved.

5.2.6 To address the problem of falling numbers of employees, especially ticket collectors, innovative ideas based on modern technologies should be introduced, such as automatic ticket boxes.

5.2.7 Bus Line 8 is a long bus route, in a high traffic area, which causes stress to the employees. It would be better to cut the route in half, and set up a connection system for passengers who want to go on to the end of the route.

5.2.8 The system of percentage commission on ticket sales, that causes competition, should be cancelled, and a reward system used instead.

5.3 Suggested for future study

From the experience of undertaking this study, the researcher has suggestions for future study as follows.

The researcher has learned a lot from this study about the problems of private bus services. There are many factors that cause problems and are behind many of the accidents. There are many needs of employees that the employers should pay attention to. The following issues could be the subject of further study to improve bus service quality.

1. The welfare of employees, that employers overlook and have not been improved, and that lead to accidents for both employees and passengers.
2. The heavy burden of servicing free bus employees.
3. The difference between public and private buses in service.
4. Female employees of private bus lines, their lives and work.
5. Investigation calling for the rights of employees of private bus lines.
6. The weakest point in hiring employees for private bus lines.

The researcher thinks that the above issues should be studied since they help employers understand their employees more than they do, could expose factors that cause problems in their operation and help them to solve those problems.

However, the researcher could not study those issues because of the following obstacles.

1) Time restriction; the researcher had to work shifts on routine jobs 5-6 days a week and finish work late at night each day, some weeks having only 1 day off, making it difficult to find enough time to collect data.

2) When the researcher was collecting data on site, some of the research participants, especially in Group 1 (passengers), did not want to participate and refused to share their opinion for the reason that they were busy and in a hurry. The researcher spent 1 month collecting data from this group.

3) The research participants in Group 2, bus owners and bus employees, seemed not to trust the researcher in the beginning, and did not give out much information. As the conversation continued they felt more comfortable and gave more detail.

4) The researcher sent an official letter from Thammasat University to BMTA to ask for permission to interview the administrative officers and it took nearly one month to get an answer of acceptance. It then took another week for an appointment date.

As a suggestion, because of these time variables that caused the study to be delayed, the researcher should plan well and set the schedule for study, giving extra time for data collection.

References

- Andreassen, T.W. (2001) From disgust to delight: Do customer hold a grudge?, *Journal of Service Research*, 4(1): 39-49
- Bangkok (2016) Bangkok Bus Service, Retrieved on 8 January 2016, from <http://www.bangkok.com/information-travel-around/buses.htm>
- Bangkok Mass Transit Authority (2013a) Bangkok Mass Transit Authority, Retrieved on 5 November 2015, from <http://www.bmta.co.th/?q=home>
- BMTA (2015b) Vehicle Categories and Service Rate, Retrieved on 18 August 2015, from <http://www.bmta.co.th/?q=en/content/services>
- BMTA (2015c) BMTA Development Plan for the Bus Line 8 Service improvement, BMTA, December 28
- Boonchai, C. (2014) The life and work of female employees in the BMTA, *Prachatai*, January 20.
- Butcher, K. and Heffernan, T. (2006) Social regard: A link between waiting for service and service outcomes, *International Journal of Hospitality Management*, 25: 34-53
- Buttle, F. (1996) SERVQUAL: Review, critique, research agenda, *European Journal of Marketing*, 30(1): 8-31.
- Choocharukul, K. (2004) Passengers' perspective of bus service quality in Bangkok: An ordered probabilistic modeling approach, thesis, Department of Civil Engineering, Chulalongkorn University, Thailand.
- Dhiratayarinant, K. (1990) Present Public Transport Provision in Bangkok Metropolis, thesis, Faculty of Economic, Chulalongkorn University, Thailand.

