

Improvise Overpasses: Study on Utilizing Spaces below Flyover

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Abstract

Nowadays the issues of using public spaces in cities for social interactions and other purpose can be very sensitive. One of the public spaces that have usually been use by people is the space under a flyover/bridge. Although public spaces are often designed for certain activities, existence of unplanned spaces including under flyovers and bridges could be useful for other purposes. This research attempts to review activities under flyovers initiated by its local community and aims to further identify other possible activities to be considered in developing these spaces to benefit surrounding communities. From the combination of interview, literature reviews and questionnaire survey, this research explores all the objectives stated. For this particular study, quantitative research was conducted through questionnaire surveys to the respondents that involved and have experienced in construction projects. After the data has been analyzed, this study found that it is possible to construct something under the flyover to give benefit to the people.

Keywords: fly under, green space, flyover, bridge.

Introduction

Nowadays there is an increase of the population inside our country. With that phenomenon it will effect a bit of the people who are using their own vehicles to reach somewhere. Beside the increase of the population inside our country there is also a migration of the people from the village to the town. Because of this it will increase the number of vehicle who is using the highway and road that are provided. So that is the idea to develop additional flyover to fulfil the will of the people who are using that road and flyover to passing from one place to another [1]. Target at the flyovers for serving the transport facilities for the middle to high income groups, and the marginal people. Because of the number of flyover has been increase nowadays so the idea to develop something below the flyover comes. Existences of public spaces in cities are essentials for social interactions to take place [2]. Although public spaces are often designed for certain activities, existence of unplanned spaces seemed interwoven in the cityscape flyovers and bridges, which offers abundance of opportunities. Public spaces should accommodate change and people from all sorts of background should be accessible to public spaces with the right to variety and flexibility [3]. Studies on three cities namely Indonesia, China and India shows that the city is structured and continuously developing every day. Sometime the possibilities what is missing are

becoming popular to master planning that often lead by assumptions of what might be the best way to turn spaces around from the authorities viewpoint [4]. In leftover spaces, restraint on possibilities becomes vague thus cultivate experimentation of uses by the users. This allowing the local community to decide on who, how, when and probability of its to be used [5].

This paper attempts to review activities under flyovers initiated by its local community in Malaysia (Pulau Pinang) and aims to contribute in further identifying the leftover spaces, and to the possible activities to be considered in developing these spaces to benefit surrounding communities. Malaysia the space under the flyover can be use for vehicles; the flyunders become a roof for the socio-economically poor households [6]. The flyunders which then become places to wait, gather, chat, play and live. Some use the flyunder voids intensively for all kinds of economic activities such as provision of services [7]. And their make shift uses are not only distributed in space but also in time, users and activities. This paper contributes first to further identify the leftover spaces, and secondly possible activities to be considered in developing these spaces to benefit surrounding communities.

Methodology

This study focused on the activities that took place under bridge/flyovers in Pulau Pinang. The case studies are about the Preliminary Study on utilizing space below a flyover in Malaysia focusing on Penang at two areas. The 1st site is under Bayan Lepas Expressway (BLE) the 2nd site is under the Gelugor Highway. Few activities are taking place at that site such as observation, interview, and distribute the questionnaire to a people at that location. These two flyovers are chosen because there are school, mosque, and bus station and near to the beach under these two flyovers. So by doing some observation there are some attraction to a people for using the space under the bridge.

Observation of activities will be recorded in the form of photographs, sketches and chart form before the writing began. Other than that these two sites will give some feedback in the similarities and dissimilarities of activities that happened at that site. Beside that the interview session also had been done to the authorize people such as JKR, MBPP, LLM, the contractors and also the supervisor to determine the possibilities DO and DONT's of doing something below the flyover/bridge. Tables and bar graphs are use for data presentations. The analysis of data collected was carried out using the data that have been collected at the site.

Site Observation, Interview and Questionnaires Analysis

Figures 1-10 show the existence situation what happen under the flyover/bridge nowadays. This happen because there is no place for a people to use (as a parking) area to waiting and pray when a pick time. For example in Figures 1-4 show in front of the Masjid Jamek Sungai Nibong. People are using this place to park their vehicle and also pray. The accident might happen due improper place to park the vehicle and pray.

A. Below Gelugor Highway (Infront of Masjid Jamek Sungai Nibong Besar)



Fig. 1: People using this area to parking their vehicle



Fig. 2: Muslim uses this area to pray



Fig. 3: Parking their motorcycle



Fig. 4: Some car a also parking under the flyover

B. Below Gelugor Highway (Infront of SJK (C) Kwang Hwa)

Figures 5-8 show that there are a lot of people (mostly parents) uses the space under the flyover to park their car while waiting for their children finish school. So it will make the road infront of the school become jam everyday



Fig. 5: People park their car along the road



Fig. 6: People park their car Under the Flyover



Fig. 7: Cross the road without give signal



Fig. 9: Car parking under the flyover



Fig. 8: the space under the flyover



Fig. 10: Bus Parking under the flyover

C. Below Gelugor Highway (Infront Sungai Nibong Bus Station)

On the other hand, even there is a marshal to guide the student crossing the road but there still have accident happened there. There are lots of bad thing will happened if this situation still be like this till forever. Figures 9-10 shows car and bus are parking under the bridge because of the car park is full. Therefore, the suggestion for the authorised people to develop something must be done by the right person in a right time with a right way.

