Analysis of Quality Public Space—Case Study: Campus 2 State Islamic University of Alauddin Makassar

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Abstract

Behavioral, social, cultural, and climatological factors currently influence the pattern of public space provision, especially on campus areas. At present the public space of the CAMPUS 2 area of State Islamic University of Alauddin Makassar tends to be "neglected" which is clearly seen from the arrangement of the physical design of the area; starting from the pedestrian ways, green open spaces/parks, gazebos, and the existing parking system do not yet appear as comfortable "containers" by its users, so these spaces are not yet in accordance with their functions. The theory of public space refers to elements of the quality of tropical city spaces by (Darmawan, Ruang Publik dan Kualitas Ruang Kota. Proceeding. Seminar Nasional PESAT, 2005a; Analisis Ruang Publik Arsitektur Kota, 2005b), because they are considered to have the same activities of its users, namely: human scale and density, structure of clarity and identity, neatness-security-comfort, city/region management, visual variety, activity and mixed functions, special spaces, and pedestrian hospitality. This research is based on the rationalistic paradigm with a descriptive research method approach, namely: literature study on the basic theory of public space quality, field observations, analyzing data using the Good Public Space Index (GPSI) method, as well as drawing conclusions so that it can be used as a guideline in the development and planning of public spaces in the CAMPUS 2 STATE ISLAMIC UNIVERSITY OF ALAUDDIN MAKASSAR in the future.

1 Introduction

State Islamic University of Alauddin Makassar (UINAM: Universitas Islam Negeri Alauddin Makassar) is a newly created campus of the Alauddin Islamic State Institute (IAIN), which has two campuses: currently, the campus 1 in Sultan Alauddin street no. 36 Makassar city is used as Strata Two (S2)/Magister and Strata Three (S3)/Doctorate lecture activities, training centers, lodgings/hotels, and hospitals, etc.; and campus 2 in HM. Yasin Limpo street no. 36, Samata, Gowa regency is used as a Strata One (S1)/bachelor-level lecture activity.

Campus 2 State Islamic University of Alauddin Makassar consists of several buildings including convention building, rectorate building, faculty of science and technology, faculty of business and economy and all public facilities. Where the accessibility between buildings is still difficult to reach on foot due to the design of the area since there is still no connection between the buildings in the form of pedestrian ways. In a regional scale scientific study of urban (Sepideh Movahed et al., 2012), pedestrian ways are part of public space that must be considered because that is where social activities occur.

At present the public space of the CAMPUS 2 State Islamic University of Alauddin Makassar tends to be "neglected" which is clearly seen from the arrangement of the physical design of the area; starting from pedestrian ways, green open spaces/parks, gazebos, and the existing parking system do not yet appear as comfortable "containers" by its users, so these spaces are not yet in accordance with their functions. Campus 2 of State Islamic University of Alauddin Makassar is also a unique campus that has open public space and many activities inside; among others, it is used as a

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national ceremonial activity, learning and discussion for students, and sports activities such as football, basketball/futsal and sometimes the university field is used for animals like goats and cows for preparation Qurban of celebration Eid al-Adha.

Therefore, it is important to manage these public space campus in terms of planning and design through public space maintenance programs, enhancing the design of public spaces, as well as improving the quality of Campus 2 environment, State Islamic University of Alauddin Makassar (UINAM). It is expected that this improvement of the quality of public spaces including connecting these public spaces is made in order to create a campus area that is comfortable to humans.

The theory of public space refers to elements of the quality of tropical city spaces by Darmawan (2005a, b), because they are considered to have the same activities for its users, namely: human scale and density, structure of clarity and identity, neatness-security-comfort, city/region management, visual variety, activity and mixed functions, special space, and pedestrian hospitality.

