

Function and Accessibility Mapping of Citywalk in Slamet Riyadi Street, Surakarta City, Central Java

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Abstract. Surakarta city is a city that has a very high economic activity. Slamet Riyadi Street Area became the central business district in Surakarta City. The high economic activity in the area of Slamet Riyadi Street, resulting in the need for public open space is also increasing. Surakarta City Government from year to year to build citywalk and other public spaces, especially in Slamet Riyadi Street. The purposes of this research are mapping the function of citywalk and mapping accessibility of citywalk in Slamet Riyadi Street Area. The research method used is descriptive qualitative with primary survey and secondary survey by mapping usability and analyzing accessibility level of Citywalk of Slamet Riyadi Street area, Surakarta City. The conclusion of this study is the variety of visitor activity on the day of the weekend is more diverse because there are activities car-free day. Activities of the most crowded visitors are when the morning (weekend) between the hours of 06:00 to 08:00 pm. The conclusion of accessibility in the citywalk along the statue of Gladhak to Yos Sudarso Street intersection is good enough in terms of wide space, pedestrian conditions, the existence of guiding block, signage, and other supporting facilities.

Keywords: function, accessibility, citywalk, Surakarta

1 Introduction

Directorate General of Spatial Planning and Development, 2008, green open space has several types of functions [1]. The green open space functions are:

- (1) Ecological Functions,
- (2) Socio-cultural Functions,
- (3) Economic Functions, and
- (4) Aesthetic Functions.

While the functions of green open space by Carmona, 2008 [2] are:

- (1) Environmental Functions
- (2) Health Functions
- (3) Economic Functions, and
- (4) Social Functions

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From both the theory of the function it can be concluded that the functions of green open space or public open space that are:

- (1) Environmental / Ecological Functions
- (2) Economic Functions
- (3) Social Functions
- (4) Cultural Functions
- (5) Health Functions
- (6) Aesthetic Functions

Citywalk in Slamet Riyadi Street, Surakarta City inaugurated in 2007. Citywalk in Slamet Riyadi Street Area, Surakarta City which is a green open space has a variety of functions. Surakarta city is a city that has a very high economic activity. Slamet Riyadi Street Area became the central business district in Surakarta City. The high economic activity in the area of Slamet Riyadi Street, resulting in the need for public open space is also increasing. Surakarta City Government from year to year to build citywalk and other public spaces, especially in Slamet Riyadi Street.

Accessibility in the use of public space is still very minimal to different abilities people. From the result of observation and preliminary survey, the hypotheses of this research are (1) Citywalk in Slamet Riyadi Street Area in Surakarta City has various functions that are as space: social, economy, culture, health, environment, (2) the accessibility level of Citywalk of Slamet Riyadi Street Area, Surakarta City is inadequate because the design is not in accordance with the barrier-free design standard. Some facilities cannot be reached by people with special needs (the elderly, the different abilities people, small children, and other special needs) easily and comfortably.

1.1 Statement of Problems

This research has two problem statements. The problem statements are:

- a. How is the pattern of distribution of various functions of Citywalk in Slamet Riyadi Street Area, Surakarta City?
- b. How the citywalk accessibility level in Slamet Riyadi Street Area, Surakarta City with reference to Minister of Public Works Regulation Number 30/PRT/M/2006?

1.2 Purposes of Research

- a. To know the mapping of environmental functions, economic functions, social functions, cultural functions, health functions, aesthetic functions that exist in citywalk.
- b. To know about accessibility with reference to Minister of Public Works Regulation Number 30/PRT/M/2006 (especially a concern in movement space, pedestrian ways, guiding block, ramp, signage)

1.3 Literature Review

Public spaces that are generally open spaces can be shared together and have a holistic meaning of the relationship between the spatial dimension and the extent of human experience. (Thwaites, 2007) [3]

Accessibility is provided to make it easy for all people including the different abilities people and the elderly to realize equal opportunities in all aspects of life and livelihoods. [4]

Urban space functions can vary depending on the type of activity that can be accommodated in it. A park is designed as a place of recreation. The next activity there can be more widespread. Visitors to the park are not only doing recreational activities but also can interact with others. The activity at citywalk is usually more toward the lifestyle that is developing at that time. [5]

2 Experimental Details

The location of this research is located at Citywalk of Slamet Riyadi Street Area, Surakarta City (from the Statue of Gladhak or Statue of Slamet Riyadi to Citywalk at the crossroad of Yos Sudarso Street). The following research sites are viewed from satellite imagery (**Figure 1**).



