The Relationships among Business Event Legibility, Emotions and Behavioral Intentions

Deniz Yüncü

Anadolu University
Faculty of Tourism
Yunusemre Campus, Eskisehir
Turkey

Abstract

This research built a conceptual model to show how attendances' perceptions of event legibility influence behavioral intentions through emotions in the seminar as a business event. An Mehrabian-Russells' PAD model was proposed to explore the linkages between customers' perceptions and emotions (pleasure, arousal and dominance) and between customers' emotional states and behavioral intentions. Structural equation modeling was employed to test the causal relationships among the hypothesized relationships. Based on customer surveys, the findings are that organizational clarity had significant effects on the attendance pleasure while way finding and devices had significant effect on attendances pleasure and dominance. In addition, pleasure and dominance had significant effect on behavioral intentions.

Keywords: Servicescape, legibility, emotions, behavioral intentions, business events, seminars.

Introduction

Servicescape is a topic both on tourism and marketing and has been investigated for the last twenty years. Especially, it is a subject that has been investigated on various branches of tourism: hotels, restaurants, cruises, congress, festivals, and sport facilities. One of the most common models which is Stimuli-Organism-Response Model (SOR) of Mehrabian and Russell has been used to examine the emotional and behavioral responses of tourists/customers of service scapes in this study.

Mehrabian and Russell's Stimuli-Organism-Response Model (SOR) is one of the most influencing models which explains the effect of physical environment on human behavior. At this model, an individual's emotional responses are placed as a means between environmental stimuli and behavior. Physical environment or environmental stimuli initially affect the emotional reactions of a person, and then these emotional reactions affect a person's behaviors toward the environment which is defined as approach or avoidance. The SOR model was analyzed and it was found that this model is valid in various service environments such as in retail stores, hotel management (Namasivayam and Lin, 2004; Heide and Gronhaug, 2006; Mattila 1999; Contryman and Jang 2006; Sim *et al.*, 2006), catering management (Tse*et al.*, 2002; Andaleeb and Conway, 2006; Ryu and Jang, 2007; Namasivayam and Mattila, 2007; Jang and Namkung, 2009; Kim and Moon, 2009), festivals (Lee *et al.*, 2008) and sport facilities (Wakefield and Blodgett, 1996; 1999; Hightower *et al.*, 2002).

The aim of this study is to investigate the effects of legibility categorized as an experimental services cape in terms of seminars, one of the tourism facilities, on attendee's emotional responses and behavioral intentions. When studies related to legibility were examined, it was observed that quite limited studies had been conducted in environments where tourist/participant-environment interactions occur, such as in retail environments. In terms of tourism literature, except the studies of Newman (1995; 2007) and Foxall and Hackett (1994), none of the studies examined in the related literature did not investigate tourism experience and environment legibility. However, as it is known, tourism is a phenomenon which includes individuals' travels to foreign places. Nevertheless, according to most relevant research, there is a focus on general services capes such as atmosphere and ambiance, and it was observed that in terms of investigation, legibility dimension was ignored which has a vital contribution on shaping customers' experiences.

Because of these reasons, especially, the legibility dimension which enables the individual to move easily in a foreign environment and enrich his/her experience should be investigated. In this study, the effect of legibility dimension as a part of a seminar event, which is defined as an experimental services cape, one of the most popular business facilities, on relationship between attendees' emotional responses and behavioral intentions was investigated. More specifically, the aim of this study is to investigate:

- The effect of legibility dimensions on attendees' emotional responses
- The effect of attendees' emotional responses on behavioral intentions.

