Identification on Residential Park Facilities Criteria Based on Visitor's Perception

Achmad Ridwan Lubis, Dewi Septanti, and Sarah Cahyadini
Department of Architecture, Institut Teknologi Sepuluh Nopember, Surabaya
e-mail: ridon02@gmail.com

Abstrak—**The soaring number of urban population and the rising of it from time to time will implicate on the pressure of the utilization of city spaces especially residential area, public and social facility also public open spaces in the city. The elevating development of residential area is not only causing the widening of built up land but also decreasing the availability of open spaces. In eastern Surabaya as one of the residential area development location has variety of activity in utilizing a housing scale of green open spaces. Furthermore, the efforts in optimizing parks around eastern Surabaya that can be used as public and social spaces. Citizen's participation to fulfill those efforts are crucial as the perception influence the need of residential parks as a facility. Therefore, concept of providing facilities on the residential parks through the citizen's perception needs to be acknowledge. The purpose of this research is to identify the criteria of facility on the parks based on the citizen's perception. The step in this research, is to identify the residential park facility's criteria based on the visitor's perception. To find the answer, quantitative methods is used in this research. Descriptive statistic is used to answer the target of the research. According to the analysis's results, the criteria of the preferred facility on the residential parks around eastern Surabaya with the highest frequency are trash bin, lights, park benches, shades, pedestrians' side, children's playground, public toilet, security guards' post, easy accessibility, sports field, jogging track, vegetation's variety and parking spots. Meanwhile, the non-preferred facilities are the ornament for the aesthetic like statues, water fountains, internet access, ready to drink water stations, signs, and gazebos.**

Kata Kunci—**Citizen's Perpection, Green Open Spaces, Park's Facilities, Residential Park.**

I. INTRODUCTION

GREEN open space is a part of open space which is filled by plants, greens, and vegetation to support direct and indirect benefit provided by the particular green open space which are safety, comfort, prosperity, and aesthetic of the area around the green open space, and the high number of residential area development was causing the widening of built-up land and the narrowing of available open spaces [1]. The open space within the residential area was designed and used for recreational activity, and physical exercise which function as services for lots of resident around the more localized part of the city like, district and neighborhood [2]. Specifically, open spaces play part in providing different function and service like entertainment, social interaction, nature exposure and sense of community [3]. Green open space as media for utilizing activity is highly needed by the community as a place for having activity, and socializing with others [4]. The tendency that happened in the residential area lately is to revert the residential area back to the balance

Tabel 1.
Respondent Amount

Responden's Age	Amount	Persentage
12-16 years	1	0,96%
17-25 years	14	13,46%
26-35 years	32	30,76%
36-45 years	38	36,53%
46-55 years	14	13,46%
56-65 years	4	3,84%
66 years <	1	0,96%
Total	**100**	**100%**

between green open space and built-up land or non-green open space so that a livable proper environment which are healthy and comfortable can be achieved [5].

The user's role, visitors or resident for the best development of green open space is significantly needed and the design for pubilc open space has to consider the user's factor and activity [6]. One of the needed role in the context of environmental design is perception. The aspect of environmental perception is vital because of the decision or chociecs for the development will be determined by the desaigner's perception of environment [7].

This study is focusing on the identification on residential park facilities criteria based on visitor's perception to support the mean of social activity and aesthetic as the mean of recreational activity, education or other activity based on the visitor's perception.

Based on the research of the public spaces' elements which have to be available within the residential park are pedestrian lane's light, main street's light, bus stops, signs, phone booth, garbage bins, vegetation, and clean water/toilets [8]. Meanwhile, there were other research which stated that facilities that had to be available were parking spots, plaza, playgrouind, physical exercise's facility, jogging track, gazebos, benches, public toilet and vegetation [9].

II. RESEARCH METHOD

Paradigm is a way of perspecting, understanding, interpreting, a framework of thoughts, a belief which gives instruction to the action. To achieve that particular goal, this research used a postpositivist paradigm. Postpositivist paradigm sees the phenomenon on the field by emphasizing on the observation's result and interviewing users on the commercial site of the city which has a lot of individual

Tabel 2.
Frequency Table Of The Park's Facility Choices

Variable	Respondents' Age						
	Early Teenagers	Late Teenagers	Early Adult	Late Adult	Early Elderly	Early Elderly	Old People
V1	N	SP	P	P	P	SP	N
V2	P	SP	P	SP	SP	SP	P
V3	P	SP	SP	SP	SP	SP	SP
V4	SP	SP	SP	SP	SP	SP	SP
V5	P	SP	SP	SP	SP	SP	SP
V6	TP	TP	TP	TP	N/TP	TP	P
V7	P	TP	P	P	P	N	P
V8	SP	SP	SP	SP	SP	SP	P
V9	N	SP	P	SP	SP	P	SP
V10	SP	SP	P	SP	SP	P	P
V11	SP	P	P	P	P	P	P
V12	SP	SP	P	P	SP	P	P
V13	P	SP	P	SP	SP	P	SP
V14	P	P	SP	SP	SP	SP	SP
V15	P	SP	P	SP	P	P	P
V16	TP	TP	P	P	P	P	SP
V17	P	SP	SP	P	P	P	SP
V18	TP	N	TP	N/TP	P	N/TP	N
V19	N	N	TP	N	N	N	N