Fig. 1. Location of Research

Source: Wikimapia, 2017

2.1 Research Approach

This research uses descriptive qualitative-quantitative research to know the spread pattern of usability or function of Citywalk and Citywalk Accessibility Level. The method used to know the pattern of distribution is by using mapping, while the level of accessibility of citywalk Slamet Riyadi street, Surakarta City was examined by comparing the existing conditions in the field with the existing standard is the Minister of Public Works Number 30/PRT/M/2006.

2.2 Research Stage

In the research process, researchers use data collection methods as follows:

Primary observation at the location by direct observation by mapping out the distribution of usability or functions of Citywalk of Slamet Riyadi street (using GPS and camera) from Gladhak Statue to Yos Sudarso Street Crossroads in accordance with environmental, economic, social, and health parameters. Observations and measurements in terms of dimension and size, availability of public space facilities with reference to Ministry of Public Works No 30/PRT/M/2006 standards. The research stages are as follows (**figure 2**):

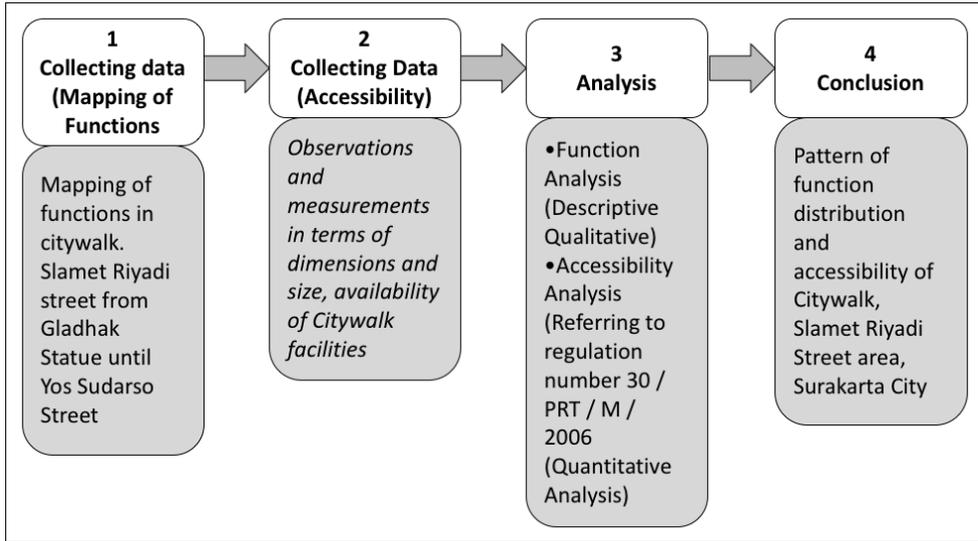


Fig. 2. Stage of research

2.3 The Variables of Research

This research has two variables. The first variable is the function, and the second is accessibility. Variables of research can be seen in table 1 below:

Table 1. Variables of Research

Numb.	Variables	Parameter	Method for collecting datas	Tools
1.	Mapping of Functions Survey using sample: (1) Activity in weekdays (monday until friday) a. 6 - 8 a.m b. 12 - 13 p.m c. 4 - 5 p.m (2) Activity in weekend (saturday and sunday) a. 6 - 8 a.m b. 12 - 13 p.m c. 4 - 5 p.m	<ul style="list-style-type: none"> • Economic • Social • Culture • Environment and health 	<ul style="list-style-type: none"> • Observe (mapping the distribution of uses) • Interview with visitors who are activity in citywalk 	<ul style="list-style-type: none"> • GPS • Camera
2.	Accessibilities	<ul style="list-style-type: none"> • Movement Space • Guiding Block • Pedestrian ways • Ramp • Symbol / Signage • Other facilities (lights, garbage) 	<ul style="list-style-type: none"> • Interviews with visitors regarding the quality and quantity of facilities • Measurement of accessibility of facilities 	<ul style="list-style-type: none"> • Camera • Roll meter

