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OVERVIEW OF URBAN QUALITY INDICATORS: TOWARDS A SUSTAINABLE AND SOPHISTICATED URBAN LIFE IN INDONESIA

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ABSTRACT

The discourse on achieving a sustainable city is a long process and inevitable for Indonesian cities. However, efforts towards a sustainable urban environment have not been accompanied by the formulation of indicators to measure the quality of urban environment, especially in the context of Indonesian cities. The primary aim of this study is to review critically urban quality indicators in urban design literature that can be benefitted to measure the quality of the urban environment in Indonesia. The method of this study is a texts inquiry with content analysis to portray the urban quality indicators that have been mentioned or applied in many parts of the worlds through theory and literature as early as the 1960s to the present. It is expected that the indicators may be beneficial to apply to the urban life in Indonesia. The overall findings show that urban quality indicators have been widely discussed in urban design literature and promoted to measure its tangible and intangible elements of urban environment. The findings of this study also propose a matrix of urban quality indicators to be applied in the Indonesian context. The challenge is how to measure such indicators and what possible impacts of having such qualities in our ever-changing urban landscape. It is hoped that through measuring Indonesian urban environment, the sustainable and sophisticated urban life in Indonesia will be achieved.

Keywords: Indonesia; Sustainability; Urban quality; Urban life

1. INTRODUCTION: Urban Quality in Urban Design Literature: Concept and Definitions

The word 'quality' derives from Latin *qualitas*. According to the Oxford Dictionary (2015), quality has two different meanings; first, it is *'the standard of something as measured against other things of a similar kind; the degree of excellence of something'*, and second, it is *'a distinctive attribute or characteristic possessed by someone or something'*. The word 'quality', as applied to urban environments, has been prominent in the planning and design professions, since the 1990s (Chapman and Larkham, 1999). The Urban Design Group specifically mentions quality of place as a principal objective and that planning should be more concerned with improvement of the design of physical environment and the quality of places and encourages all professions to combine them (Urban Design Group News, 1989, quoted by Linden & Billingham, 1996 in (Chapman and Larkham, 1999). Urban quality has also been used as a key component in a variety of related terms such as: 'good city form' (Lynch, 1981); 'urban quality' (Parfect and Power, 1997, Talen, 2002, Chapman and Larkham, 1999, Trip, 2007, Montgomery,

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1998); 'peculiar nature of cities' (Jacobs, 1961); 'environmental quality' (Rapoport, 1983, Kamp et al., 2003); 'qualities of good city' (Jacobs and Appleyard, 1987, Jacobs, 2011); 'urban environmental quality' (Pacione, 2003, Florida, 2002b); and 'spatial quality' (Moulaert et al., 2011).

Many scholars define urban quality as a complex concept and being multi-dimensional in nature. Some literature only gives an open and fluid 'clue' on urban quality, whereas others use theories, indicators, and components to describe it to the readers (Jacobs (1961), (Lynch, 1981), while others use case studies, which measure its quality, in order to give the readers a clearer definition (Rapoport (1990). Kamp et al. (2003) also stated that environmental quality is a container concept with different theories related to different aspects of environmental quality and that the concept is multidimensional. The essential element of quality in an urban environment cannot be easily measured or fully identified (Parfect and Power, 1997). Montgomery (1998), on the other hand, suggested that urban quality can be considered in much wider terms than the physical attributes of buildings, spaces, and street patterns, while Lynch (1981) identified it as the impact of the relationship between the place and the society which occupies it. Rapoport (1983) also noted that urban quality is not a unitary phenomenon, but it is multidimensional and comprises both 'universal', pan-human aspects, and culture-specific.

2. METHODS: Filtering and Ordering the Urban Quality Indicator

The method of this study was a text inquiry with content analysis to portray the urban quality indicators that have been mentioned or applied in many parts of the worlds, through theory and literature as early as the 1960s to the present. The urban quality indicators as mentioned in the various urban design literatures such as Lynch (1981), Appleyard (1987), Tibbalds et al. (1993), Parfect and Power (1997), Montgomery (1998), Landry (2000), Florida (2002), and Trip (2007) were then ordered following the urban design dimension as formulated by Carmona et al.(2010).