Notes :
V1 : Vegetation
V2 : Park benches
V3 : Lights
V4 : Garbage bins
V5 : Public toilet
V6 : Internet connection
V7 : Drinkable water
TP : Not important
SP : Very important

V8 : Shades
V9 : Security posts
V10 : Kid's playground
V11 : *Jogging Track*
V12 : Sports field
V13 : Gazebos
V14 : Pedestrian's lane
N : Neutral
STP : very not important

V15 : Accesibility
V16 : Signs
V17 : Parking spots
V18 : Statues
V19 : Water fountain
N/TP : Neutral not important
N/P : Neutral and important
P : Important

interaction or group interaction outdoor or based on objectivity [10].

A. Research Strategy

This study used a quantitative analyzing technique which was descriptive statistic. The data collection was conducted by using a Likert scale questionnaire. a Likert scale questionnaire was given to respondents which were visiting the park with the hope for respondents to sahre their perspective toward the facility that had to be available in the residential park. Data were obtained from 20 research's locations (100 respondents). Variables in this study were, vegetation, park benches, lights, garbage bins, public toilets, internet connection, drinking water, shades, park security posts, jogging track, sports arena, gazeboz, pedestrian's lane, easy accesibility, signs, parking spots, statues and water fountain.

III. ANALYSIS RESULT

To answer the target, this research used SPSS 23 with the Frequesncy Descriptive analysis type. To ease the data processing of identification on residential park facilities criteria based on perception within the SPSS 23, a simplification was done on the age variable of the respondent's characterics which was simplified based one of the 2009ᵗʰ regulation of the Health Department of Indonesian republic which are for age 0 – 5 year old (toddler), 5 – 11 year old (kids), 12 – 16 year old (early teeanger), 17 – 25 year old (late teenager), 26 – 35 year old (early adult), 36 – 45 year

old (late adult), 46 – 55 (early elderly), 56 – 65 year old (late elderly), above 65 year old (old people). Respondent amount and frequency table of the park facility choices can see Table 1 and Table 2.

Based on the data processing result of residetial park facilities criteria for the early teenager age category toward the park facility's variable, respondents were long for facilities like park benches, lights, garbage bins, public toilet,drinkable water station, shades, kid's playground, jogging track, sports field, pedestrian's lane, easy accessibility, and parking spots for the park.

Based on the data processing result of residetial park facilities criteria for the early adult age category toward the park facility's variable, respondents were long for facilities like variety of vegetation, park benches, lights, garbage bins, internet connection, drinkable water station, shades, kids' playground, jogging track, sports field, easy accesibility, parking spots, and statues for the park.

Based on the data processing result of residetial park facilities criteria for the late adult age category toward the park facility's variable, respondents were long for facilities like variety of vegetation, park benches, lights, garbage bins, public toilets, shades, security posts, kids' playground, jogging track, sports field, gazebos, pedestrians' lane, easy accesibility, parking spots for the park.

Based on the data processing result of residetial park facilities criteria for the late adult age category toward the park facility's variable, respondents were long for facilities like variety of vegetation, park benches, lights, garbage bins, public toilets, shades, security posts, kids' playground,

jogging track, sports field, gazebos, pedestrians' lane, easy accesibility, parking spots for the park.

Based on the data processing result of residetial park facilities criteria for the early elderly age category toward the park facility's variable, respondents were long for facilities like variety of vegetation, park benches, garbage bins, public toilets, drinkable water station, shades, security posts, kids' playground, jogging track, sports field, gazebos, pedestrians' lane easy accesibility, signs, and parking spots for the park.

Based on the data processing result of residetial park facilities criteria for the late elderly age category toward the park facility's variable, respondents were long for facilities like variety of vegetation, park benches, lights, garbage bins, public toilets, shades, security posts, kids' playground, jogging track, sports field, gazebos, pedestrians' lane, easy accesibility, signs, and parking spots were the most wanted facilities for the park.

Based on the data processing result of residetial park facilities criteria for the very old people age category toward the park facility's variable, respondents were long for facilities like park benches, lights, garbage bins, public toilets, shades, internet connection, drinking water station, security posts, kids' playground, jogging track, sports field, gazebos, pedestirans' lane, easy accesibility, signs, parking spots for the park.

IV. CONCLUSION

According to the data analysis' result, the most preferred facilities by the eastern Surabaya's citizens were garbage bins, lights, benches, shades, pedestrians' lane, kids' playground, public toilets, security posts, easy accessibility, sports field, jogging track, variety of vegetation, and parking spots. On the contrary, facilities which were not preferred were, aesthetics like statues, water fountain, internet connection, drinkable water station, signs, and gazebos.

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