

# SERVICESCAPE FACTORS ON HIGHER EDUCATION LIBRARY

JAM

15, 4

Received, August 2017  
Revised, September 2017  
Accepted, December 2017

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**Abstract:** The purpose of a college library is to meet the needs of lecturers who conduct teaching and learning processes and who concern *Three College Dharma* (teaching, research and community service). It is necessary to consider factors underlying users' reasons to visit libraries. Using exploratory quantitative methods, this paper aims to investigate servicescape library factors that affect users' interests. Data were collected through questionnaires containing twenty five statements related to college library servicescape. The population as well as the sample of this study involved 346 respondents such as lecturers, students and staff. This study found college library servicescape factors were obtained through five stages such as data preparation stage; extraction factor stage; axis rotation factor stage; model operation stage and result use stage. Likert scale model was employed to score each statement in the questionnaires. Five factors were grouped such as cleanliness and comfortable facilities, aesthetic facilities, accessibility to layout, facility appearance and functionality of facilities. The factor with the lowest mean of 3.58 was Functionality of the Facilities. This factor included the room light indicator; appropriate lighting (sunlight); convenient library opening hours for users; adequate lockers/caretaker and adequate carrel reading/study desk.

**Keywords:** College Libraries, Library Management, Servicescape



Journal of Applied  
Management (JAM)  
Volume 15 Number 4,  
December 2017  
Indexed in Google Scholar

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DOI: [http://dx.doi.org/  
10.21776/ub.jam.2017.015.  
04.09](http://dx.doi.org/10.21776/ub.jam.2017.015.04.09)

The college library is expected to meet the needs of teaching and learning process for academic communities. A library work team expects to have frequent visits by users. This rationale leads to a question, that is, what factors make users to come to a library. If the factors are identified, further improvement can be made to make their visits increased.

A collection factor is often identified as one of the main reasons to visit a library. This paper aims to investigate

servicescape and find out how it affects visitors' interest to come to the library. Servicescape refers to a library's overall physical atmosphere and physical environment in which service activity occurs. Library space atmosphere, design, furniture; appearance; lighting or lighting library space and library communication media are among the examples of servicescape categories.

Services are freely translated as intangible products such as accounting, banking, cleaning, consulting, education, insurance, expertise, medical care or transportation (<http://www.businessdictionary.com/definition/services.html>). This term is not easy to identify because the meanings are very closely related such as a combination of diagnosis, drug administration, etc. No transfer of ownership or ownership takes

place when services are sold, and they (1) cannot be stored or transported, (2) long-lasting, and (3) come into existence at the time they are bought and consumed.

The definition of servicescape itself may refer to a whole atmosphere and physical environment in which service occurs, and it is also called service setting. Lovelock and Wright (2002) have explained servicespace as follows.

Servicescape according to Nilsson dan Ballantyne (2014) as follows. It was first defines by Booms and Bitner (1981) as the environment in which the service is assembled for customers, where buyer and seller interact together. The servicescape shapes the expectations of the customers and also their satisfactions. The place where service is produced and consumed (often simultaneously) is also a place of service co-production, and recognized as such by many customers, whether taking the form of physical place or virtual space. The servicescape is traditionally concerned with the atmospherics of service, which can have a strong impact on customers' perceptions of the service experience and in communicating the firm's image and purpose to its customers.

Having adopted the study by Reimer and Kuehn (2005), Lovelock and Wright (2002) made use of twenty-five statement items as described in Table 2.

**METHOD**

The population of this study included all the University of Ciputra Surabaya visitors. They were about 3,409 people consisting of lecturers, staff, and student representatives in eight study programs. Samples were taken in some stages. First, it was to group the samples such as a group of lecturers, staff, and students based on the study program. Second, it was to determine sample size using Krejcie and Morgan tables (1970). We finally obtained 346 people. Thirdly, 346 samples were distributed in accordance with the previous grouping procedure. The result of the sample size is shown in Table 1.

