

# The Influence of Servicescape and Human Service of Exhibition on the Visitor's Flow and Revisit Intention

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## Article Info

Volume 81

Page Number: 165- 172

Publication Issue:

November-December 2019

## Abstract

**Background/Objectives:** In order to improve the visitors Flow and revisit intention exhibition began to introduce IT technology. However, there is a lack of research on whether actual IT technologies and human service affect the Flow and revisit intention of visitors. Therefore, this study is to examine the effect of servicescape and human service of exhibition, including IT technology, on the Flow and revisit intention of visitors.

**Methods/Statistical analysis:** We conducted survey from March 31 to April 4, 2017 at the Seoul Motor show in KINTEX, which is the exhibition that applied IT technology such as Virtual reality and VR experience zone. Totally, 268 questionnaires were used. For the evaluation of hypothesis, exploratory factor analysis, reliability analysis, correlation analysis, and regression analysis were performed using the statistical program SPSS 22.0.

**Findings:** Functionality, Electronic display, and Human service have positive effects on visitors Flow. Also every factors of servicescape (Functionality, Electronic display, Cleanliness), Human service and visitors Flow have positive effects on the Revisit intention. These results means that IT technology significantly affect to the visitors flow and revisit intention. And cleanliness is affect to the revisit intention but not significantly affect the visitors Flow. It means the exhibition context is more important than the cleanliness of the facility.

**Improvements/Applications:** This study is meaningful by confirming that the introduction of human services and IT technologies in the exhibition industry, which has been insufficiently studied until now, actually affects the Flow and revisit intention of visitors.

**Keywords:** Exhibition, Servicescape, Human service, IT technology, Flow, Revisit intention

## Article History

Article Received: 3 January 2019

Revised: 25 March 2019

Accepted: 28 July 2019

Publication: 22 November 2019

## I. Introduction

The exhibition is an eco-friendly, high-value-added industry that promotes economic ripple

effects in the region through economic, social, and cultural exchange and at the same time, cutting edge industry with the highest

development of advertising and marketing. These exhibitions are an industry that is likely to develop further, providing educational and cultural opportunities to the residents of the host region, as well as improving the awareness and image of the host region, and producing more effective effects than any other method as a means of promotion and sales[1]. It is no exaggeration to say that about 80% of the world's trade in the 21st century is through exhibitions.

Korea has also achieved rapid quantitative growth, but the problem is that most of the exhibition organizers are small and there is still a shortage of specialists. In order to be internationally competitive in the modernized and diversified world of customer needs, various researches and efforts are needed to bring out customer satisfaction. However, until now, the existing researches on exhibitions have been mostly focused on exhibitors such as exhibition targets, decision factors of exhibitions, selection criteria of exhibitions, and limited research on visitors [2].

Satisfaction has been recognized as a major factor in predicting future intentions of customers, such as intention to return to existing customers or increase reputation and awareness in the market [3]. Customer satisfaction is judged to include the physical environment and human services, and satisfaction and dissatisfaction occur depending on whether the consumer's expectations match the realistic situation. Such satisfaction exists for visitors visiting the exhibition, and Lousbury&Polik[4] defined audience satisfaction as a result of the consumer experience as a kind of attitude toward the total experience of the visitors. It is defined as a subjective judgment about the difference with expectations.

For the continuous growth and development of exhibition, it is important to provide satisfaction to visitors and to differentiate them from exhibition fairs with other similar characteristics. In order to differentiate the exhibition, as in other service industries, it is necessary to properly manage and operate

processes such as goods, promotion, and distribution, to provide competent human services, and to provide an excellent physical environment. For this reason, research on servicescape has been actively conducted in case of previous studies related to exhibitions.

Serviscape is a concept that emphasizes the importance of the physical environment in which a service is delivered in the process of delivering the service. Wakefield & Blodgett (1994)[5] and Lucas (2000)[6], in their own studies, also argue that tangibleness can be more importantly recognized to customers than intangibility, because the consumer stays in the room for a relatively long time. In addition, in the case of You-Jae Yi and Woo-Chul Kim's research[7], they argued customers in the physical environment of the service are exposed to numerous stimuli and they can be influenced by the service experience. Hutton & Richardson (1995)[8] also noted that Serviscape is part of the evaluation process around service quality, and visitors are mostly influenced by their appearance when evaluating services. In this context, the servicescape of exhibition can be a means of differentiating by affecting the overall impression of the exhibition as part of the evaluation process of the services provided to the visitors.