In this research (Fig. 1), it is based on the rationalistic paradigm with a descriptive research method approach, namely: literature study on the basic theory of public space quality, field observations, analyzing data using the GPSI method, as well as drawing conclusions so that it can be used as a guideline in the development and planning of public
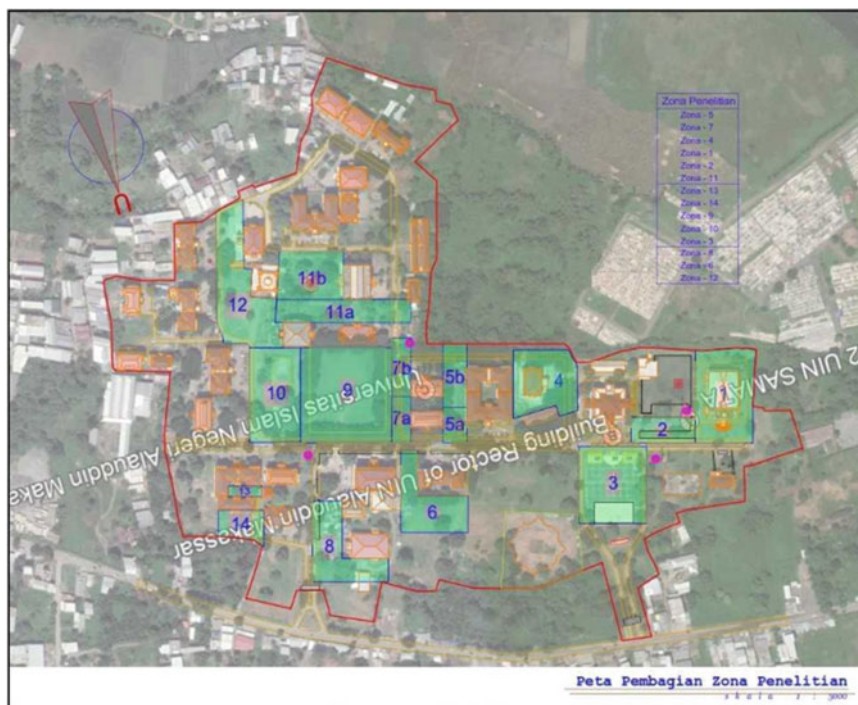
spaces in the CAMPUS 2 STATE ISLAMIC UNIVERSITY OF ALAUDDIN MAKASSAR in the future.

Quality public space according to Carr (1992) can be seen from the ongoing activities in that space. Activities in open public spaces include telling stories, playing games, and greeting each other, or just passive contact such as sitting down to watch the surroundings and listening to the crowd and also creating an active and festive atmosphere.

Several indicators of the use of public spaces that serve as benchmarks for quality in an area are: (1) number of users; social activities in public spaces that occur because of the presence of other people in that place; public spaces that function well are indicated by more people using the space which in turn can invite more and more people to visit (Gehl, 1987). (2) The level of social activity is indicated by the high proportion of users who come together or in groups; people who come in groups have used a room to meet regularly (Whyte, 1979). (3) The time of the activity is reviewed based on the use of space that varies according to time and day of the week.

2 Literature Review and Theory

Public space, according to the Project for Public Spaces in New York in Darmawan (2005a, b), in a city is generally referred to a form of space that humans use together in the

Information:
Zone 1 : **Convention building**
Zone 2 : **Convention building and its surroundings**
Zone 3 : **Plaza University/UINAM**
Zone 4 : **Lecturer Building and its surroundings**
Zone 5 : **Parking of Science and technology faculty building and its surroundings**
Zone 6 : **Ushuluddin and philosophy faculty building**
Zone 7 : **Pedestrian way connecting**
Zone 8 : **Gate 2 University/Campus**
Zone 9 : **Football field**
Zone 10 : **Basketball / Futsal court**
Zone 11 : **Garden fountains university and its surrounding**
Zone 12 : **Da'wah and Communication faculty building**
Zone 13 : **Health and Medicine faculty building**
Zone 14 : **Health and Medicine faculty building and its surroundings**

Fig. 1 Map of research zone distribution (*Source* Personal Editing, 2018)

form of roads, pedestrians, parks, plazas, public transportation facilities (bus stop), and museum.

In general, public space is an open space that can accommodate the need for meeting places and joint activities in the open air. This space enables human encounters to interact with one another. Because these spaces often arise in a variety of joint activities, these open spaces are categorized as public spaces.