3 Result and Discussion

The Citywalk length of Surakarta City is about 5 km stretching from the statue of Gladhak / Slamet Riyadi Statue to Purwosari Station. The location of this study is by limiting the citywalk of Surakarta City from the Gladhak Statue to Yos Sudarso Street. The following is a citywalk description of Surakarta City from Gladhak Statue to Yos Sudarso Street (**Figure 3**).

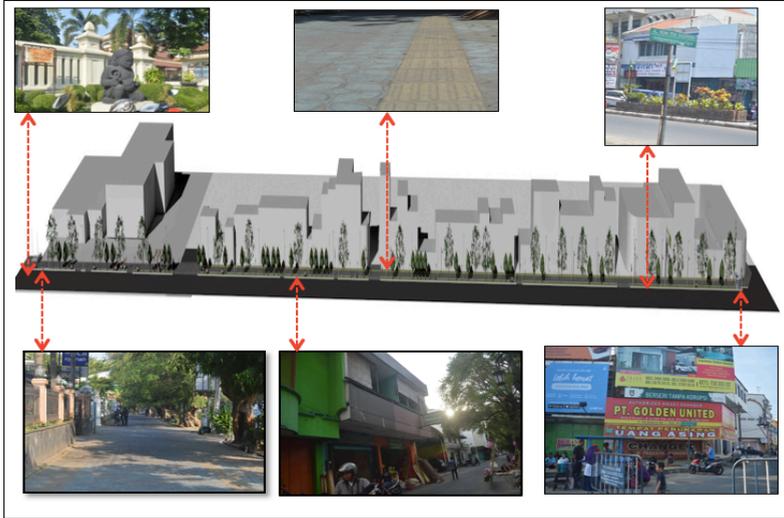


Fig. 3. Citywalk on Slamet Riyadi Street

3.1 Mapping Functions

Mapping the usefulness of the citywalk along the Gladhak Statue until Yos Sudarso Street intersection is carried out in two sample days, namely working days/ weekdays (Monday, Tuesday, Wednesday, Thursday, Friday) and holidays/ weekends (Saturday and Sunday). Performed 3 (three) times of observation. The first observation was carried out in the morning (06-08 a.m), the second observation was carried out in the noon (12-01 p.m), and the third observation was carried out in the afternoon (4-5 p.m). Here are the results of citywalk usability mapping on weekdays (**Figure 4**):



Fig. 4. Mapping of the usefulness in citywalk, Surakarta (weekdays)

a. Weekdays

Research locations are trade and service areas. From **Figure 4**, there are economic activities namely shops and street vendors every weekday from morning to night.

b. Weekend

Every weekend on Slamet Riyadi, especially on Sunday, there is a car-free day. Many activities there such as economic activities (selling food, toys), social activities, health and environment activities (gymnastics). The weekend activities can be seen in **Picture 5** below:



Fig. 5. Mapping of the usefulness in citywalk, Surakarta (weekend)

On Saturdays and Sundays, economic activities at the research location are more crowded than working days. On Sundays, there is a regular event, car free day, where many sellers sell their merchandise in the form of food, drinks, shoes, wallets, and handicrafts.

Discussion of The Funcions:

Based on the Directorate of Spatial Planning and Development (2008) and Carmona (2008), the functions of public open space are environmental, economic, social, cultural, health, aesthetic. Compared to these theories and data in the citywalk in Slamet Riyadi Street, Surakarta, it was found that the functions that exist in the citywalk city of Surakarta are economy, social, health.