3. FINDINGS AND RESULTS: Indicators of Urban Quality

There are various indicators of urban quality stated in urban design literature. *The Death and Life of Great American Cities* by Jane Jacobs (1961) was one of the earliest texts concerned with the quality of urban areas and stressed a number of key aspects: safety, public contact, mixture of uses, and diversity of ingredients, with four conditions: mixed-use districts, variation of building age, short blocks, and sufficient density. Indeed, Jacobs (1961) was the first to explore urban quality from the premise of activity both producing and mirroring quality in the built environment (Montgomery, 1998).

Kevin Lynch (1981) in *A Theory of Good City Form* formulated five basic dimensions of city performance: vitality, sense, fit, access, and control. He suggested that 'vitality' relates to the degree of the urban form that supports vital functions (basic survival needs), while 'sense' relates to the degree to which the settlement can be clearly perceived, differentiated, and structured. He related 'fit' to the degree of urban form matching the pattern and quantity of people engagement, whilst 'access' refers to the ability of an urban form to be accessible towards urban activities. Finally, 'control' relates to the degree to which the use and access to spaces and activities are controlled by a city's users. Responding to the challenges of modern urban design such as poor living environments, the loss of control on urban development, the loss of public life, and urban placelessness, Jacobs and Appleyard (1987) proposed an 'Urban Design Manifesto' with the aim of improving the quality of future urban environment through

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seven indicators: livability, identity and control, access to opportunity, imagination, and joy; authenticity and meaning; open communities and public life; self-reliance; and justice. They also emphasized the importance of livable streets and neighborhoods with inclusive physical characteristics under livability standards.

Francis Tibbalds et al. (1993) as Chair of the Urban Design Group produced a report focusing explicitly on the issues of urban quality. Figure 1 is the summary diagram of the report showing the inter-related elements of London's environmental quality. The eight elements were expressed as the central concepts of much urban design thinking in a readily-accessible language and demonstrated the range of inter-related components, from activity, physical form, and management.

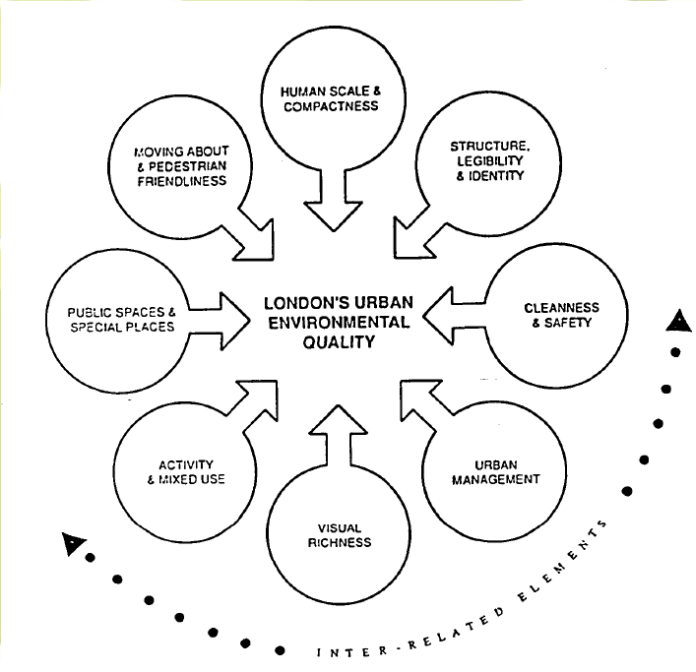

Figure 1 Factors in London's environmental quality
Source: Tibbalds et al. (1993: 213 in Chapman and Larkham (1999))

Parfect and Power (1997) in their book *Planning for Urban Quality* emphasized that elements of quality in urban environments may well spring from a combination of factors relating to the sense of place, such as legibility, collective memory, issues of the historical continuum, and diversity in a pluralistic society. They argued that these issues are fundamental in creating high quality urban places, and as a result quality of places is reflected in the quality of life. According to Montgomery (1998), the notion of urban quality is bound-up in the social, psychological and cultural dimensions of place. He proposed three quality indicators which make up a successful place: activity, form and image with sub-indicators in each of them.