Meanwhile, according to Roger Scruton in Darmawan (2005a, b), each public space has the following meanings: a location that is designed to have maximum access to the surrounding environment, where humans interact and the behavior of the public space users.

Although some experts say that public space is generally open space, Rustam Hakim (2003) says that public space is a container that can accommodate certain activities of the community, both individually and in groups, where the form of public space is very dependent on the pattern and building mass composition. By their nature, public space is divided into two types, namely:

1. Closed public space: is a public space contained in a building.
2. Open public space: public space outside the building which is often also called open space.

In assessing the quality of regional public spaces there are eight important elements, namely:

1. Mixed activities and functions
2. Special space
3. Pedestrian hospitality
4. Human scale and density
5. Structure, clarity, and identity
6. Neatness, safety, and comfort
7. Regional management
8. Visual variety

According to Gehl (2011), outdoor activities in public space are divided into three categories, namely: necessary activities, optional activities, and social activities.

Furthermore he also explained that it includes (1) Necessary activities such as going to school or to work, shopping, waiting for a bus or a person, running errands, and distributing mail; (2) Optional activities such as activities as taking a walk to breath fresh air, standing around enjoying life, or sitting and sunbathing; and (3) Social activities; all these activities highly depend on the physical conditions of the outdoor in public space. If the outdoor area is of high quality, then many outdoor activities can take place with about the same frequency—although obviously, people tend to take longer, due to better physical condition.

3 Method

The research method used is a descriptive research method:

1. Literature study of the basic theory of public space.
2. Field observations at locations that have been identified and determined.
3. Analysis of data obtained in the field, using the GPSI method, using 6 variables (Mehta, 2007).

1. IU(Intensity of Use) :
$$IU = \frac{\text{average number of people}}{\text{highest amount}}$$

2. ISU(Intensity of Social Use) :
$$ISU = \frac{\text{the number of people involved in the group}}{\text{highest amount}}$$

3. PDS (People's Duration of Stay) :
$$PDS = \frac{\text{average time}}{\text{highest time}}$$

4. TDU (Temporal Diversity of Use) :
$$D = N(N-1)/\text{Total } n(n-1) \text{ (Simpson's Diversity Index)}$$

5. VU (Variety of Use) :
$$D = N(N-1)/\text{Total } n(n-1) \text{ (Simpson's Diversity Index)}$$

6. DU (Diversity of Users) :
$$D = N(N-1)/\text{Total } n(n-1) \text{ (Simpson's Diversity Index)}$$

By using the GPSI method, the activities and its users can be well studied with certainty and quickly. The sample in this study is all those who use public spaces in the campus UINAM. The study was conducted from Monday to Sunday, starting at 8:00 a.m. to 21:00 p.m. local time.

4 Results and Discussions

GPSI method was used to analyze the data and used as a tool to measure the quality of public space to work as planned. The effectiveness of public space was indicated by a score from 0 to 1 described as follows:

a. Basic interpretation
- GPSI is obtained by adding up the values of all variables.
- By using the six variables, where each variable has a range of values from 0 to 1 and also has the same interpretation where the value approaching 1 is positive; thus the minimum value is "0" and maximum "1."
- A value close to "0" interpreted that the analysis segment has a very low value in terms of outdoor space utilization.

- Low scores are discussed in more detail by reviewing the value of each of the constituent variables: low number of users, low social interaction, not long duration of the activity, no diversity of activities or the dominance of certain groups of individuals in the use of space.
- GPSI values that are close to "1" indicate that the analysis segment has a higher democratic nature (used by diverse individuals), which is more responsive (able to accommodate diverse activities and more individuals) so that it is preferred by users because it has meaning.

b. Modification method

- This method can be used to analyze the use of space on a day of observation or use of space in a time segment, where the use of space in the morning compared with the use of space during the other times in a day, afternoon or night.

The average GPSI value of QUALITY PUBLIC SPACE at CAMPUS 2 STATE ISLAMIC UNIVERSITY OF ALAUDDIN MAKASSAR indicates a high level. Table 1 consists of the results of each variable index, where

from the overall research zone there are 3 places that show a high significance value approaching the positive value of 1.

