

TRANSITIONAL SPACE DESIGN IN HIGH RISE RESIDENTIAL FOR
COMMUTER WORKERS IN JOHOR BAHRU

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To my dearest family and friends

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ABSTRACT

The purpose of this study is to examine the impact and importance of transitional space in high rise residential buildings for Malaysians working in Singapore. This is because these workers commute daily from Johor Bahru to Singapore whereby the daily commute increases their stress level and tiredness from heavy work load makes it necessary to provide intermediate spaces in their residential area which is referred to as 'transitional space' in this study. Due to their tight daily schedule, the workers need complete and comprehensive facilities in their residential area. Therefore, this study also examines the behavior and the needs of these workers to find out the appropriate facilities and spaces that are required in their residential area. This study explores the connection between the facilities and residential units in the building, which creates social areas and tranquil spaces for these workers to take advantage of. The study was conducted using survey and interview questions to Malaysian employees working in Singapore who were found around Johor Bahru. The research findings provide information on the behavior of these workers and their backgrounds, in turn giving ideas for the architectural solutions that are appropriate to be adapted into the design of said high rise residential building. The finding suggest that the existing of transitional space in high rise residential building play a big role to creates social interaction also as place to reduce stress for these commuter workers.

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CHAPTER 1

INTRODUCTION

1.1 Background Study

As in April 2017, 1 Singapore Dollar is equal to 3.11 Ringgit Malaysia. Due to this high exchange currency, it leads people from Malaysia to work in Singapore (The Star, 2016). According to the Human Resource Ministry there are about 350,000 Malaysians working in Singapore (Malaysian Digest, 2015). It is a huge number of Malaysian who concurred that the field of employment in Singapore is lucrative for working due to the high Singapore Dollar currency rate and the location of Singapore island that is near to Johor Bahru.

Many Malaysians today work in Singapore as professionals in banking, construction, engineering, medicine, legal and ICT services, whereas others work in manufacturing and service industry (Malaysian Digest, 2015). Mr. Tan Chuan-Jin, Acting Minister for Manpower in Singapore said that across the overall group of Malaysian Work Permit Holders in Singapore about 15% are in blue collar jobs such as plumbers, air-conditioner servicemen, and electricians (Ministry of Man Power, 2015). The 2011 World Bank report had highlighted that the main cause of immigration of Malaysians to another country is attributed to the less attractive salary and benefits offered at home (Malaysian Digest, 2015). The Oil and Gas industry in Singapore gives

attractive salary and remuneration package and this is the main reason why lots of skilled Malaysians choose to work in Singapore rather than their own country (The Star, 2016).

The main reason that Malaysians choose to work in Singapore is the higher wages across the causeway, and the different currency rates lead to the attractive wages. For example, a fresh graduate with a Bachelor in Information and Technology can get \$2900 monthly salary and when converted to Ringgit Malaysia, it is equal to RM 8990. In Malaysia, the starting salary for fresh graduates is barely around RM2600 (Malaysian Digest, 2015).

It is a normal situation where many Malaysians working in Singapore are living in Johor. Everyday, there are many Malaysians commuting and passing the customs checkpoint to cross the Johor Causeway for working (Malaysian Digest, 2015). One reason why Malaysians still choose to stay in Johor while working in Singapore are the easy access routes and methods for commuting. There are many modes of transport that can be used for daily commute for example by bus and train or by their own car and motorcycles to cross the causeway. There are two main access routes by land to go to Singapore, which is by the Johor Causeway Link and the Tuas Second Link. With only a one kilometer bridge length for the Johor Causeways and 1920 meter bridge length for the Tuas Second link and both link take approximately 1 hour to cross the border (Wikipedia, 2017b).

Higher cost of living in Singapore makes Malaysians working there decide to live in Johor Bahru as they can get a place to stay, and daily essential items are cheaper which mean that they can save more money from their monthly salary. The workers can often spend less than 40 percent of their pay every month when they decide to live in Johor Bahru (Ho T. , Can You Save Money Staying In Malaysia? A Singaporean Shares With Us How His Life Really Is., 2016). The cost of renting a condominium apartment in Johor is only RM 1520.53 in the city center while in Singapore, it is approximately cost RM 9727.80 (SGD 3138.31) (Ho & Leong, 2016).

Due to these factors, every day, thousands of vehicles travel in and out between Singapore and Johor Bahru in the morning and evening. This shows that there are many people who commute between the two different countries, where they work in Singapore during the day and stay in Johor Bahru at night. Therefore, these people have an exhausting journey to get to work. It is estimated that almost every day, the journey across the causeway takes more than 2 hours every morning. The (Royal Society for Public Health , 2016) in their report titled “Health in Hurry” stated that if a person has a longer commute every day, it can decrease his individual health and wellbeing.