Literature Review

Servicescape and Legibility

Studies showed that services cape has a great effect on customers' product perception (Donovan and Rossiter, 1982; Turley and Milliman, 2000). In marketing literature, as a services cape dimension "legibility" was first examined by Foxall and Hackett (1994) for its spatial feature of an international congress center. In the study, the legibility of the congress center was investigated as one dimension which was called as "wayfinding". Another study on legibility was conducted by Newmann (2007) who tried to define the legibility dimensions and to determine the effects of these dimensions on airport visitors' emotional responses. In the study, the legibility dimensions of an airport was investigated in two dimensions which were "place organization" and "wayfinding". Although there has been limited number of studies on the concept of legibility, in the field of environmental psychology, legibility is considered as a theoretical basis and many studies were conducted. Legibility has been defined as an environmental stimulant in the field of environmental psychology (Lynch, 1960; Kaplan and Kaplan, 1978; 1979; 1995; Weisman, 1981; Passini, 1984), and as an extension of servicescape in the field of environmental tourism and marketing (Foxall and Hacket, 1994; Titus and Everett, 1995; Newmann, 1995; Newmann, 2007).

In general, legibility is an environment being able to form a mental image and the probability of being able to organize it as a consistent pattern (Lynch, 1960, p.2). In the preference matrix model developed by Kaplan and Kaplan (Kaplan and Kaplan, 1978; 1979; 1992; 1995), legibility was considered as an environmental stimulant in individual's place references and defined as constructing a place with distinctive elements in a good way to enable the individual find his/her way in the environment and turning back to his/her starting point easily. According to Kaplan and Kaplan, the basic need for information related to certain environments and places affects individual's differences (Kaplan, 1995, p. 58). Moreover, Passini (1984, p. 6) defines legibility as creating meaning on the targeted information and as the environment being convenient for inferring the information and as environment quality. This definition emphasizes that environmental legibility plays a vital role for customers in finding their way/directions in the service environment (Titus and Everett, 1995, p. 107). When these definitions are considered closely in relation to tourism and event experience, it is seen that legibility plays an important role for tourists or event participants while they find their ways and try to reach the information they look for in the physical environment.

The first study on legibility was conducted by Lynch (1960). Lynch (1960, p.2) investigated legibility as a psychological structure and defined legibility as realizing an environment easily and the easiness of organizing it with a specific pattern. According to Lynch, a legible environment can be a concrete reference system or an information organizer. It is seen that to explain the legibility concept in the field of environmental psychology, various researchers investigated various dimensions (concepts) such as organization and clarity (Lynch, 1960; Nasar, 1994, 2000; Oostendorp and Berlyne, 1978; Deng and Poole, 2012), wayfinding (Lynch, 1960; Weismann, 1981; Passini, 1984), signing/ equipment (Lynch, 1960; Newmann, 1995, 2000; Doğu and Erkip, 2000). Similarly, Köseoğlu (2012) stated that in the literature, it is seen that different dimensions were used such as order, simplicity, consistency, intelligibility and perception and all these concepts express the features which exist because of the structure of the place (Köseoğlu, 2012). The sub dimensions of the concept legibility determined after the literature study are presented below.

Organizational Clarity

Lynch used the concept legibility as a spatial organization and used the term "order" to explain legibility. In addition to Lynch, Nasar (2000; 1984) used the terms "order" and "clarity" to examine the legibility dimension. Nasar (1984) used the concepts conformity, legibility and clarity together to explain the relation between "term" and environmental organization, and stated that the concept "order" is related to environmental organization.

In this aspect, order is defined as the quality and the quality degree of the balanced relation among the parts of the environment and place (Nasar, 2000). Clarity reflects the definability of various elements which are closely related and the process of realizing an environment (Deng and Poole, 2012). Similar to the definition of clarity/order factors by Nasar (1984), Ostendorp and Berlyne (1978), the "order" dimension is related to environment organization such as suitability, similitude and clarity capacity/size. While conformity, suitability and similitude concepts are related to how elements improving the harmony of the environment are brought together, legibility is the ability to organize and to realize all parts of the place in a harmonial pattern which include all these concepts (Lynch, 1960).