Figure 2 provides information about the analysis of the GPSI. It indicates that (1) Plaza UINAM, amounting to 0.776501291; (2) Basketball/Futsal Field UINAM, amounting to 0.775949823; and (3) Faculty of Health and Medicine UINAM, amounting to 0.732590436; where the values are approaching 1 which is positive, and have become great public spaces on the UINAM campus.
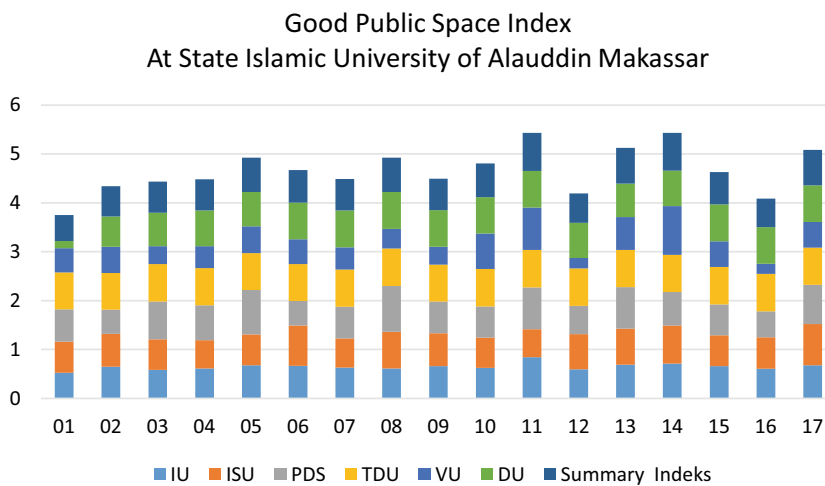
Nevertheless, the public space is still considered unresponsive to its users; as well as meaningless to them as a really comfortable public space for activities. Therefore, it is necessary to plan and design for improvement in order to increase the effectiveness of activities on the UINAM campus.

From Fig. 3, it can be seen that the highest of Variety of Use (VU) in the **Plaza UINAM** shows a value of 0.996443874, where the value approaching 1 is positive and is interpreted as a quality public space with a variety of activities from morning to night. Likewise, in the People's Duration of Stay (PDS) variable in the **Garden fountains of the university and its surrounding** shows a value of 0.937511, where the value approaching 1 is positive and is

Table 1 Summary of analysis and discussion of research data results (*Source* Researcher's Analysis, 2018)

Ruang Publik / Instrumen	IU	ISU	PDS	TDU	VU	DU	Summary Indeks
01 Fakultas Sains & Teknologi (Titik 5A)	0.525823	0.637346	0.660714	0.753695	0.493327208	0.147058824	0.536327339
02 Fakultas Sains & Teknologi (Titik 5B)	0.648377	0.673214	0.493902	0.750794	0.536215051	0.620689655	0.620531951
03 Fakultas Sains & Teknologi (Titik 7A)	0.582938	0.624317	0.775111	0.765766	0.36786975	0.685785417	0.633631195
04 Fakultas Sains & Teknologi (Titik 7B)	0.614326	0.576841	0.713964	0.761141	0.450724591	0.728215328	0.640868653
05 Fakultas Sains & Teknologi (Antara Gedung C, Rektorat, & Ruang Dosen)(4)	0.676375	0.631944	0.910494	0.756411	0.547896397	0.699113079	0.703705579
06 Audiotorium UINAM & Sekitarnya (Titik 2A)	0.667062	0.825949	0.502778	0.750505	0.512450327	0.746629602	0.667562322
07 Audiotorium UINAM & Sekitarnya (Titik 2B)	0.633421	0.591121	0.648551	0.760976	0.458810281	0.752959892	0.640973196
08 Taman Air Mancur UINAM & Sekitarnya (Titik 11A)	0.613501	0.746971	0.937511	0.768067	0.404718153	0.751284912	0.703675511
09 Taman Air Mancur UINAM & Sekitarnya (Titik 11B)	0.659487	0.673451	0.650273	0.756098	0.362775708	0.748827951	0.641818777
10 Lapangan Sepak Bola UINAM (9)	0.623233	0.620915	0.637511	0.769231	0.723041153	0.744985843	0.686486166
11 Lapangan Basket/Futsal UINAM (10)	0.841667	0.575301	0.854369	0.764121	0.870087898	0.750153042	0.775949823
12 Fak.Kesehatan & Kedokteran UINAM (13)	0.597902	0.717448	0.577381	0.769841	0.209771751	0.723159228	0.599250497
13 Fak.Kesehatan & Kedokteran UINAM (14)	0.690476	0.736486	0.848921	0.765032	0.671232508	0.683395109	0.732590436
14 Plaza UINAM (03)	0.715972	0.775111	0.685938	0.760317	0.996443874	0.725225873	0.776501291
15 Fak.Ushuluddin & Filsafat (6)	0.659622	0.635057	0.627358	0.767881	0.526534135	0.75094258	0.661232453
16 Pintu 2 UINAM (8)	0.605442	0.646041	0.527083	0.770053	0.205260886	0.75262158	0.584416911
17 Depan Fak.Dakwah & Komunikasi (12)	0.675895	0.846939	0.802198	0.763012	0.520040764	0.751414605	0.726583228