Everyone who works during the day definitely needs a place to stay at night to rest and relax. After a busy day and faced with the congested and tiring journey, it is very important to consider the location of suitable accommodation. To save travel time, a strategic housing location is very important to ensure that the quality of life can be improved. In addition, aside from travel by their own vehicles to enter and exit for the purpose of working in Singapore, they also use public transport as an alternative such as by buses and trains that are easily found in JB Sentral, which also connects with Johor Bahru CIQ building.

1.2 Background Issues

There are several issues that arise in relation to the Malaysian workers in Singapore. By offering attractive salaries and because of the location of Johor Bahru, which is very close to the Singapore, Malaysians working in Singapore choose not to stay in Singapore. Before proceeding with this study, issues related to the group of commuter workers who were in Johor Bahru were identified.

1.2.1 High cost of living in Singapore.

Singapore has retained the title of the world's most expensive city for expatriates since the 1970s (Williams, 2016). The Economist Intelligence Unit (EIU) in its 2016 worldwide cost of living survey released on March 2016, ranked Singapore as the costliest ahead of Zurich, Hong Kong, Geneva and Paris. Expenses for daily food in Singapore are very high because most of the raw material for food including canned food is imported from other countries. People in Singapore spend a minimum of SGD 150 to SGD 200 (RM 465 to RM 620) per month for electricity and water bills. However it is more if they need air conditioning and internet broadband facilities.

Moreover, housing cost is the most expensive expenditure as far as the cost of living in Singapore is concerned. According to InterNation.org, Singapore has the third highest population density in the world. The cost to rent a room in a shared flat in Singapore is from SGD 500 per month. A Government Subsidized Housing (HDB) apartment scheme with fairly modern facilities and conveniently located will cost between SGD 2,200 and SGD 3000 per month. There is a long waiting list, and locals are obviously preferred as tenants (2015).

1.2.2 Homeless in Johor Bahru

Jimmy Leong, President of the Malaysian Tour Guides Council told The Star in 2014 that the presence of the homeless who sleep at JB Sentral creates a major eyesore and tarnishes the country's image. The homeless groups reportedly sleep at the waiting areas inside JB Sentral after they are tired after returning back to Johor Bahru from work.

Rising costs of living and urban development in Johor Bahru causes many to choose not to stay in a proper home (Wan Ismail & Turiman, 2016). Surprisingly, she found that the majority of the homeless people are local people trying to get a job in

Singapore. Based on the survey, the reasons they choose to be homeless in Johor Bahru City Center is due partly to the distance from their homes and workplaces being too far, and constraints in working time. Because of these constraints in working time and the fact that they have to work overtime, they thus just need a place for a brief recess.

1.2.3 Impact on Health and Wellbeing

At the Johor-Singapore Causeway and Second Link, which connect the two countries by land, delays in border crossings due to poor traffic management and rising toll fees are sticky issues for both sides. According to Malaysia's immigration data, more than 250,000 use the causeway daily. About 58% of them cross by motorcycle and 36% by car. It is one of the busiest crossings in Southeast Asia. People commute daily across this causeway to go to work in the early morning and come home in the late evening. It takes 45 minutes to cross the border bridge and with traffic jams, it takes more than two hours (Tan, 2015). So it could take a long journey to go to the workplace. For the worst case, the 'rush hour' is synonymous with crowding, frustration and stress. Commuting experience has the potential to decrease the wellbeing of workers and limit the time available to them for health promoting activities. Royal Society for Public Health Reported that longer commutes were associated with mental wellbeing, blood pressure, less on doing physical activities, not taking healthy food and less time on spending time with family and friend.

1.3 Problem Statement

The transitional space is one that is termed as the "Third Space" in buildings. The existence of transitional spaces in building act as a buffer zone and as a 'link' between two spaces. People travel and pass by from one space to another space and between this two spaces these is the transitional space. This transitional spaces act in many ways. It can be a resting place, a social space, communal spaces or just walkways

for pedestrians. Transitional spaces in habitation areas are suitable spaces to serve the daily needs for commuters. The commuters have opportunities to get some interaction with other people and some rest before continuing their journey to the workplace.

1.4 Thesis Statement

Transitional space is an effective architectural element that increases social interaction among people that travel from one space to another space. It can be indoors or outdoors and it can function as buffer zones within the context area that it is located. However, transitional spaces in residential buildings are always underestimated by designers and local residents. Transitional spaces just act as link spaces between two spaces that are used by residents every day. Commuters are faced with hectic schedules in their daily life. They go to work from their homes at early in the morning and come back late. During the journey from their home to the workplace, they need a series of spaces that help them to get a calming environment and act as a buffer area that can release their stress and rest when they are tired. Hence, it is believed that understanding the commuters' behaviors can provide the correct idea about how transitional spaces can serve as architectural elements in residential areas that help commuters to ease their hectic daily life and increase their quality of life.

