Transport System Study

Version 2.0

Objectives

1. To compare the characteristics of different passenger transport means.
2. To compare the transport problems and planning of different areas.
3. To analyze the impacts of transport development on transport system in the area.

Equipment List

Items	Quantity	Checked	Returned
1. Clipboard (Individual)	x1	❑	❑
2. Compass (Individual)	x1	❑	❑
3. Base Map (Individual)	x1	❑	❑
4. Tablet Computer	x1	❑	❑
5. Counter	x2	❑	❑

Field Work

1. Base map shows the area, origin and destination of the field study.
2. At the specific locations in Tung Chung town and Tsuen Wan town, conduct 3-minute traffic counts at Table 1.1 and Table 1.2.
3. Each group travels from Tung Chung town (origin) to Tsuen Wan town (destination) according to the assigned route, and records the characteristics of transport system at Table 2.
4. Using the moblile application and global positioning system of the tablet computer, record the assigned route and the traveling speed between stops at Table 1.3; take photos of the transport facilities and problems along the route.
5. Record the passenger throughput of each stop along the route at Table 1.3.
6. Record the local characteristics of Tung Chung town and Tsuen Wan town at Table 3.

Trip Information

a) Group: _____ b) Route: _____ c) Transport Mode(s): _____

d) Unimodal Transport/ Multimodal Transport

2. a) Origin: _____ b) Destination: _____ c) Date: _____

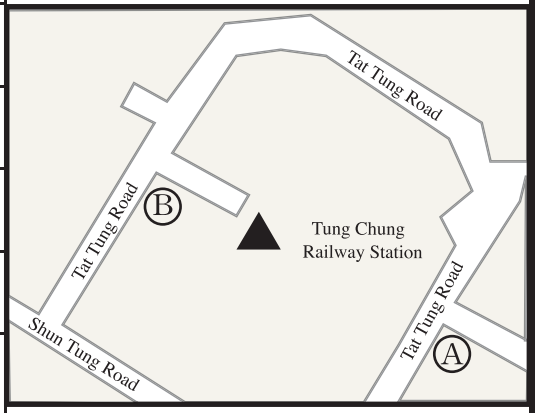
d) Departure Time: _____ e) Arrival Time:: _____ f) Rush Hours: YES / NO

Data Sheet

Table 1.1 Tung Chung Town Traffic Counts

	Tung Chung Town Checkpoint A	Tung Chung Town Checkpoint B
1. Private Car		
2. Taxi		
3. Minibus		
4. Bus		
5. Coach		
6. Goods Vehicle		
7. Container Vehicle		
8. Others		

Tung Chung Town Street Map



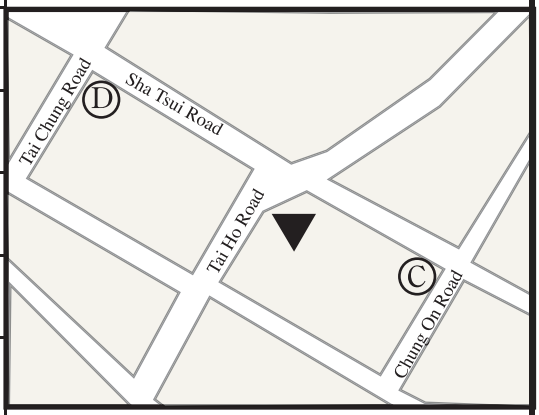
Ⓐ Checkpoint A ▲ Origin

Ⓑ Checkpoint B

Table 1.2 Tsuen Wan Town Traffic Counts

	Tsuen Wan Town Checkpoint C	Tsuen Wan Town Checkpoint D
1. Private Car		
2. Taxi		
3. Minibus		
4. Bus		
5. Coach		
6. Goods Vehicle		
7. Container Vehicle		
8. Others		

Tsuen Wan Town Street Map



Ⓒ Checkpoint C ▼ Destination

Ⓓ Checkpoint D

Table 1.3 Passenger Throughput and Travel Speed at Each Stop

Stop	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Boarding Passenger										
Alighting Passenger										
Travel Speed										

Table 2 Comparison of Transport Systems

Types of Transport Modes:

1. Rout A/ B/ C adopts rail/ water/ road transport, and the journey includes _____minutes of walking with the use of footbridge/ with the use of pedestrian subway/ withthout any pedestrian walkway system.