- Oliver, R.L. (1997) *Satisfaction: A Behavioural Perspective on the Consumer*, New York: McGraw-Hill.
- Eskildson, L. (1994) Improving the odds of TQM's success, *Quality Progress*, 27: 61–63.
- Fredricson, T. (2013) Bangkok's "worst" bus line: Not THAT bad, *Bangkok Post*, August 21.
- Gibson, H. (2005) Towards an understanding of 'why sport tourists do what they do', *Sport in Society Special Issue: Sport Tourism: Concepts and Theories*, 8 (2): 198–217.
- Jitsamruay, P. (2015) Fast & Furious Bus Line 8: An investigation into poor service, *Prachatai English*, August 04.
- Komchadluek (2016) Bus Line 8 accident, *Komchadluek*, Retrieved on 5 February 2016, from <http://www.komchadluek.net/news/crime/224779.html>
- Mahitthirook, A. (2016), Bangkok's fearsome No.8 bus line ordered to improve, *Bangkok Post*, April 1
- Meakin, R. (2005), Study of Urban Public Transport Conditions in Bangkok Thailand – A case study summary: Bangkok
- Md.Hussain, K. and Carlsson, T. (2010) Service Quality: Expectations, perceptions and satisfaction about Service Quality at Destination Gotland - A case study, thesis, School of the Humanities and Social Science, Gotland University, Sweden
- Munzilah Md. Rohani et al. (2013) Bus Operation: Quality Service and The Role of Bus Provider and Driver, *Procedia Engineering*, 53: 167-178.

- Nationmultimedia (2016) Anything but lucky, Bangkok's No 8 buses given a "last chance", Retrieved on 5 March 2016, from <http://www.nationmultimedia.com/life/Anything-but-lucky-Bangkoks-No-8-buses-given-a-las-30283095.html>
- Piriyawat, C. and Narupiti, S. (n.d.) Alternative Methods for Investigating Bus Service Quality and User Dissatisfaction in Bangkok and Its Vicinity, thesis, Department of Civil Engineering, Burapha University
- Riverview (2016) Bus in Singapore, Retrieved on 19 January 2016, from <http://www.riverview.com.sg/singapore-guide/how-to-travel-around-singapore>
- Sanook (2016) Bus line 8 slammed into concrete pillar, Sanook, June 23
- Sittipun, C. (2013), The worst bus service, *The Nation*, August 8.
- Suksai, C. (2014) Bus line 8 information, *Komchadluek*, March 11.
- Tanaboriboon, Y. (2001) Evaluation of bus operations using performance indicator and GIS analysis: Bangkok case study , Asian Institute of Technology
- Tornow, W.W. and Wiley, J.W. (1991) Service quality and management practices
A look at employee attitude, customer satisfaction, and bottom-line consequence, *Human Resource Planning*, 14 (2): 105–115.
- Wikimedia (2015) Bus in Malaysia, Retrieved on 22 January 2016, from https://commons.wikimedia.org/wiki/File:Kuala_Lumpur_Malaysia_rapidKL-bus-01.jpg
- Wikipedia (2016a) Transport in Bangkok, Retrieved on 07 Jan 2016, from http://www.en.wikipedia.org/wiki/Transport_in_Bangkok
- Wikipedia (2016b) SERVQUAL, Retrieved on 04 April 2016, from <https://en.wikipedia.org/wiki/SERVQUAL>

Wikipedia (2016c) Bus transport in Singapore, Retrieved on 04 March 2016, from

https://en.wikipedia.org/wiki/Bus_transport_in_Singapore

Zeithaml V.A., Berry LL. And Parasuraman A. (1993) The nature and determinants of customer expectations of service, *Journal of the Academy of Marketing*

Service, 21:1-12.



Appendix A

Interview Sheet for Participants in Group 1 (Passengers)

This interview is part of the Independent Study for Master of Science in Service Innovation (International Program), College of Innovation, Thammasat University.

These interview questions are designed to explore opinions and experiences of

passengers' of the Bus Line 8 on its service quality and the appropriate ways for the improvement. The questions are divided into 3 parts:

Part 1 General information

Part 2 Passengers' experience regarding service quality of the Bus Line 8.

Part 3 Suggestions to improve the service quality of the Bus Line 8.

Part 1: General information

Sex:.....

Age:.....

Occupation:.....

Frequency of using the Bus line 8:.....

Part 2: Passengers' experience regarding service quality of the Bus Line 8

1. Is the bus line 8 your daily use?

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.....