Data were collected by means of questionnaires after having conducted validity and reliability tests. Questionnaire contains 25 items. The items are based on Reimer and Kuehn (2005). Data were analyzed using exploratory factor analysis. Model analysis is written as follows (Murwani, 2009):

$$X_i = a_{i1}F_1 + a_{i2}F_2 + \dots + a_{im}F_m + d_iU_i$$

where,

$X_i$  = Indicator i in standard score

$a_{i1}$  = Standardized regression coefficient of indicator i on common factor j;  $A_{ij} = \lambda_{ij}$  = loading factor is integrated as the correlation between the indicator by the factor, where the bigger  $\lambda$ , the stronger the incoming indicator becomes a member of a factor

**Table 1 Sample Size Distribution**

No	Elements	Population Size (N)	Sample Size (n)
1	Lecturers	351	(351/3409) x 346 = 35,63
2	Staffs	163	(163/3409) x 346 = 16,54
3	Management Students	1215	(1215/3409) x 346 = 123,32
4	Accounting Students	76	(76/3409) x 346 = 7,71
5	Visual Design Students	341	(341/3409) x 346 = 34,61
6	Architecture Students	130	(130/3409) x 346 = 13,19
7	Information Engineering Students	186	(186/3409) x 346 = 18,88
8	Psychology Students	125	(125/3409) x 346 = 12,69
9	Business Hospitality Students	594	(594/3409) x 346 = 60,29
10	Management Master Students	228	(228/3409) x 346 = 23,14
<b>Total</b>		<b>3409</b>	<b>346</b>

Source: Primary data from Academic Administration Bureau and Human Resources Department

- $F_i$  = common factor
- $d_i$  = standardized regression coefficient of indicator  $i$  on unique factor  $i$
- $U_i$  = Unique factor  $i$
- $m$  = number of common factors  $i$

**RESULT**

**Validity And Reliability Tests**

The results of validity and reliability test are shown in Table 2. This table shows twenty five items are valid with  $p$  less than 0.05 and reliable with Alpha Cronbach more than 0.6.

**Table 2 The Results of Validity and Reliability of Servicescape**

No	Item	Calculated r	p	Description
1.	The library equipment looks modern	0,732	0.000	valid
2.	The physical facilities are visually appealing	0,759	0.000	valid
3.	The library staff are attractive and easily recognizable	0,626	0.000	valid
4.	Newsletters and other communication materials are interesting	0,760	0.000	valid
5.	The library room is interesting	0,744	0.000	valid
6.	The interior design (lamp shade, the room sweetener) is interesting	0,734	0.000	valid
7.	The library room is fragrant	0,430	0.009	valid
8.	Low noise level	0,597	0.000	valid
9.	Clean room	0,614	0.000	valid
10.	Room temperature is comfortable	0,696	0.000	valid
11.	The air quality in the room is nice	0,792	0.000	valid
12.	The background of the music is fun	0,349	0.030	valid
13.	Color mebulair / furniture (sofa, chairs, tables) is interesting	0,562	0.013	valid
14.	The interior color of the lounge room and the have attractive collection space	0,731	0.000	valid
15.	Exterior (looks from the outside) has interesting library space	0,600	0.000	valid
16.	Inadequate indoor lights	0,689	0.000	valid
17.	Adequate Lighting (sunlight)	0,496	0.003	valid
18.	The library's opening hours are convenient for users	0,700	0.000	valid
19.	Locker / daycare is adequate	0,638	0.000	valid
20.	The study carrel table is adequate	0,641	0.000	valid
21.	The design of the circulating counter for borrowing and returning books is attractive	0,741	0.000	valid
22.	The arrangement of lounge space (lounge) library is neatly balanced with spacious room	0,683	0.000	valid
23.	Spatial arrangement collection is neatly balanced with the room	0,566	0.001	valid
24.	The arrangement of the book collection on the bookshelf is neat	0,642	0.000	valid
25.	Lounge are equipped with modern style decoration	0,670	0.000	valid

Source: Primary Data May 2015

**Exploratory Factor Analysis**

Using the Kaiser-Meyer-Olkin index (Murwani, 2009), 25 items were tested if they all were adequate enough to fulfill sample adequacy require-

ments. The KMO index was 0.929, and thus the samples were considered adequate, as it has exceeded 0.5 (Murwani, 2009). The Barlett test was further performed. Murwani (2009:5) explained the

Barlett test was a statistical test to check whether or not significant correlation between 25 items took place. Barlett test of this present study showed significant correlation among 25 items ( $p = 0.000$ ). Next was to conduct an extraction factor procedure. The result of the factor extraction yielded a number of extracted factors and the magnitude of factor load-

ing (Hair, 2016) of each indicator (Murwarni, 2009) as shown in Table 3.