Existing physical environment has gradually expanded its scope according to the development of IT technology. In fact, the scope of servicescape has been expanded from the existing physical environment to virtual space, so the concept of servicescape is also changed like 'e-scape' [9], 'cyberscape'[10], and 'e-serviscape'[11]. .Exhibition are also showing changes in various aspects such as contents, programs, and physical environment through convergence with IT technology. Currently, many exhibition fairs introduce and try PDFs, kiosks, tablet PCs for information, and VR experience hall or operate cyber museums that allow visitors to experience the exhibition without having to visit them through the implementation of virtual spaces. Especially at the recent exhibitions, visitors

can provide information that visitors want through tablet PCs or provide realistic experience programs through VR experience halls. However, unlike the introduction of increasing IT technology, the research on whether the introduction of electronic equipment actually affects visitors flow and revisit intention is insufficient.

In addition, servicescape is one of the most influential models for explaining the impact on human behavior, but it does not fully explain the emotional aspects. There is a study that the behavior of the service delivery process affects customer orientation and trust based on the employee's behavior, image factors and surrounding factors in the actual physical environment [12]. In addition, research on the social elements of servicescape such as customer and employee, number of other customers or employees, degree of congestion, and accessibility, which are human components in the physical environment, is being actively conducted [13,14,15].

In this study, we found out the effects of servicescapes and human services on exhibitions, including IT equipments applied to exhibition museums such as informational tablet PCs, kiosks, and VR experience halls, on the satisfaction and returning intentions of visitors. For this, the following hypotheses were set.

## II. Materials and Methods

The purpose of this study is to investigate the influence of the servicescape and human service of the exhibition industry including the IT equipment such as the kiosk, VR experience hall, and tablet PC for providing information as shown figure 1. The Following hypothesis were set for this.

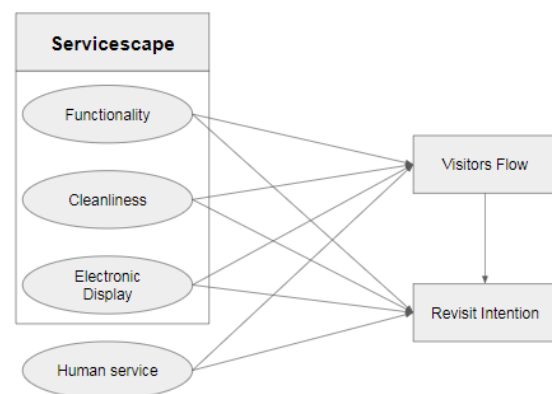
H1. The servicescape of the exhibition will have a significantly impact on the visitors Flow.

H2. The human services of the exhibition fair will have a significantly effect on the visitors Flow.

H3. The servicescape of the exhibition will have a significantly influence on the visitor's revisit intention.

H4. The human services of the exhibition will have a significantly effect on the visitor's revisit intention.

H5. The visitors Flow will have a significantly effect on the visitor's revisit intention.



**Figure 1. Research model**

## III. Results and Discussion

### Feasibility and reliability analysis

For test the hypothesis, Exploratory factor analysis was conducted. As a result of exploratory factor analysis, the servicescape of exhibition was extracted into three factors named “Functionality”, “Cleanliness”, and “Electronic display”. Human service, visitors flow and revisit intention were extracted as a single factor[Table 1].

**Table 1: Factor Analysis results**

Factor name		Factor loading	Eigen value	Disperison %	Cronbach's $\alpha$
Human service	I could feel sincerity and kindness from the staff at the exhibition venue.	.747	7.497	41.653	.894
	Employees pay close attention to customer problem solving	.737			