Wayfinding

Another dimension taken into consideration while investigating the legibility concept is wayfinding (Lynch, 1960; Weisman, 1981; Passini, 1988; Newman, 2007). Basically Lynch (1960) defined legibility as easy wayfinding of an individual in an environment and well-construction of certain elements in the place so that the individual finds his/her way in turning back to the starting point easily. Similarly Weisman (1981) defined legibility as an element that aids the individual in wayfinding in a physical environment. Moreover, Passini (1988) defined legibility as easing the information quality in a place or an aid for wayfinding in a physical environment. Considering these, it is seen that not only the dimensions of order and clarity but also wayfinding is a structure that provides environmental legibility.

Devices

Devices used in an environment are elements that provide way finding, and as a result, support the legibility of an environment. Maps, signs and other visual elements are defined as necessary elements for way finding in an inexperienced place (Doğu and Erkip, 2000). It is possible to define event programs which are printed during the event and published on websites virtually as a means that provides legibility within the scope of the events. Event programs prepared for this purpose can be examined as an important factor in providing the legibility of the event.

Legibility, Emotional Reactions and Behavioral Intentions

To understand the effect of legibility, which is effective on a attendees of an event like in physical places, defined as an environmental stimulant on individual's emotional, cognitive and behavioral responses, it is benefited from environmental psychology which studies human-environment interaction. In environmental psychology, various models which explain the effect of the stimulants in physical environment on human behavior were developed. The most commonly used model among these developed models in the field of marketing and tourism is Stimulus-Organism-Response (SOR) model developed by Mehrabian and Russell (1974; 1976) (Figure 1).

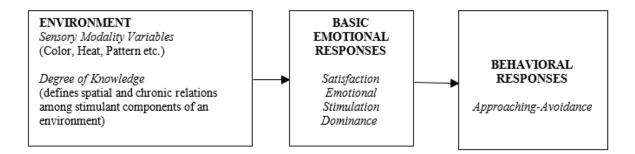


Figure 1.Mehrabian-Russell's Stimulus-Organism-Response Model

Reference: Adapted from Mehrabian, A. & Russell, J. A. (1976)

According to SOR Model, environmental stimuli (S) cause emotional response (R) on the individual. These emotional responses which are defined as approach and avoidance effect the behaviors of the individual toward the environment/organism (O). Although this model by Mehrabian and Russell was not developed for different consumption environments such as retail stores, hotels, restaurants and facility places, it is the most accepted model to explain services cape effects on customer behavior (Donovan and Rossiter, 1982; Donovan and Nesdale, 1994; Wakefield and Baker, 1998; Lin, 2004).

The Effect of Legibility on Emotional Response

According to M-R Model, environment effects an individual's behavior via the changes in emotions. Mehrabian and Russell think that in environmental circumstances, three basic emotional states intervene the approachavoidance behavior.

In M-R model, emotional responses were measured by emotional stimulation and dominance scale (PAD Scale). Pleasure, emotional stimulation and dominance towards environmental stimuli are three orthogonal dimensions which are the basis for any emotional responses, and they are emotional expressions that are evaluated based on the individual's own statement. Pleasure is related to feeling good, happy, joy and the degree of satisfaction in a particular situation (Mehrabian and Russell, 1976: 18). Mehrabian and Russell considered emotional stimulation as an emotional dimension which is different from Berlyne (1967, p. 12) who defined it as a process in central nervous system. Emotional stimulation is defined as an emotional expression with one dimension which is lined towards over excitement of sleeping state and it is stated that it is related to the degree of excitement, move, or feeling his/herself active during an emotional stimulation state (Mehrabian and Russell, 1976, p. 18). The feeling of dominance depends on the feeling of not being restricted or on the various ways of movement freedom. The dominance feeling is defined as the individual's feeling of control of his/her state. This feeling can be prevented by organisms which restrict the behavior forms or by organisms which ease different behavior (Mehrabian and Russell, 1976, p.19-20).