2. What is your experience about its service?

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3. How do you feel when you are on board?

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4. What do you think about the bus driver manner?
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5. What do you think about the ticket collector manner?
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.....
6. Do you feel safety when you are on the bus?
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.....
7. Does the driver stop at the appoint stop?
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.....
8. What do you think about the service quality of the Bus Line 8?
.....
.....
9. Do you have an idea to change the bus line? If Yes, please indicate the reason.
.....
.....
10. Please rate the followings, according to your opinion
1= very poor 2= poor 3= okay 4= good 5= excellent
- 1) comfort
- 2) cleanness
- 3) availability of seats
- 4) safety on board
- 5) security on board
- 6) travel time
- 7) waiting time
- 8) modernity of vehicles
- 9) driver behavior
- 10) ticket collector behavior

Part 3: Suggestion to improve the service quality of the Bus Line 8

1. What is your suggestion to improve the service quality of the Bus Line 8?

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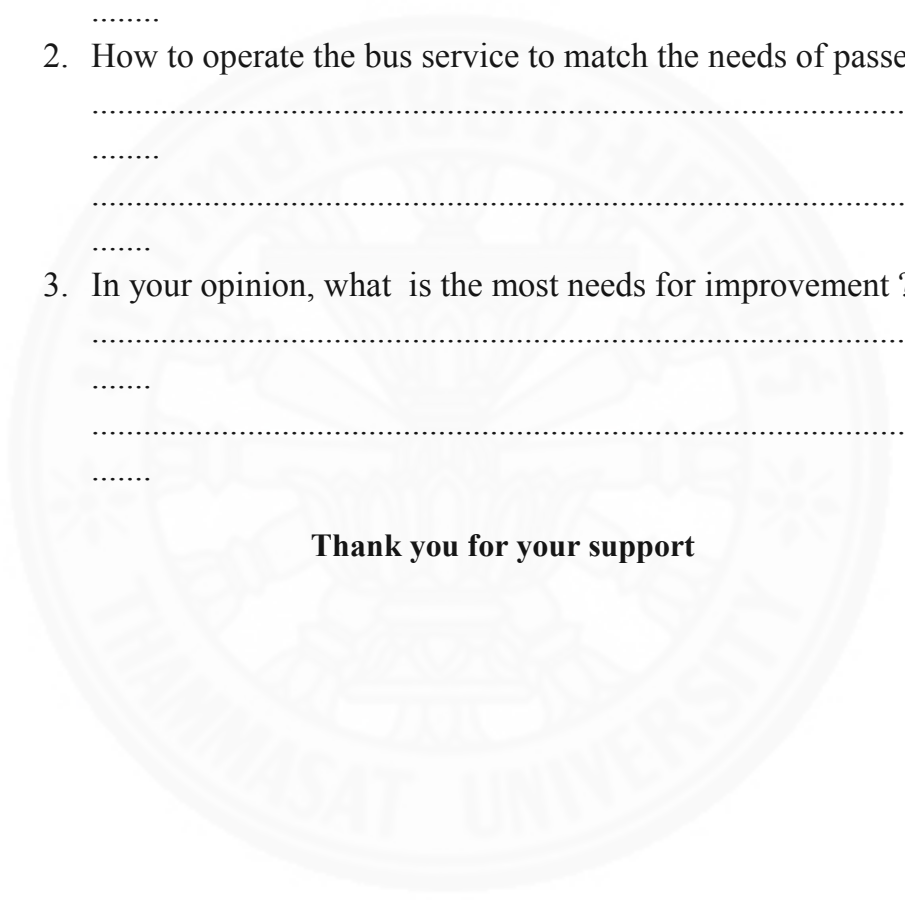
2. How to operate the bus service to match the needs of passengers?

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3. In your opinion, what is the most needs for improvement ? How?

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Thank you for your support



Appendix B

Interview Sheet for Participants in Group 2 (Service Providers)

This interview is part of the Independent Study for Master of Science in Service Innovation (International Program), College of Innovation, Thammasat University.