Service escape	Cleanliness	Employees have an individual interest in each customer	.731	1.627	9.040	.783
		The staff understood my desire to use the exhibition venue.	.725			
		Employees willingly helped customers	.716			
		The staff at exhibition venue had expertise in the service.	.703			
		The staff at exhibition venue provided customized service suitable to the customer's requirements.	.700			
		The supporters gave ample explanation about the safety of the fair.	.565			
	Cleanliness	The aisle and exit of the exhibition venue are clean	.807	1.627	9.040	.783
		The exhibition venues restroom is clean	.750			
		The overall facility of the exhibition venue is clean	.715			
	Electronic Display	The number of Signs in the exhibition venue are enough.	.809	1.164	6.468	.805
		Signs in the exhibition venue are easy to understand.	.722			
		Signs in the exhibition venue are useful for finding directions.	.718			
	Functionality	Electronic equipment in the exhibition venue is equipped with the latest technology.	.782	1.106	6.145	.750
		Electronic equipment in the exhibition venue can be used through rental or business center.	.667			
		The electronic equipment in the exhibition venue provides excellent electronic equipment.	.651			
		The overall facilities of the exhibition venue provide excellent functions for conducting conventions / events.	.513			
Total Dispersion: 63.306, KMO Measure of Sampling Adequacy: .921 Bartlett's Test of Sphericity Chi-Square 2451.302(df=171, p<.000)						
Flow		During the exhibition, I felt a sense of emancipation from my daily life.	.870	2.792	69.811	.855
		While I was watching the exhibition, I fell in love with other things.	.863			
		During the exhibition, It seemed to be at a different time from other places.	.838			
		I did not know how long it was going to be during the exhibition.	.768			
Total Dispersion: 69.811, KMO Measure of Sampling Adequacy: .810 Bartlett's Test of Sphericity Chi-Square 474.144 (df=6, p<.000)						
Revisit Intention		I will recommend this exhibition fair to people around me	.847	2.734	68.346	.845
		I will tell a positive story to others about this exhibition.	.841			

I am willing to visit this exhibition again in the near future.	.815
I will use this exhibition fair again.	.804
Total Dispersion: 68.346, KMO Measure of Sampling Adequacy: .816 Bartlett's Test of Sphericity Chi-Square 425.035 (df=6, p<.000)	

### Correlation analysis

To analyze the correlations between the variable, pearson's correlation coefficient was used. As a result, the correlation between all the variables was significant [Table 2]. And the correlation coefficient between all the variables was lower than 0.8.

**Table 2: Correlation Analysis**

		1	2	3	4	5	
Servicescape	Functionality	1					
	Cleanliness	.532**	1				
	Electronic Display	.548**	.496**	1			
	Human service	.567**	.491**	.554**	1		
	Flow	.518**	.362**	.504**	.576**	1	
	Revisit Intention	.537**	.504**	.540**	.561**	.556**	1
**p<.001							

### Hypothesis Verification

As a result of regression analysis, Functionality( $\beta=.133$ ,  $p<.05$ ) and electronic display( $\beta=.133$ ,  $p<.05$ ) among the three factors of servicescape significantly affected the visitors flow. The hypothesis 1 was partially adopted[Table 3]. The hypothesis 2, Human service( $\beta=.133$ ,  $p<.05$ ) had a significant effect on the visitors flow, was adopted[Table 4]. And the servicescape of exhibition( Functionality :  $\beta=.133$ ,  $p<.05$ , Cleanliness :  $\beta=.133$ ,  $p<.05$ , Electronic display :  $\beta=.133$ ,  $p<.05$ ) and human service( $\beta=.133$ ,  $p<$ ) were significantly affected the visitors flow[Table 5, Table 6]. Finally, Hypothesis 5 that the visitors flow will be significantly influenced was adopted[Table 7].

**Table 3: The Impact of Servicescape on Exhibition visitors Flow**

Dependent variable	Independent variable	Non-standardization factor		standardization factor	T	P
		B	SE	$\beta$		
Flow	(constant)	.725	.249		2.910	.004
	Functionality	.410	.079	.333	5.199	.000
	Cleanliness	.037	.069	.033	.539	.591
	Electronic Display	.317	.065	.305	4.881	.000
	R <sup>2</sup> =.338, AdjR <sup>2</sup> =.331, F=45.003, p<.000					

**Table 4: The Impact of Human service on Exhibition visitors Flow**

Dependent variable	Independent variable	Non-standardization factor			standardization factor	T	P
		B	SE	$\beta$			
Flow	(constant)	.954	.218			4.380	.000
	Human service	.707	.061	.576		11.497	.000
	R <sup>2</sup> =.332, AdjR <sup>2</sup> =.329, F=132.180, p<.000						

**Table 5: The Impact of Servicescape on Exhibition visitors revisit intention**

Dependent variable	Independent variable	Non-standardization factor			standardization factor	T	P
		B	SE	$\beta$			
Revisit Intention	(constant)	.069	.222			3.108	.002
	Functionality	.304	.070	.262		4.328	.000
	Cleanliness	.235	.062	.222		3.796	.000
	Electronic Display	.280	.058	.286		4.841	.000
	R <sup>2</sup> =.407, AdjR <sup>2</sup> =.401, F=60.500, p<.000						