In the field of marketing and tourism, four basic theories taken from psychological literature are used to explain the emotions on consumers caused by consuming experience. These are Izard's (1977) DET-Differential Emotions Theory, Plutchik's (1980) CME-Circular Model of Emotion, Mehrabian and Russell's (1976) PAD-Pleasure Arousal Dominance and PANAS Positive and Negative Affect Schedule order models. Among these models, because of the advantages that PAD model offers, the PAD scale is preferred to be used in many studies measuring consumers' emotional responses in the field of marketing. Firstly, when compared with other emotional models, bipolar PAD Scale by Mehrabian and Russell is found more beneficial since it includes also the low level stimulant effect. At the same time, Holbrook (1986) stated that Russell's model does not include discriminant validity problem. Furthermore, Wirtz (1994) stated that the prediction and explanation power of bipolar emotional model provides a very good external validity. Therefore, when the marketing and tourism literature is examined, it can be seen that Russell's bipolar affective scale is used in most of the studies that examine consumption and the emotions that depend on this consumption.

In the field of tourism, it is stated that servicescape has positive effects on customer pleasure and on their emotional stimulation feelings in studies which were conducted in various consumption places such as hotels, restaurants and events. It has been determined that Ryu and Jang (2007) in large scale restaurants, Kim and Moon (2009) customer satisfaction of ambiance in thematic restaurants (Ryu and Jang, 2007; Kim and Moon, 2009) and emotional stimulation (Ryu and Jang, 2007) are the most powerful effects of servicescape on emotions. Kim and Moon (2009) found that besides ambiance, seating comfort, seating order and electronic equipment have an effect on the feeling of satisfaction. In addition, Lin and Mattila (2010) the theme decoration of the restaurant have a positive effect on customer satisfaction and emotional stimulation and only this effect is created in lower level in emotional stimulation dimension. Wakefield and Blodgett (1994) found that in the servicescape of stadiums where sport facilities take place, there is a direct correlation between the aesthetic appearance of the stadium with its crowd and seating order and the functional features and the variable of emotional stimulation which is defined as the excitement level of audience. In the study on festivalscapes, Lee and the others (2008) found that the festival program content, festival staff, festival place, food, gifts, suitability and marking have a direct effect on festival attendees' positive emotional responses.

The Effects of Emotional Response on Behavioral Intentions

In the S-O-R Model of Mehrabian and Russell, it is stated that an individual's behaviors affected by the feeling of satisfaction which appears by being affected by the stimulants in the environment is caused by the feelings of emotional stimulant and dominance (Russell and Mehrabian, 1978, p. 355). Researchers defined all the responses that an individual gives as approach and avoidance. While the approach behavior is defined as the desire of being in a physical environment, interaction with the environment and with the individuals in the environment, acting together, discovering the environment, carrying out the given task or as the desire of improving the satisfaction level, avoidance is defined as just the opposite of these behaviors.

In the studies conducted in the field of tourism, the findings showed that the emotional response caused by services cape defined as environmental stimulant in consumption environments are closely related to behavioral intentions of customers. Ryu and Jang (2007), Jang and Namkung (2009), Kim and Moon (2009) studied the effects of services cape on behavioral intention.

In these studies, it was observed that via emotional responses, services cape is directly related to behavioral intentions such as revisit, recommendation, staying in the restaurant for longer and spending more money. It was seen that at places where the facilities take place such as sport stadiums and festival places, emotional responses caused by services cape have effects on behavioral intentions of the facility participants (Wakefield and Blodgett, 1994; Wakefield *et al.*, 1996; Lee *et al.*, 2008).