3.2 Accessibilities of Citywalk in Slamet Riyadi Street

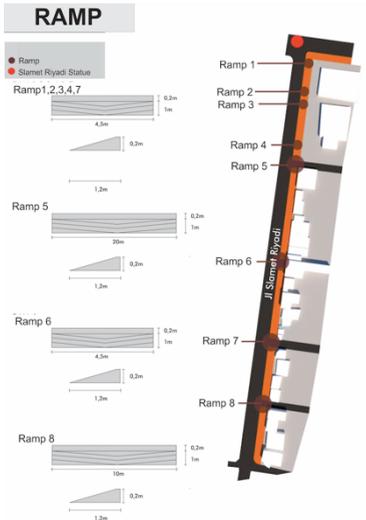
Study of accessibility of Surakarta Citywalk from Gladhak Statue to Yos Sudarso Street, namely from:

1. Movement space
2. Guiding block
3. Pedestrian ways
4. Ramp
5. Symbol / Signage
6. Other facilities

The following are the results of the surveys (**Table 2**)

Table 2. Accessibilities of Surakarta Citywalk from Gladhak Statue to Yos Sudarso Street

#	Variable of Accessibilities	The existence		Result of Survey	Compatibility of condition in the field
		Available	Not available		Compatible/Not
1	Movement Space				
	Crutches, wheelchair user, blind people	√		There is no specialization in the space for crutches, wheelchairs and blind people	Compatible (length is about 4,5 m)
2	Guiding block/ Guide Path	√		There is already a guide path for the blind  Guiding Block	Compatible (size is >30 cm)
3	Pedestrian ways	√		 Damaged roads	Results: <ul style="list-style-type: none"> • The road surface is stable, strong, not slippery, but there are some uneven paving blocks. • Roads are not tilted / all flat. • Seating available. • Citywalk width of 4.5 m • The pedestrian path is free from obstacles. • Safety edge 15 cm wide
				 Paving block in citywalk	
				 Safety edge	

#	Variable of Accessibilities	The existence		Result of Survey	Compatibility of condition in the field
		Available	Not available		Compatible/Not
4	Ramp	√		 <p>Ramp</p>  <p>The kinds of ramp in location</p>	Ramp height = 100 cm
5	Symbol and signage	√		 <p>Mapping of signages</p>	There are signages in research location

#	Variable of Accessibilities	The existence		Result of Survey	Compatibility of condition in the field
		Available	Not available		Compatible/Not
6	Other facilities	√			The facilities are bench, pergola, police station, traffic lights, lamps

Discussion of Accessibilities:

Based on The Minister of Public Works Number 30/PRT/M/2006, the movement space, guiding block, pedestrian ways, ramp, symbol/ signage, other facilities (bench, pergola, police station, traffic lights, lamps) are compatible. The standard from the Minister of Public Works Number 30/ PRT/M/2006, movement space must provide space for crutches, wheelchair users, blind people, and conditions in the field meet 4.5 m wide. For the guiding block, the standard of The Minister of Public Works Number 30/PRT/M/2006 is > 30 cm, and the guiding block in the field is 30 cm. For pedestrian lines, according to the standards of The Minister of Public Works Number 30/PRT/M/2006, the road surface is stable, strong, not slippery, but the location is some uneven paving blocks, citywalk width is 4.5 m, free from obstacles, and safety edge is 15 cm wide. For ramp, the standard of The Minister of Public Works Number 30/PRT/M/2006 is 100 cm wide, and in the field, it is 100 cm. For the signage and symbols standard from The Minister of Public Works Number 30/PRT/M/2006, there are signages for normal user and blind people, and the reality in the field is that there are several signages but specifically for blind people. For special standard facilities from The Minister of Public Works Number 30/PRT/M/2006, there must be facilities such as benches, and the reality in the field is that there are benches, trash bins, pergolas, traffic lights, lights, police station.

4 Conclusion

The conclusion of this study is that the citywalk along the statue of Gladhak until the intersection of Yos Sudarso Street has a variety of uses:

1. Economy
2. Social
3. Health

The variety of visitor activities on Sundays (weekends) is more diverse because there are activities of a car-free day. The most crowded activity of visitors is in the morning between 06.00-08.00 WIB.

Citywalk accessibility along the Gladhak statue until Yos Sudarso Street intersection is good enough in terms of a width of space, pedestrian conditions, the presence of guiding blocks, signage, and other supporting facilities. But some paving blocks have some bad condition that can disturb comfortability of visitors.

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