These interview questions are designed to explore your views on passengers' feedback and experiences of the Bus Line 8 service quality as well as the factors contributing to its service quality. Your suggestions on how to improve Bus Line 8 service will be very much appreciate. The questions are divided into 3 parts:

Part 1 General information

Part 2 Passengers' experience regarding service quality of the Bus Line 8.

Part 3 Suggestions to improve the service quality of the Bus Line 8.

Part 1: General information

Name:

Sex:.....

Age:.....

Position:.....

Period of working:.....

Part 2: Opinions on passengers' feedback and their experiences regarding service quality of Bus Line 8

1. What do you think about the opinion of passengers regarding the service quality of the Bus Line 8?

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2. How does the company/bus owner manage or solve the problems regarding the passengers' complaint?

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3. What does the company/bus owner plan to improve the service of the Bus Line 8 according to the Bangkok Mass Transit Authority (BMTA) warning?

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4. Do you think after the warning of BMTA the problem of the Bus Line 8 will be solved?

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5. What factors do you think are the obstruction to the service quality of the Bus Line 8 improvement?

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Part 3: Suggestion to improve service quality of the Bus Line 8

1. In your opinion, what are the appropriate ways for the improvement? And how?

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2. What kind of innovation should be brought to improve the Bus Line 8 to make it the modern vehicle and ready for better service?

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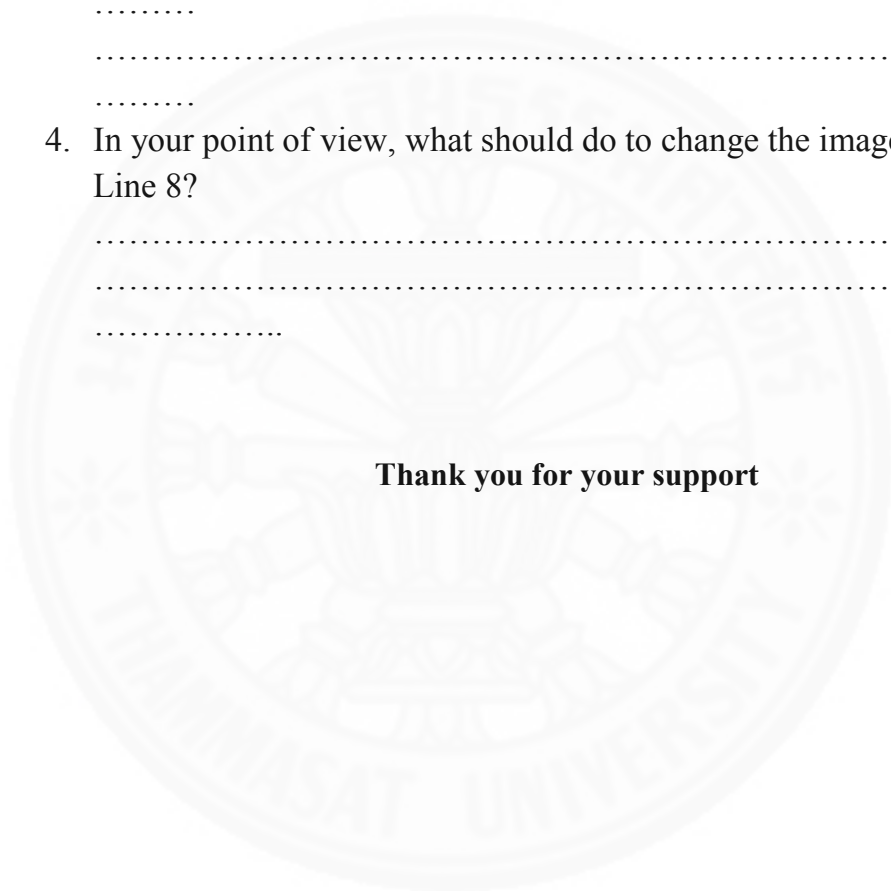
3. How to improve the quality of bus driver and ticket collectors?

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.....

4. In your point of view, what should do to change the image of the Bus Line 8?

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.....

Thank you for your support



BIOGRAPHY

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