**Table 6: The Impact of Human service on Exhibition visitors revisit intention**

Dependent variable	Independent variable	Non-standardization factor			standardization factor	T	P
		B	SE	$\beta$			
Revisit Intention	(constant)	1.337	.208			6.442	.000
	Human service	.647	.059	.561		11.048	.000
	R <sup>2</sup> =.315, AdjR <sup>2</sup> =.312, F=122.054, p<.000						

**Table 7: The Impact of Exhibition visitors Flow on Visitors revisit intention**

Dependent variable	Independent variable	Non-standardization factor			standardization factor	T	P
		B	SE	$\beta$			
Revisit Intention	(constant)	1.806	.168			10.764	.000
	Flow	.524	.048	.556		10.923	.000
	R <sup>2</sup> =.184, AdjR <sup>2</sup> =.182, F=88.685, p<.000						

Except the hypothesis that the cleanliness of servicescape had a significant effect on the visitors flow, All the hypothesis were adopted [Table 8]. This result is that even if the facilities are slightly less clean, exhibition visitors can enjoy and be immersed in the contents of exhibition, provided that the proper facilities, equipment and human services.

**Table 8: Result of Hypothesis**



Hypothesis	Path	Result
H 1	Servicescape of Exhibition → Visitors Flow	Accepted
H 1-1	Functionality → Visitors Flow	Accepted
H 1-2	Cleanliness → Visitors Flow	Rejected
H 1-3	Electronic Display → Visitors Flow	Accepted
H 2	Human service → Visitors Flow	Accepted
H 3	Servicescape of Exhibition → Revisit Intention	Accepted
H 3-1	Functionality → Revisit Intention	Accepted
H 3-2	Cleanliness → Revisit Intention	Accepted
H3-3	Electronic Display → Revisit Intention	Accepted
H 4	Human service → Revisit Intention	Accepted
H 5	Visitors Flow → Revisit Intention	Accepted

This results mean that even if the facilities are slightly less clean, exhibition visitors can enjoy and be immersed in the contents of exhibition, provided that the proper facilities, equipment and human services. However, it is notified that just the provision of facilities, equipment, and human services can not be sufficient in order for a visitor to visit the exhibition again. In addition, in the case of functionality defined in this study, IT equipment, such as cyber museums, kiosks, and information tablet PCs, was included unlike other previous studies that simply mean facilities and spaces provided at exhibition venues. Through this, it was confirmed that the IT equipment introduced in the exhibition venue had a significant influence on the visitors Flow and revisit intention. And it was confirmed that the introduction of appropriate IT technology should be considered as a way to provide differentiated In the case of cleanliness, it was found to have a significant effect on the visitors revisit intention, not to visitors flow. This is because the contents of exhibition are more important than the facilities to the visitors who want to immerse the contents of the exhibition. If the content is solid and provided to visitors through appropriate IT equipment, the cleanliness of the facility will not have a significant impact. However, since cleanliness

has a significant effect on revisit intention, it can be seen that the cleanliness of the facility is an important factor in the case of exhibition fairs that intend to form spectators who visit repeatedly or enthusiasts.

Electronic display items also had a significant effect on the immersion and return visit intention of visitors. Through this, it was found that providing information to visitors at the proper location by using various IT equipments could improve the immersion of visitors and lead to revisit.

Lastly, the human service also showed a significant effect on the visitors flow and revisit intention. This is because even though information is provided to visitors by using various IT equipments, it is difficult to replace empathy, attentiveness and emotion that only human services can provide.

#### IV. Conclusion

This study was conducted to examine the effect of servicescape and human service on the visitors flow and revisit intention in exhibition industry that was introduced various IT equipment. Nowadays, when various IT technologies are applied to the exhibition industry, the validity of the convergence between the exhibition industry and the IT

industry was confirmed by confirming that the application of IT equipment at the exhibition fair actually had a significant effect. Through this, it was confirmed that the application of IT equipment as an effective method of providing differentiated servicescape was effective, and that human service was one of the important factors. However, although various IT technologies are used in the exhibition industry, this research has largely defined the electronic equipment used in the exhibition industry. Therefore, in future studies, it is also important to identify which IT equipment and technologies have the greatest influence on the immersion and return visit intention among the IT technologies. In addition, since the servicescape and human services required for each exhibition have different characteristics, it is necessary to conduct research on exhibition exhibitions of various characteristics.

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