Table 3 shows five factors are extracted (based on more than one eigenvalue). Each item has a loading factor, and the largest item is “Comfortable room temperature” item (0.816). Meanwhile, the smallest is the “Background music” item (0.428)

**Table 3** *Factor Loading*

	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>	<b>Factor 5</b>
The room was fragrant	0.555				
Low noise level	0.638				
Clean room	0.742				
Room temperature is comfortable	0.816				
The air quality in the room is nice	0.783				
Color mebulair / furniture (sofa, chairs, tables) interesting		0,548			
The interior design (lamp shade, the room sweetener) is interesting		0.627			
The interior color of the lounge room and the attractive collection space		0.631			
Exterior (looks from the outside) interesting library space		0.655			
The design of the circulating counter borrowing and return is attractive		0.679			
Modern style lounge lounge (lounge) décor			0.505		
The arrangement of the book collection on the shelves is neat			0.586		
The arrangement of lounge space (lounge) library neatly balanced with spacious room			0.700		
Spatial arrangement collection neatly balanced with the room			0.712		
The background of the music is fun			0.752		
The library equipment looks modern				0.428	
The physical facilities are visually appealing				0.597	
Light lights in enough space				0.683	
Lighting (sunlight) that comes in enough					0.470
The study carrel table is adequate					0.538
The library’s opening hours are convenient for users					0.617
Locker / daycare is adequate					0.680
					0.760

The final step is to give the name to five factors referring to the relevant literature. Factor 1 is cleanliness and comfort facilities (Siu, 2012), Factor 2 aesthetic facility (Wakefield and Blodgett, 1996), Factor 3 accessibility of the layout (layout

accessibility) (Wakefield and Blodgett, 1996), factor 4 the facility display (Wakefield and Blodgett, 1996; Siu, 2012), and factor 5 functionality of the facilities (Siu, 2012).

## DISCUSSION

This research found five factors of library servicescape, namely cleanliness and comfortable facilities, aesthetic facilities, accessibility to layout, facility appearance and functionality of facilities

### **Cleanliness and comfort of facility factor.**

This factor is related to ambient and servicescape which include a fragrant room, low noise level, clean room, comfortable room temperature, and good air quality. Siu (2012) describes the hygiene and comfort factors of the facility as follows.

*Several studies have shown the importance of ambience to the perceived quality of the servicescape in convention and exhibition settings. In a study of conference delegates in the United Kingdom, Robinson and Callan (2005) found that venue ambience was considered as the second most important attribute in determining quality perceptions, just after "competence". Weise (2008: 15) also documented the effects of temperature in both meeting and event spaces. The effects of music on customers' moods (Mattila and Wirtz, 2001), purchase intentions (Areni and Kim, 1993), as well as on service outcomes (Morin et al., 2007) have also been documented extensively in servicescape studies. Moreover, research has shown that pleasant aromas in a service setting can generate higher levels of physiological arousal (Lorig and Schwartz, 1988) and encourage customers to spend more time in the servicescape (Morrin and Ratneshwar, 2003). It is therefore argued that all of the above ambient conditions affect customers' evaluations of the quality of servicescape ( p. 237)*

**The aesthetic factor of the facility.** This factor is related to the architecture of interior design and servicescape which includes an attractive library room, attractive interior design/interior furniture, relaxing room interior color and attractive collection room, attractive exterior and modern style library lounge decoration. Wakefield and Blodgett

(1999); Siu (2012) explain the aesthetic factors of the facility as follows.

*In addition to being aesthetically appealing, the servicescape must be designed so that patrons of the leisure service feel comfortable. ... refers to the servicescape as the "built environment" or, more specifically, the "man-made, physical surroundings as opposed to the natural or social environment"...designed and arranged in leisure service settings....because they affect the comfort of the customer. Aesthetic appeal refers to factors such as the surrounding external environment, the architectural design, facility upkeep and cleanliness, signage, and other physical elements which customers view (and evaluate the aesthetic quality of) in the servicescape. Aesthetic factors are important because they influence the ambience of the place. (pp. 67-68)*

*Signs and symbols incorporate explicit and implicit elements (Bitner, 1992). These elements are intended to be an informative means of communicating product or service information, directing customer behavior or even for transmitting the cultural values of a firm. The signs, symbols and artifacts included in a setting help customers form their first impression of the overall servicescape and the service firm's ability to offer high-quality service. They have also a profound impact on whether customers believe that a company is trustworthy or not (Bitner, 1992). Nguyen and Leblanc(2002) found that visual symbols in part set the atmosphere within a servicescape. Clear location signs within a convention venue and clearly signed fire exits and routes are dimensions of access considered important to conference delegates (Robinson and Callan, 2005). Any favorable impression created by signs and/or symbols in a service setting will tend to induce desirable moods among customers, thus positively influencing their per-*

*ceptions of the quality of the overall servicescape. (p. 238)*

**Accessibility factor of the layout.** This factor is related to accessibility and layout that include an attractive circulation design of borrowing and returns, the arrangement of the lounge space of the library neatly balanced with the spacious room, the arrangement of the collection space neatly balanced with the spacious room, arrangement of book collections on neat bookcases, and decoration with modern style lounge (lounge). Siu, *et al.* (2012) describe the accessibility factor of the layout as follows.