Hypotheses

It is seen that servicescape has effects on customers' or attendees' emotional responses and behavioral intentions via the related literature. Depending on this, Figure 2 displays causal relations among emotional responses, behavioral intentions and legibility structures defined as an extension of experimental servicescape in seminar which is an event with business purposes. Subsequently, the model with its legibility dimension examines the causal and structural relations between emotional responses such as satisfaction, emotional stimulant and dominance and behavioral intentions. Hypothetically, organizational clarity, wayfinding and devices effect the emotional responses of seminar attendees and then the emotional states effect the behavioral intentions. Thus:

h_{1a}: Organizational clarity has a positive effect on pleasure

h_{1b}: Organizational clarity has a positive effect on arousal

h_{1c}: Organizational clarity has a positive effect on dominance

h_{2a}: Wayfinding has a positive effect on pleasure

h_{2b}: Wayfinding has a positive effect on arousal

h_{2c}: Wayfinding has a positive effect on dominance

h_{3a}: Devices have a positive effect on pleasure

h_{3b}: Devices have a positive effect on arousal

h_{3c}: Devices have a positive effect on dominance

h₄: Pleasure feelings have a positive effect on behavioral intentions

h₅: Arousal feelings have a positive effect on behavioral intentions

h₆: Dominance feelings have a positive effect on behavioral intentions

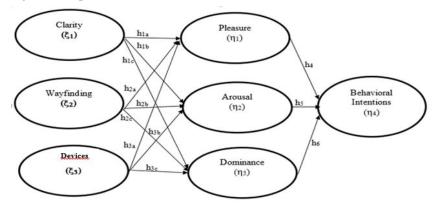


Figure 2: A Proposed Hypothetical Model

Method

Study Seminars and Sample

The population of the study was from the VII. Research Method Seminar organized in Antalya. Research Method Seminars have been organized since 2002 to improve knowledge and experience on research methods and techniques for academicians and post-graduate students. In the study the whole population participated in the study and the study included 230 seminar attendees. Data of the study were collected through face to face questionnaire. On the last day of the seminar, the questionnaire was given to 230 seminar attendees and 134 completed questionnaires were taken into consideration.

Scale Development and Questionnaire

The Scale of Events' Legibility

It is seen that to explain legibility in the field of environmental psychology different dimensions are used: Simple, consistent, understandable, perceivable etc. All these concepts express the features that result from the place structure. There is a need to differentiate place dimensions to measure place legibility using these concepts (Köseoğlu, 2012). Therefore, in this study, to measure the legibility of an event, the dimensions of the events were differentiated and the legibility dimension was evaluated with organizational clarity, way finding and devices. Each event has its own particular physical environment and various features. An event's servicecape is multidimensional and retails stores compared to other service environment such as malls are much wider and complicated. Moreover, in the present literature, no legibility scale developed for an event exists. Because of these reasons, there is a need to develop a scale to determine and define the basic structures which form the legibility dimension of seminar events.

The scale development study was based on the scale development paradigm suggested by Churchill (1979) and other researchers (Anderson and Gerbing, 1988). In the first stage, basic structures forming the legibility concept were determined based on the related literature review conducted by the researcher. Elements that form legibility of an event in the field of environmental psychology, evolutionary aesthetics, and marketing are determined as: "Organizational clarity" (Lynch, 1960; Nasar, 1997; 2000; Kaplan and Kaplan, 1995), "Wayfinding" (Lynch, 1960; Foxall and Hacket, 1994; Newman, 2007), "Devices" Kaplan and Kaplan, 1995). After this stage, at the stage that was suggested by Churchill (1979) as the second stage, to determine the expressions, again literature review was carried out and 22 items were determined. Considering this, the studies of Lynch (1960), Passini (1988), Weisman (1981), Titus and Everett (1995) and Newman (2007) were taken as basis for this study. The third stage includes simplifying the scale which includes items determined at the first stage, literature review and it includes determining the content validity of the scale. At this stage, one expert instructor fin the field of environmental psychology and two expert instructors in the field of tourism were asked to evaluate the items/expressions in the scale determined at the second stage. This stage was conducted to be certain about the expressions that represent the scale dimensions. As stated in previous studies, in general, university instructors act as experts or referees of the dimensions of a scale (Anderson and Reynolds, 2003; Babin and Burns, 1998). At this stage, the instructors were given the conceptual definitions of the dimensions which provide legibility of an event and they were asked to evaluate each expression that represent the dimensions. In addition to this, the instructors were asked to check the clarity of the words, in the expressions, the length and form of the expressions. As a result of this stage, two items were taken out of the scale and the number of items decreased from 22 to 20. At the fourth and fifth stages the data were collected and via exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) scale simplification study was conducted. The pilot study stated by Churchill could not be conducted since the seminar was not organized for the second time in the same year.

