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Convenience component of walkability in Malang City case study the street corridors around city squares

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Abstract

Malang city as the second biggest city in East Java Province tends to be less convenient recently. The traffic jam almost happen every day. The situations lead to the jay walking pedestrians. This case study analyzed the convenience component of walkability (CCW) at the street corridors around *Alun-Alun Merdeka* (AAM) and *Alun-Alun Bunder* (AAB). The CCW variables consist of the pedestrian infrastructure (PI). The PI indicators were the obstructions, cleanliness-maintenance, amenities and diffable supports. The PI data collecting method was adopted from the global walkability survey guide book and modified to suit the condition. The PI data were scored from 1-5 for semantic scale.The data were analyzed by descriptive-quantitative-interpretive methods. The score results was 2,31 (at range: bad to fair) thus the PI need to be improved. It concluded that 'roofing' indicator played the important role due to the convenience and needed to conduct next research to study other factors.

Keywords: walkability; convenience; pedestrian infrastructure; thermal comfort; THI.

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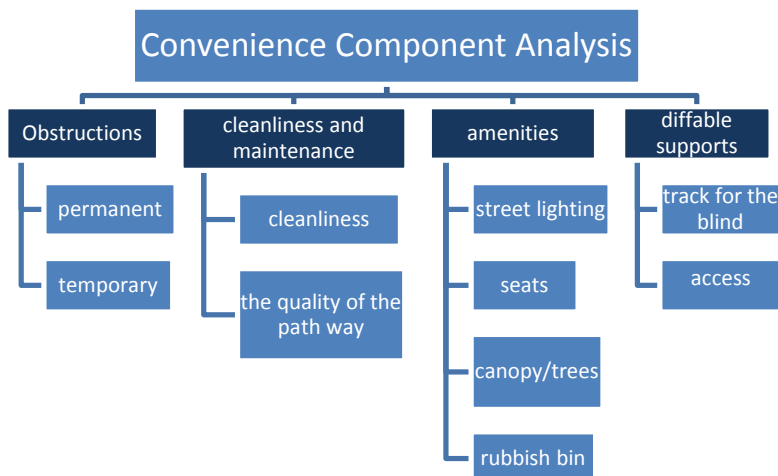E-mail address:*erna.winansih@unmer.ac.id*

1. Introduction

Malang city is the second biggest city in the East Java Province, Indonesia. Malang is well known as one of the most wanted city to live because of the perceived convenience (IAP, 2014). Not only this popularity makes some advantages but also causes some disadvantages. Malang becomes crowded and more crowded each day. The congestion and crowded traffics has been the daily sight of the city. The motorized vehicles rule the street corridors and even some motorcycles expand to the pedestrian ways. The pedestrians have to compete with these motorized vehicles and lead to jay walk. The increasing vehicles lead to the decrease of the environmental comfort (Li et al, 2005) (Sugiyono, 2006) (Achsan, 2009) (Bantacut, 2012) (Wicahyuni et al, 2013). Malang city became less convenient and less walkable (Newman, 2014) (Newman 2015). The convenience component of walkability studied in this case consist of the pedestrian infrastructure (PI) variables (Krambeck, 2006) (Leather et al, 2011), (Efroymson, 2012) (Sadana, 2012).

Pedestrian infrastructure variables

PI variables consist of the facilities due the walking activities. The condition of pedestrian way shows the existence and the quality of the path way. Not only that the path way exist but also how it is and how it works. The PI variables are obstructions, cleanliness, amenities and diffable supports (Krambeck, 2006) (Leather et al, 2011), (Efroymson, 2012) (Sadana, 2012). The existence of obstructions (permanently or temporarily obstructed, minimum width of path way), the cleanliness and maintenance (rubbish existence, or maybe the stinky smell and the conditions of the surface that could affect the walking), kinds of amenities (tree/canopy, street lighting, rubbish bin, seats and so forth that could make the pedestrians circumstances more attractive) and the supporting for diffable people (for examples: tracks for the blind, wheel chair accesibility and so forth) are the indicators for the PI. The permanent obstructions could be the trees, electricity equipments, security post and others so the path way fewer than 1 meter of the minimum width that cause difficult to walk. The temporarily obstructions could be some vendors, motorcycles parking, ricksaws parking and others.

2. Methods

This case study analyzed the convenience component of walkability at the street corridors around *Alun-Alun Merdeka* (*AAM*) and *Alun-Alun Bunder (AAB)*. The PI variables data collecting method was adopted from the global walkability survey guide book and modified to suit the condition (Krambeck, 2006) (Leather et al, 2011), (Efroymson, 2012) (Sadana, 2012). The PI data were scored from 1-5 for semantic scale using observation sheets that contained the indicators of PI variables (fig. 1). The score range 1, 2, 3, 4, 5 meant worse, bad, fair, good and better. The indicators analyzed by describing the existence of PI according to the score and calculating the semantic scores to get the average value.