*Spatial layout refers to the way the furnishings and equipment, service areas, and passageways are arranged, as well as the spatial relationships among these elements (Bitner, 1992). A well designed layout will provide convenient entry, exit and access to various kinds of customer facilities. This, in turn will positively enhance customers' perceptions of an effective and professional service environment, and improve customer satisfaction with the whole service experience. But a really well planned servicescape layout will not only fulfill functional needs, it may even help fulfill customers' hedonic or pleasure needs (Wakefield and Blodgett, 1996). Aubert-Gamet (1997) has shown how layout is strongly related to the sense of crowding or spaciousness. Hultsman's later study (2001) confirmed that layout was considered the secondmost important exhibit hall attribute...space as the most important criterion for an attractive event.... This makes spatial layout a good indicator of service providers' efforts towards their customers. (pp. 237-238)*

**Facility display factor.** This factor is related to the appearance of goods or equipment including modern-looking library equipments, visually appealing physical facilities, and a pleasant background music. Wakefield and Blodgett (1999); Siu (2012)

describe the facility display factors as follows.

*...to extended periods of time, the servicescape is even more likely to influence consumer attitudes toward the service provision. In these cases, the service provider should recognize that the servicescape may become a crucial component of the marketing strategy, perhaps equalling (or surpassing) the importance of offering a quality primary service.*

*...must be of acceptable quality, but a pleasing servicescape (i.e. the building, décor, layout, employee appearance, etc.) may determine to a large extent the degree of overall satisfaction and repatronage.*

*Excitement is an emotional response characterized by feelings ranging from exhilarating, sensational, stimulating, and interesting to dull, dreary, boring, unstimulating, and monotonous (see Russell and Pratt, 1980). We suggest that the servicescape can set the mood for these emotions, and can elicit either positive emotions or more negative emotions. High quality servicescapes, which may include stimulating electronic displays (e.g. bigscreen TVs; signs; lights) and otherwise attractive exterior and interior décor, may make the experience more interesting. In contrast, older facilities that are in disrepair and in need of new paint and equipment are likely to appear more dreary and boring. Because the servicescape influences the atmosphere of a place, we hypothesize that customers' perceptions of a higher quality servicescape will cause them to experience greater levels of excitement, which in turn will lead them to be more satisfied with the service experience. (pp. 68-69)*

*...and helpful staff were the most important attributes of... (p. 238)*

*According to Bitner (1992), ambient conditions mainly include temperature, lighting, music, aroma, and air quality. (p. 237)*

**Factor functionality of the facility.** This factor is related to the facility performance that includes inadequate indoor lights, adequate exposure (sunlight), convenient library opening hours for the user, adequate locker/daycare, and an adequate study carrel table. Siu (2012) describes the functionality factor of the facility as follows.

*Bitner (1992: 66) defined functionality as "...the ability of some items to facilitate per-*

*formance and the accomplishment of goals". It is of vital importance for convention and exhibition service providers to create a functional physical environment, as customers are observing and experiencing the environment's facilities intensively. Several studies have shown that meeting facilities such as modern audio-visual equipment are one of the most important attributes*