PAD Scale

In addition to the legibility scale in the study, the PAD (Pleasure-Arousal-Dominance) scale developed by Mehrabian and Russel (1976) was used in the study to determine the emotional responses which the seminar attendeess display legibility. The original version of the PAD scale was developed in English by the researchers. The scale was adapted to different languages to measure the emotional response of customers/attendeess from different cultures by various researchers (Russell et al., 1989; Chebat and Morrin, 2007; Davis et al., 2008; Brengman, 2002; Soriano and Foxall, 2006). Nonetheless, since the Turkish version of the scale does not exist, there was the need to adapt the scale to Turkish language initially. Translation equivalence method was used for the Turkish adaptation of the scale because this method is the most commonly used method to carry out the comparability study of the scale in different languages (Brislinet al., 1973; Mullen, 1995; Soriano and Foxall, 2006). The translation equivalence of the scale can be achieved by translating and retranslating the scale (Brislinet al., 1973; Mullen, 1995). Berry (1980, p. 10) states that translation equivalence, one of the methods of conceptual equivalence operational method, is the translation of the scale from its original language to the target language by a bilingual person and the retranslation of the scale to its original language by another person. Nevertheless, Mertens (1998) stated that it is important to avoid word to word translation but to consider linguistics, cultural and regional features of the language during the translation process. To achieve the Turkish equivalence of the scale, at the first stage, the original PAD scale was translated into Turkish by three university instructors who teach English at university.

The aim of the use of the emotional expressions in the scale was explained to the instructors and they were asked to translate the English emotional expressions of the scale to Turkish. After the first translation, problems occurred in direct translation of these adjective pairs which took place in the original scale: "awed-important", "aroused-unaroused", "controlling-controlled, "influenced-influential"; "in control-cared for". However, at the first stage, the original expressions in the scale were directly translated into Turkish by the instructors. At the second stage, a university instructor whose native language was English but taught Turkish in Turkey was asked to translate the Turkish scale to English. At this stage, the English translation of the adjective pairs which were pointed as problematic in the Turkish translation process was not consistent with the expressions in the original scale. Thus, the problematic adjective pairs were translated to adjectives which have similar equivalence in Turkish without losing their meanings. In the related literature, it was seen that researchers who used the PAD scale in their own languages experienced problems and changed these adjectives in a way that would not cause the loss of their meanings.

Behavioral Intention

To measure the behavioral reactions of seminar attendees in this study, behavioral intention scale which was developed by Zeithaml, Berry and Parasuraman (1996) and includes revisit intention dimensions and word of mouth communication (WOM) as determining factors.

Questionnaire

The questionnaire consists of 20 expressions to determine the legibility dimensions of the event, 15 expressions to determine the emotional responses towards the legibility of the seminar attendees, and three demographic questions to determine the demographic information of the attendees. The scale expressions related to the legibility and behavioral intention were structured as 7-point Likert scale. Also, a separate column, "No idea" was added to the scale for the attendees who did not have an idea about the given expression, and data expressed as "no idea" was entered as lost data during the data analysis.

In the study, the emotional responses caused by satisfaction, emotional stimulation and dominance dimensions were measured by semantic differential scale which uses opposite adjectives, has 7 points, and is a bipolar degreed scale (Osgood *et al.*, 1957; Heise, 1969; Al-Hindawe, 1996). Questions related to the demographic information of the attendees were designed as a nominal scale and where only one choice can be selected.