Characteristics of Transport Modes:

2a. Travel Fare: $_____

2b. (i) Waiting Time: ____ : ____ - ____ : ____ (min in total)

(ii) Travel Time : ____ : ____ - ____ : ____ (min in total)

2c. Travel Distance : _____ (km)

2d. Mean Travel Speed : _____ (km/h)

Survey:
The simple questionnaire distributed in class helps understand different travel patterns for passengers.

Characteristics of Transport System:

3a. Transport Demand	
i. Frequency	(min)
ii. Current Passenger Throughput[1]	
iii. Maximum Carrying Capacity	
iv. Current Loading	(ii) / (iii) x 100% = (%)

3b. Main Nodes	
The Stop at the Origin:	
i. Transport Facilities	
ii. Connecting Transport Means	
The Stop at the Interchange:	
i. Transport Facilities	
ii. Connecting Transport Means	
The Stop at the Destination:	
i. Transport Facilities	
ii. Connecting Transport Means	

→ Example: Car parks, transport interchanges, footbridges etc.

→ Example: Rail, bus, minibuses etc.

3c. Main Transport Networks
i. Highway／strategic routes／lines along the trip:
ii. Interchange Station within the Same Mode :
iii. Transport demand is larger than / smaller than/ similar to the capacity of transport network.

← Example: Route Twisk, Route 3 etc.

Note

[1] Current Passenger Throughput of Rail Transport:
Estimate with counting passengers at either ends and middle of the trains and mutiplying the mean of the results by the number of train compartments.

Table 3 Local Characteristics Comparison in the Study Area

	Tung Chung Town	Tsuen Wan Town	Description/ Evidence
1. Development History	longer/ shorter/ similar	longer/ shorter/ similar	
2. Development Density	higher/ lower similar	higher/ lower similar	
3. Transport Flow	higher/ lower/ similar	higher/ lower/ similar	
4. Width of Roads	wider/ narrower/ similar	wider/ narrower/ similar	
5. Parking Space/ Facilities	more/ less/ similar	more/ less/ similar	
6. Cycling Facilities	more/ less/ similar	more/ less/ similar	
7. Pedestrian Flow	more/ less/ similar	more/ less/ similar	
8. Width of Pedestrian Pavements	wider/ narrower/ similar	wider/ narrower/ similar	
9. Greening of Pedestrian Pavements	more/ less/ similar	more/ less/ similar	
10. Pedestrian Walkway System	better/ worse/ similar	better/ worse/ similar	
11. Noise Pollution	more/ less/ similar	more/ less/ similar	
12. Air Pollution	more/ less/ similar	more/ less/ similar	
13. Water Pollution	more/ less/ similar	more/ less/ similar	
14. Others			

Data Processing

1. Using tablet computer, combine the data and photos taken along the route with other groups', to analyse the characteristics and problems of different transport means.

Discussion

1a. According to the Table 1.1, Table 1.2 and Table 3, compare the transport problems of Tung Chung Town and Tsuen Wan Town.

1b. Explain how the transport demand and road capacity cause the transport problems in the above question.

2. According to the transport problems mentioned in question 1, suggest some remedial measures to solve the problems.

3a. According to Table 1.3 and Table 2, compare the transport demand, nodes and networks of the water, road and rail transports.

3b. In the near future, do you think the water transport in the study area would be replaced by other transport modes? Explain your answer.

4. According to the public transport system experienced in the field study, to what extent the sustainable development concept has been applied in the area? Explain your answer.

Case Study

According to the case and references provided by the instructor, discuss how the commencement of new transport infrastructure affects the transport system nearby, and answer the following questions.

Transport Infrastructure in the Case: _____

1. According to the references and field observation,

   a. how will the infrastructure help develop the nearby transport system?

   b. which one of the passenger transport means in the study will be affected most? Explain your answer.