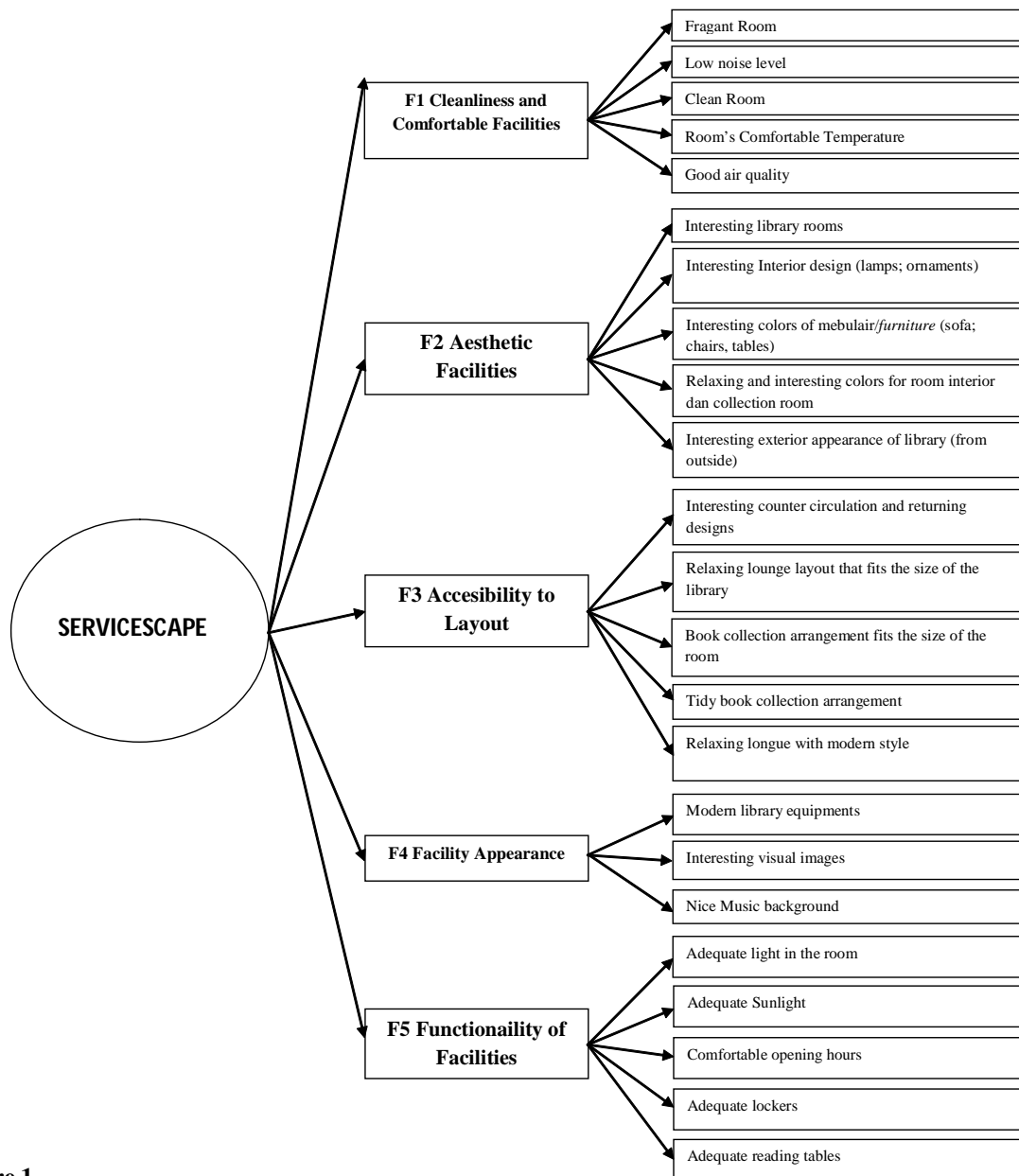


Figure 1

*determining the success of a meeting or convention and customer satisfaction, ... .*

*Customers' evaluations of the functional and aesthetic qualities of the facilities strongly affect their attitudes towards the servicescape.*

*Apart from functionality and performance, the amenity and comfort of facilities will strongly affect customers' physical experience (Wakefield and Blodgett, 1996).*

*..., Arneill and Devlin (2002) showed that individuals tend to assess overall quality according to their visual interpretation of the furnishings of a specific context. Wu and Weber (2005) later documented that ventilation, state-of-the-art audio-visual equipment, comfortable seating, adequate restrooms... .*

*A well-maintained facility was cited as the second most important attribute of a convention center in a study by Breiter and Milman (2006). (p. 238)*

From the above five factors can be arranged factor structure as shown in Figure 1.

## CONCLUSSION

Based on the results of research, discussion and interpretation of data can be concluded with the identification of five factors with each indicator. Nice fragrant room and low noise level are by a clean library room and comfortable library room temperature settings as well as good air quality. To attract visiting visitors, a library with interesting rooms' needs to supported with an attractive interior design, mebulair/furniture (sofa, chair, and table) with interesting colors. In addition, interior color of the lounge (lounge) and collection space needs to be considered. The exterior of the library room should be made interesting

For the counter-circulation design the borrowing and returning needs to be made interesting by observing how the library's lounge arrangement is arranged. Relaxed space needs to be arranged neatly balanced with the width of the room to be

maintained neatly also arrangement of the book collections must be ordered neatly book dirak and not less important also is how the decoration of the lounge (library) library kept in a modern style.

The existing equipment in the library should be modern and the physical facilities are visually made as interesting as possible. Overall the existing facilities of the library have to support the physical appearance of the library to attract visitors come, in addition to a pleasant background music.

Lighting of the lights has to be sufficient in space, and it needs to be kept in balance with the entry of sunlight. Hours of services provided should be made convenient for users, and the presence of lockers/daycare and reading table/study carrel have to adequate.

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