Data Analysis

At the data analysis preparation stage, initially the missing data problem was worked on. To solve the problem of missing value situation, LISREL 8.8 program was used by applying the multiple-imputation method. In addition to the missing data problem, the data distribution was examined to determine the techniques used for the exploratory and confirmatory factor analysis. The critical kurtosis value is ± 2 and for skewness it is defined as ± 2 in statistics (Hair *et al.*, 1998). The variables related to the data of this study was found between the determined range of kurtosis and skewness. Therefore, it was accepted that data related to variables displayed normal distribution and principle component analysis and varimax techniques in exploratory factor analysis were used.

Results

Exploratory Factor Analysis and Confirmatory Factor Analysis Legibility Scale

To assess the dimensionalities of legibility constructs, an EFA was conduct with Varimax rotation. The EFA results revealed three factors for the legibility construct explaining 72.28% of total variance. The first dimension labeled clarity, comprised nine items that were representative of respondents' perceived *organisation clarity*. The second dimension labeled *wayfinding* comprised five items representing respondents' easily wayfinding in seminar's hotel. The third factor labeled *devices* comprised three items representing respondent's perceived information of seminar' program. The reliability coefficients calculated were .94 for organisation clarity, .82 for wayfinding, .77 for devices. CFA was then conducted on the three-factor legibility construct with correlation matrix and maximum likelihood estimation. Based on the results of the first CFA made one modification between items (C1 and C5 items). When made modification between items, X^2/df was 1.8, which is below the desired threshold of 2.0.The goodness-of-fit indices reflected acceptable fit with RMSEA of 0.08 which is satisfactory. The other goodness-of-fit indices were all above their cut-off values with the CFI (CFI= .95), the GFI (GFI=.83) and the IFI (IFI=.97). These results suggested that the measurement model adequately fit the data.

The psychometric properties of each latent structure were evaluated separately through examining the completely standardized loading, t-value, R², construct reliability and average variance extracted. As seen Table 1, the standardized loadings (above .40), t-values (above 1.96 for p=0.05), construct reliability scores (above .70) and average variance extracted measures (above .50) lend evidence to the convergent validity for event' legibility scale.

Table 1: CFA for Legibility Scale

	CSL	t value	\mathbb{R}^2	CR	AVE
Organizational Clarity				.94	.67
C1The seminar web site provides sufficient info. about	.83	7.40	.68		
payment					
C2 The seminar web site content is easy to understand	.92	6.18	.85		
C3 The seminar web site provides understandable info about application procedure	.85	7.46	.71		
C4 The seminar web site is easy accessible	.84	7.08	.71		
C5 The seminar web site provides sufficient info about conference hotel.	.73	7.85	.54		
C6 The seminar web site's content is well organized	.86	6.86	.75		
C7 The seminar web site provides sufficient info about seminar	.81	7.59	.65		
C8 The seminar web site provides all the info I require about seminar	.81	7.46	.66		
C9 The seminar web site is legible.	.66	7.98	.43		
Wayfinding				.83	.50
W1Architecture of the hotel helps way finding	.81	6.01	.66		
W2 Hotel's entrances and exits are easy to find	.76	6.62	.58		
W3It's easy to move through hotel corridors	.74	6.82	.55		
W4 Rest rooms of the hotel are large enough	.51	7.84	.26		
W5The hotel is easy reachable	.67	7.31	.45		
Devices				.82	.62
E1 The seminar programme provides sufficient info	.89	4.96	.79		
about educations					
E2The seminar programme is settled easy understandable.	.92	3.92	.84		
E3 The seminar schedule is settled clearly	.47	8.04	.22		

PAD Scale

The EFA results revealed two factors for the PAD scale construct explaining 68.15% of total variance. The first dimension labeled pleasure and second dimension labeled dominance. The reliability coefficients calculated were .937 for pleasure, .843 for dominance. CFA was then conducted on the two-factor PAD construct with correlation matrix and maximum likelihood estimation. X^2/df was 1.2, which is below the desired threshold of 2.0. The goodness-of-fit indices reflected acceptable fit with RMSEA of 0.04 which is satisfactory. The other goodness-of-fit indices were all above their cut-off values with the CFI (CFI= .99), the GFI (GFI=.93), the IFI (IFI=.99), the NFI (NFI=.98) and the SRMR (SRMR= .03). These results suggested that the measurement model adequately fit the data. As seen Table 2, the standardized loadings (above .40), t-values (above 1.96 for p=0,05), construct reliability scores (above .93 for pleasure and .79 for dominance) and average variance extracted measures (above .67 for pleasure and .56 for dominance) lend evidence to the convergent validity for PAD scale