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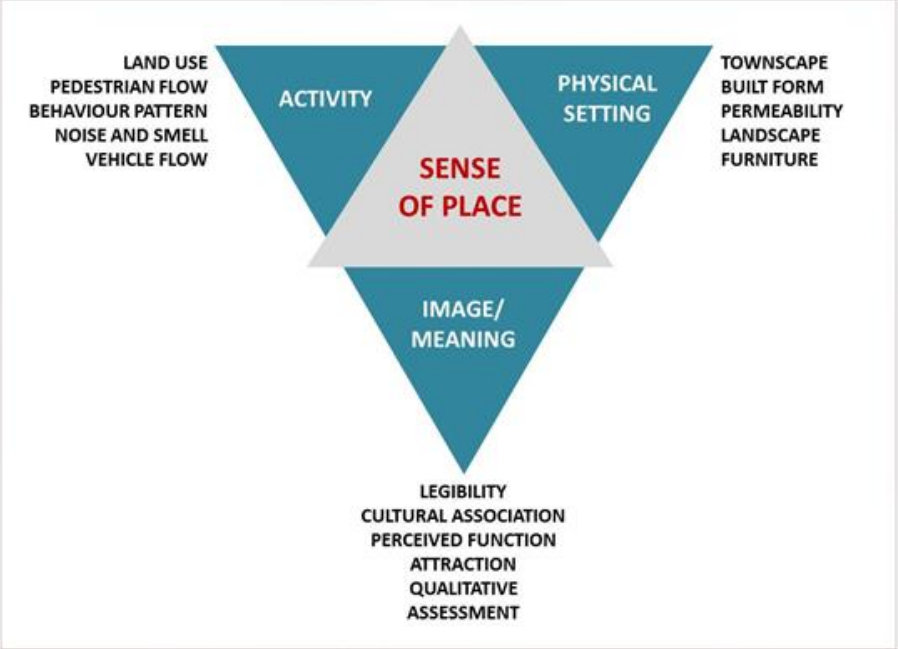

Figure 2 Place Quality Diagram, adapted from Montgomery (1998)

Speaking of urban quality indicators, Florida (2002b) in proposing the term 'creative economy and creative class' stated that there are six points of quality of place: diversity, social interaction, authenticity, lifestyle, identity, and creativity. According to Florida (2002b), quality of place has three dimensions: the first is *'What's there'*: the setting for creativity; the second is *'Who's there'*: pointing to the kinds of people and community; and the third is *What's going on'*: the vibrancy of street life, café cultures, arts, music and people engaging in outdoor activities – altogether create a lot of active, exciting, creative endeavors. The quality of place defined by Florida is specific, and it entails a set of factors that collectively make a city an attractive place for residence of the creative class (Trip, 2007). Trip (2007: 503) summarized a list of the main elements of the quality of place and indicators suggested by Florida and related literature (see Table 1).

Table 1 Main Elements of Quality of Place and Indicators Suggested by Florida and Related Literature

Quality	Indicator
Diversity	Functional diversity, distinctive neighborhoods, sufficient density
Specific Amenities	Individual sport facilities, recreation areas and restaurants per capita; (semi-) public spaces for informal meetings (third places)
Liveliness: culture	Cultural and musical events; live performance venues per capita
Technology: innovativeness	Patents per capita; relative percentage of high-tech output
Talent	Percentage of people with a bachelor's degree and above
Creativity, bohemia	Percentage of artistically creative people
Tolerance; openness	Relative percentage of foreign-born people; gays
Aesthetics	Architecture; parks; urban heritage
Environment; sustainability	Natural environmental assets; environmental quality; reuse of older industrial sites
Safety	Crime figures

Source: Trip (2007: 503)

Landry (2000) who introduced the term 'creative city' identified the preconditions for a creative city. Durmaz (2012) summarized the quality of place indicators which are formulated by Landry (2000) as being: economic vitality, social vitality, environmental vitality, and cultural vitality. Landry (2000) also highlighted the importance of actors in urban areas to ensure that a city is successful including those visionary individuals, creative organizations and a political culture that share a clarity of purpose under good leadership; those are important in making cities creative. Indeed, policy makers and urban agents should share certain qualities, such as open-mindedness and willingness to take risks together with a clear focus on long-term aims. As such, there needs to be a capacity to work with local distinctiveness and to find strength in apparent weaknesses and willingness to listen and learn. After a content analysis process, these indicators were then filtered, grouped, and ordered as follows:

Table 2 Ordering Urban Quality Indicators

No	Dimension	Indicator	References
1.	Morphological	**Legibility**	Legibility[3,4]; Clear beginning and ending[9]; buildings that complement each other[9]; clear definition[9]
2.	Morphological	**Walkability**	Pedestrians friendliness[3]; Walkability[9]; Pedestrians[10]
3.	Morphological	**Accessibility**	Access[1]; Access[1]; Accessibility[9]
4.	Morphological	**Connectivity**	Moving about[3]; Traffic Management[10]; Transit[10]
5.	Morphological; Socio-cultural	**Diversity**	Mixed-use activity[3]; Diversity[4,6,7,9]; Diverse users[10]; Blending of uses and modes[10]
6.	Functional	**Livability**	Livability[2]; Comfort[9]; Trees[9]; Amenities[7,10]; Environmental quality[7];
7.	Functional; Socio-cultural	**Vitality**	Vitality[1]; Joy[2]; Public spaces[3]; Activity[5]; Social interaction[6]; Liveliness[7]; economic, social, environmental, and cultural vitality[8]; Places[9]; Attraction[10]; Destination[10]; Active edge uses[10]
8.	Functional	**Adaptability**	Fit[1]; Self-reliance[2];
9.	Functional; Socio-cultural	**Creativity**	Imagination[2]; Special places[3]; Lifestyle[6]; Creativity[6]; Culture[7]; Innovativeness[7]; Talent[7];
10.	Visual; Morphological	**Form and Visual Quality**	Visual richness[3]; Human Scale[3]; Compactness[3]; Form[5]; Aesthetics[7]; Physical Qualities[9]; Details[9]
11.	Visual; Morphological	**Transparency and Active frontage**	Openness[2,7]; Transparency[9]
12.	Functional; perceptual	**Safety**	Justice[2]; Safety[3,7]; Tolerance[7];
13.	Perceptual	**Imageability**	Sense[1]; Meaning[2]; Identity[2,3,6,10]; Image[5,10]
14.	Perceptual	**Place Attachment**	Collective memory[4]
15.	Morphological; Perceptual	**Authenticity**	Authenticity[2,6]; Historical continuum[4]; Time[9]; Neighborhood Preservation[10]

[1]Lynch; [2]Appleyard; [3]Tibbalds; [4]Parfect&Power; [5]Montgomery; [6]Florida; [7]Trip; [8]Landry; [9]Jacobs; [10]PPS

4. DISCUSSIONS: Measuring Urban Quality

According to Marans (2003), urban quality should be captured with multiple indicators and is a subjective phenomenon reflecting the lives of the urban residents. However, the objective condition of the setting themselves does not convey the true quality, rather, it is the meaning of those conditions to the users. Some urban quality indicators, as mentioned by Florida (2002b), are hard to define or measure, and many are subjective (Brown and Meczynski, 2009). Trip (2007) claimed that quality of place is a vague concept, but this is because of its multiplicity and complexity, not because of its lack of content, meanwhile, the attributes of quality of place are hard to define. However, it

offers the potential for future research; the main problem is how to measure it and its possible impact (Trip, 2007, Brown and Meczynski, 2009).

The study by Brown and Meczynski (2009), for example, assessed urban quality by asking city workers using questionnaire-based interviews in a selected urban area. The respondents were asked about their main reasons for moving to the city, their satisfaction with a number of key urban quality factors, and about the quality of certain aspect of the city. Likert-type scales were used to quantify levels of satisfaction and perceptions of quality, and standard questions were included namely age, gender, income and level of education. The results revealed that although it is difficult to measure urban quality, in this case of Amsterdam and Rotterdam, it was possible with the criteria applied (some adopted from Florida (2002b)) to obtain a satisfactory picture of the actual quality of place in both cases. It was concluded that Amsterdam had a better quality than Rotterdam, particularly in the socio-cultural scene: cultural industries, gay and bohemian scenes, nightlife, culture, and image. Rotterdam appeared to perform better on some counts than what was suggested by the official records. Lessons learned from the Trip's study include the need to carefully consider the scale to measure various aspects of quality of place and the need to give further attention to the *'intangibles'*, as they constitute essential part of urban quality despite being difficult to assess.

Varna and Tiesdell (2010) formulated a Star Model for assessing the publicness of public space. The model is intended to be of value for comparative purposes (measuring one public space and another), as an analytic measure of publicness to be compared with more subjective interpretations of publicness, and as a departure point for deeper investigations of why particular places are more/less public than they should be. There are five indicators of 'publicness': ownership, control, civility, animation, and physical configuration. This model offered analysis of the social life of public space using qualitative descriptions to create quantified diagrams and provided a useful tool for grounding future empirical work on the subject.