Information: IU : **Intensity of Use**, ISU : **Intensity of Social Use**, PDS : **People's Duration of Stay**, TDU : **Temporal Diversity of Use**, VU : **Variety of Use**, DU : **Diversity of Users**

Good Public Space Index
At State Islamic University of Alauddin Makassar

Information:

IU : **Intensity of Use**

ISU : **Intensity of Social Use**

PDS : **People's Duration of Stay**

TDU : **Temporal Diversity of Use**

VU : **Variety of Use**

DU : **Diversity of Users**

01 Faculty of Science and Technology (Point 5A)
02 Faculty of Science and Technology (Point 5B)
03 Faculty of Science and Technology (Point 7A)
04 Faculty of Science and Technology (Point 7B)
05 Faculty of Science and Technology (Point 4)
06 Convention Building (Point 2A)
07 Convention Building (Point 2B)
08 Garden fountains university (Point 11A)
09 Garden fountains university (Point 11B)
10 Football field (Point 9)
11 Basketball / Futsal court (Point 10)
12 Health and Medicine faculty (Point 15)
13 Health and Medicine faculty (Point 14)
14 Plaza University/UINAM (Point 3)
15 Ushuluddin and philosophy faculty (Point 6)
16 Gate 2 University (Point 8)
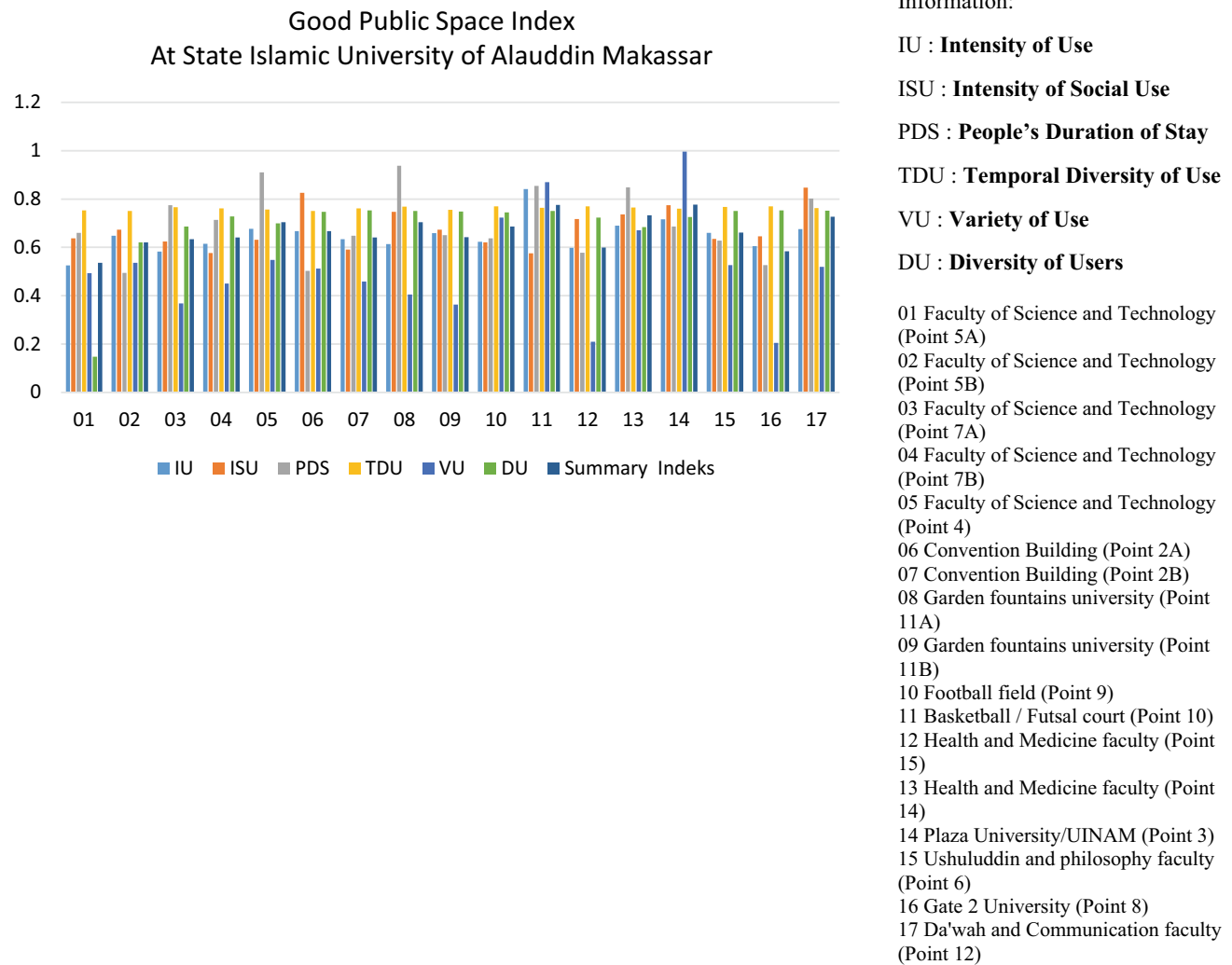17 Da'wah and Communication faculty (Point 12)

Fig. 2 Good public space index at State Islamic University of Alauddin Makassar (*Source* Researcher's Analysis, 2018)

interpreted as a quality public space with duration time average in the place approximately 2 h.

5 Conclusion

The results showed that there were 3 zones of public spaces in the UINAM campus area which were classified as high, namely Plaza UINAM, Basketball/Futsal Field UINAM, and Faculty of Health and Medicine UINAM. Likewise, VU (Variety of Use) and PDS (People's Duration of Stay)

showed a positive significance value. This can be seen from the values shown. Nevertheless, there are several gaps important to follow up. In general, the problem identified is the lack of lee, such as plant, to protect users of these public spaces from the sun's heat. Another problem is the dominance of passive activities, such as sitting, conversing, playing in cellphone, and taking pictures but they run short of supporting facilities for sports, pedestrians, and parking. This is not parallel to the concept and theory of quality of public open space which needs an active and festive environment and also supported by better physical conditions.

Good Public Space Index
At State Islamic University of Alauddin Makassar

Information:

IU : **Intensity of Use**

ISU : **Intensity of Social Use**

PDS : **People's Duration of Stay**

TDU : **Temporal Diversity of Use**

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01 Faculty of Science and Technology (Point 5A)
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12 Health and Medicine faculty (Point 15)
13 Health and Medicine faculty (Point 14)
14 Plaza University/UINAM (Point 3)
15 Ushuluddin and philosophy faculty (Point 6)
16 Gate 2 University (Point 8)
17 Da'wah and Communication faculty (Point 12)

Fig. 3 Detail of good public space index at State Islamic University of Alauddin Makassar (*Source* Researcher's Analysis, 2018)

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