D. Under Bayan Lepas Expressway (BLE)

From Fig. 11 to Fig. 15, we can see that there are some car and motorcycle are park beside the road and under the bridge. This is usually happened in weekend. This happened because of the location to park the car is too far which is infront of the Queens Bay. So the people who want to go taking picture or cycling beside the beach need to walk far away from the place that they want to go.



Fig. 12: The location of the recreation place



Fig. 15: The site view of the space under (BLE)



Fig. 13: Space below flyover under construction



Fig. 14: Motorcycle was parked beside the road

E. Questionnaires Analysis and Interview

A set of 200 questionnaires were sent to the targeted respondents, with a response rate of 100% as been shown in Table 1. From Table 1, most of the respondents were respondent from the mosque, Parents and driver taxi. This is because this type of people is directly related to this area of study.

TABLE 1. Number of respondents

Profession	No of Respondent	Percentage, % (n=200)
Architect	3	1.5
Project manager	5	2.5
Engineer	6	3
Contractor	2	1
Site supervisor	15	7.5
Driver Taxi	27	13.5
Driver Bas	21	10.5
Respondent at mosque	47	23.5
Parents	28	14
Teacher	17	8.5
Owner of shop	13	6.5
Respondent at beach	16	8
Total	200	100

Results and Discussion

A. Factors That Make People Use the Space under the Flyover/Bridge

TABLE 2. Factors that make people use the space under the flyover/bridge

Factors	Respondent	Percentage
Less car park on the surrounding area	183	91.5%
Near to destination	157	78.5%
No charge for parking	200	100%

Less action from the authorised people	67	33.5%
Safe to enter and exit	176	88%
If there is a shop there People can go easily	103	51.5%
Not enough space in the mosque	200	100%

Table 2 shows the number of the respondent and the percentage of the factors that make people use the space under the flyover. This is usually been ask when we distribute the questionnaires to the respondent. With that also we know what is inside the respondent mine and what are the things that the respondents see from the time to time. Moreover no charge for parking and not enough space in the mosque is the factor that all the respondent 100% agreed.

B. How to Avoid People Use The Space Under Bridge In Illegal Concept

TABLE 3. How to avoid people use the space under bridge in illegal concept

Idea to avoid people use the space under flyover	Respondent	Percentage
Make the proper car park with payment under the flyover	96	48%
The authority people must take charge strictly	114	57%
Construct a proper extension place to pray	188	94%
Construct proper parking lot for motorcycle	196	98%
Construct a walkway underground for people	135	67.5%
Do some structure that can avoid people use this place	25	12.5%
Plant something under the flyover	145	72.5%
Create the space for people	79	39.5%

Table 3 above show the method to avoid people use the space under bridge in illegal. From the table, it has been found that Construct proper parking lot for motorcycle was the most important factor that to avoid people use the space under bridge in illegal concept. This we can see when the respondent are saying and ask for the authorised person to build and construct the proper parking place to the motorcycle under the flyover. Other than that the respondent also asks for the construct a proper extension place to pray especially on Friday. They ask to close the road in front the Masjid Jamek Sungai Nibong Besar for 1 hour and make a diversion to the vehicle in 1 way road for the other road. And the less suggestion is to Do some structures that can avoid people use this place such as in china do some structure such as sharp stone to make sure there are no vehicle and people are using that place. However some respondent are think this is suitable

to apply to Malaysia especially in Pulau Pinang and some people are not agreed.

C. Possible measures to plan for the future for the space under the flyover

TABLE 4. The suggestion and possibility to measures and plan for the future

No	Plan for the future
1	The authority must make sure the developers are using the space under the flyover for public users in their developing site especially under the flyover.
2	Already make use of the space under the flyover by the developer, authorise people and contractor
3	The developer need to organize to construct something under the flyover
4	The government need to create some act for doing something under the flyover by looking the need from the people surrounding
5	They must be planned something for the future for the development under the flyover
6	The conference about this topic need to be done every year

In order to overcome the issues of avoid people use the space under bridge in illegal concept, there were several possible measures that can be implemented. Six possible measures had been proposed as shown in Table 4 with its ranking of priority. The highest of the idea come from the respondent is No 1 in the table 4. These we can see when a lot of people are need the space under the flyover to full fill their need. This happened because the space under the flyover is not doing for anything that's why people are using that space in illegal manner. If there is need for using the space under the flyover to create some parking area so why don't the authorised make it happened so that the area become more safety for been used. Furthermore the suggestion for the conference about this topic need to be done every year is one of the suggestions and possibility to measures and plan for the future but this suggestion and idea is the lowest percentage that we get from the respondent. But this idea can be valuable if it's going to happened every year starting from this year.

Conclusion

From this research, it can be concluded that the leftover spaces specifically under the flyovers can be create something to the public in the future. Both case studies though different in location and community background, suggest of future activities and uses that could be considered in designing spaces under the flyovers if there's meet the requirement from the authorized people. Some activities and uses were found good in order to attract users from surrounding communities. Such as to develop parking space, have cafes, food stalls and recreational activities. However, in order to further understand these possibilities and opportunities that stimulate activities, research on the physical characteristics, and the more complex

of community background need to be conducted to fulfill the need of the people surrounding to make sure the uses of that area are the best.

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