In line with Varna and Tiesdell (2010), a study on evaluating public space by Mehta (2014) offered a comprehensive instruments which exist in the literature to measure the quality of public space using a *Public Space Index* (PSI) with indicators: inclusiveness, meaningfulness, safety, comfort, and pleasurability. The Public Space Index (PSI) was constructed from 42 to 45 variables to evaluate the five dimensions of public space that captured and measured both observed behavior (use) and perceptions of public space. All variables were rated by the researchers by observing the space and interaction between the space and its occupants, with rating scale ranging from 0 to 3. The index offered a model that could benefit city stakeholders in evaluating various dimensions of public space.

A work by Hall (2012) revealed the quality of urban street through individual experiences alongside the histories of migration, racism and class that saturated in a London's multi-ethnic street, The Walworth Road. Hall used an ethnographic method and operated the research by sitting for six months in a coffee shop (Nick's Caff) on the street to meet local people and interviewing them with a snowballing process of looking for respondents. Through data-led analysis, contrasting ethnographic data with contemporary planning reports, Hall explored the diverse way of valuing the social, economic, and spatial qualities of the road (Hall, 2012, p.208). Hall revealed the adaptability of shop spaces (flexibility, social economic complexity, and diversity), longevity, and vitality as three major indicators revealed in valuing the quality of

Walworth Road. Mehta (2013) used a mixed-methods strategy of inquiry that consists of both quantitative and qualitative methods used to study the characteristics of a street (street quality) that support social activities along the street. A variety of techniques including direct observation, pedestrian count, a survey, and interviews were simultaneously conducted in three locations of the study. Both qualitative and quantitative data were collected, analyzed, and presented simultaneously as main findings of the study.

The above examples show that there are several different methods to reveal the quality of urban spaces. Quantitative methods as carried out by (Brown and Meczynski, 2009), (Varna and Tiesdell, 2010), and (Mehta, 2014) suggest that urban quality indicators could be defined prior to the study (deductive approach). The pre-determined indicators that have been set are then used as tools to assess the urban quality in numbers/quantitative result before being interpreted as the key findings of the study. On the other hand, indicators in the qualitative method as used by Hall (2012) are obtained from the field observation (data-led analysis), such as from in-depth interviews. In Hall's (2012) study, the findings that revealed the quality indicators were adopted from the research data and then confirmed with quantitative data from recent planning reports, census, maps, or street surveys, before being appointed as the main/key findings of the research. Mehta (2013) used both methods (quantitative and qualitative) to obtain data which were collected simultaneously and merged during the analysis phase to add dimension to the findings.

5. CONCLUSION: Framework for Urban Quality towards a Sophisticated Urban Life in Indonesia

A critical review and overview on urban quality in urban design literature presented in this study offers some key findings. Urban quality has been widely discussed in urban design literature from the 1960s to the present day. Urban quality indicators have been promoted to measure urban quality in its 'tangible' and intangible distinctive characteristics of the urban environment. Some indicators are 'subjective' phenomena reflecting the lives of the urban residents; however, the 'objective' condition of the setting does not convey the true quality, unless the meaning of those 'objective' conditions is interpreted by the users. The main problems of urban quality are how to measure it and what possible impacts of having such qualities are.

The following formulated matrix can be used as a basic formula to measure the urban quality indicators in Indonesia:

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Dimension	Element	Legibility	Walkability, accessibility, and connectivity	diversity	liveability	vitality	adaptability	creativity	Form and visual quality	Transparency and active frontage	safety	imageability	Place attachment	authenticity
		Urban Quality Indicator												
Morphological	Land Use													
	Building Height and composition													
	Plot and Street Pattern													
	Street Scale and Proportion													
	Sidewalks and Pedestrians													
Perceptual	Street Image													
	Meaning and Symbolism													
	Sense of Place													
	Place Attachment													
Socio-cultural	Street as Public Space													
	Street Public Life and Culture													
Visual	Streetscape													
	Architectural Style													
	Façade Design													
Functional	Street Network and Movement													
	Street as Urban Place													
Temporal	Street Transformation													
	Street Management													

Figure 2 Matrix for Urban Quality: towards a Sophisticated Urban Life in Indonesia
Source: Author, 2016

In Indonesian context, urban quality indicators that have been reviewed in this study can be utilized to measure the quality of the urban environment in Indonesia, both in metropolitan city, medium-scale city, and small city. Measuring the urban quality can be very important amidst the rapid urban development that can be benefitted in one side but, on the other hand, may reduce the quality of urban spaces. It has been clearly visible in public domain, both streets and squares. The journey towards a sophisticated urban life in Indonesia still seems long, particularly if we talk about the sustainability aspects that remain a fight in Indonesian context.

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