1.5 Aim of the Research

The aim of this research is to establish the transitional space as an important architectural element in high-rise residential area design for commuting workers in Johor Bahru to enhance their quality of life.

1.6 Objectives of the Research

The objectives of this research are:

1. To identify the necessary requirements in high-rise residential building that suitable for commuting workers.
2. To identify the different types of transitional spaces that is used for commuters in high-rise residential building.
3. To determine that transitional spaces can be designed to enhance the quality of life of the commuting workers.

1.7 Research Question

In order to understanding the best and suitable transitional spaces for commuters living in Johor Bahru, the research questions are as follow:

1. What are the daily needs in high-rise residential building required by the commuting workers that should be given attention by the designer?
2. What are the types of transitional spaces suitable for commuter living that can enhance their daily life?
3. How can the transitional space be designs in high-rise residential building to enhance the quality of life of commuting worker?

1.8 Scope of Research

Transitional spaces are one of the architectural elements that are widely used in most buildings. However, this research on transitional space is only focusing on the

types in high rise residential buildings and how they can be designed. The typology of the transitional space focuses on the relation of the commuting workers needs and how the spaces respond to the tropical climate in Johor Bahru context that can provide tranquility in the space. The high rise residential in this research contain appropriate facilities that the commuting workers need in their daily life. Identifying the facilities required can give some idea of how the transitional spaces can add to the facility spaces to enhance the spatial quality and provide a good experience for the commuter workers.

1.9 Significance of Research

The significance of this study is to express the importance of the transitional space in the residential building. The typology of the transitional space has been broadly noticed and widely used in all types of buildings throughout the whole world. The identification of suitable transitional spaces that can enhance the commuting workers journey to the workplace is important to increase their quality of life. Moreover, its essence is adapted to produce a quality space that can provide another function and meaning to the primary spaces in the building. It also can provide a guideline for designing thesis projects on Commuter Living. A proper methodology of identification for suitable transitional space for high rise residential areas will be produced from the research. The interpretation between the Design Dissertation and Design Thesis can help each other with the research outcome and design knowledge to be utilized in this two courses.

1.10 Research Methodology

In this study, the methods used for this research are targeted towards identifying the behavior and daily needs of commuting workers. The information can help to configure the suitable typology of transitional spaces that can be adapted in residential

buildings for commuting workers. Therefore, the methodology used in this study is based on the mixed method. This will be discussed in Chapter 3. The primary data is collected from structured interviews and observation. Case studies and literature reviews were studied in order to understand more about the transitional space typology for residential building.

1.11 Expected Findings

Through the study, several expected findings will be delivered. The first is to identify the necessary facilities in residential buildings for commuting workers by studying the behavior of this target group. By understanding and extracting the data that has been collected, it is expected that the typology of the transitional space in residential buildings that are suitable for commuting people will be defined clearly. Hence, the design strategies and approaches for transitional spaces in residential buildings will enhance the quality of life for commuting workers in Johor Bahru. The typology and the function of transitional space found in this study will be extracted and translated into design thesis.

1.12 Structure of Study

This study is delivered six main chapters. Chapter 1 discusses overview of the study. In this chapter the background of the study, issues, problem statement, thesis statement, research aim, research objectives, research questions, scope of study, research methodology and expected findings are presented.

Chapter 2 is the Literature Review. It discusses the previous studies related to this study. In this chapter, further information focusing on transitional spaces is

discussed. It begins with discussing the terms and classification of transitional space itself and includes the applications in residential buildings. Later, the adaptation of transitional spaces for the commuting workers' needs in their residential area is explained.

Next, Chapter 3 discusses the method to collect the data used in this study. This chapter informs on the procedures in collecting data and how it can be extracted and translated in the Findings and Discussion chapter.

In relation with the transitional space studies in residential buildings, some case studies of related buildings are discussed in Chapter 4 in order to identify several examples of adaptations of transitional spaces in residential buildings.

Chapter 5, will present the data collection analysis. It will explain the findings of this study. Data collection from questionnaires is compared with interviews that have been done on commuting workers within Johor Bahru CIQ Complex building, Johor Bahru Sentral and Johor Bahru City Square. The analyzed data will be used to determine the relevant approaches and strategies for by achieving the research objectives.

Last but not least in Chapter 6, the study and significance of this dissertation is summarizes. Moreover, the limitations are elaborated and as well as he plan for potential further study regarding this subject matter.

1.13 Summary of the Chapter

This study helps in exploring the relevant approaches and strategies in order to determine the typology of transitional spaces in residential building that are suitable for commuting workers to enhance their quality of daily life. Hence, this study focuses on transitional space understanding as the architectural element that can be applied in

residential buildings. Besides that, a study on the tranquility approach and social interactions and also the commuter's behavior will be further discussed. At the end, the suitable configuration of transitional space for commuters housing will be understood and can be applied in residential building design.

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