Table 2: Overall CFA for the PAD Scale

	CSL	t value	\mathbb{R}^2	CR	AVE
Pleasure				.93	.67
Unhappy-Happy	.84	12.10	.71		
Annoyed-Pleased	.80	10.96	.64		
Unsatisfied- Satisfied	.84	11.92	.71		
Melancholic-Contented	.85	12.27	.73		
Despairing-Hopeful	.85	12.06	.72		
Bored-Relaxed	.81	11.24	.65		
Dull-Jittery	.77	10.57	.60		
Dominance				.79	.56
Submissive-Dominant	.91	12.17	.83		
Insignificant-Important	.57	6.79	.33		
Guided-Autonomous	.74	9.39	.55		

Testing the Structural Model

After confirming the measurement models, the structural model was examined. The results of the standardized parameter estimates and t-values are reported in the Table 3. To identify the fit of the structural model, the overall fit index and supplementary goodness-of-fit indices were used. The Chi-square value ($X^2_{(134)}$ =42.41) was found as significant. However, other fit indices indicated a marginally acceptable level (RMSEA= 0.026, GFI=0.094, AGFI=0.89, CFI=0.99, SRMR=0.053). As shown in Table 3, organizational clarity, wayfinding and devices have a significant influence on attendees' pleasure feelings while wayfinding and devices have significant influence on attendees' dominance feelings. According to these findings, h_{1a} - h_{2a} and h_{3a} - h_{3c} supported. Furthermore, as hypothesized in h_4 and h_6 attendees' pleasure and dominance feelings were found to have a significant effect on behavioral intentions

Table 3: Structural Model: Standardized Coefficients, t-values

	η_1 Pleasure	η₃ Dominance	
ξ1 (Organizational Clarity)	γ _{1,1=} .54 (3.75) **	γ _{1,2} - .24 (1.54)	
ξ2(Wayfinding)	$\gamma_{2,1}=.25$ (2.23)*	γ _{2,2} - .25 (2.02)*	
\$3 (Devices)	γ _{3,1} =.72 (5.33) **	γ _{3,2} - .34 (2.28) *	
	Behaviora	Intentions	
η ₁ (Pleasure)	β _{2,1} . .59 (8.11) **		
η ₃ (Dominance)	β _{3,2} 17 (2.18)*		

Discussion

The study explored the relationships among events' legibility, attendees' emotional responses (pleasure and dominance) and behavioral intentions based on environmental psychology and marketing literature. Based on M-R model, current study proposed a theoretical model and tested it in a seminar as a business event. The most contribution of the current study is in its empirical demonstration of how event attendees perceive legibility and how perception directly influences attendees' emotions and indirectly affects their behavioral intentions.

The scale developed in this study provides an opportunity for quantitative measurement of legibility structure which is measured qualitatively and is explained more conceptually in particularly in the field of environmental psychology.

Different from the studies focusing on the environment of the building at testing servicescape and legibility, in the present study, the legibility dimension also includes multiple places such as hotels and destinations where the event takes place rather than the solely physical place and websites as virtual event environment. Considering this, different from the other studies, in this study, not only the legibility of the physical place but also the virtual website which is a part of event experience were considered as an environment which the event takes place. In the studies conducted in the field of marketing, legibility dimension was considered as one structure but the dimensions which are the basis for that structure were ignored. In this study, the dimensions which are the basis of legibility were investigated considering both physical place and virtual place and with this purpose, this study benefited from studies in the field of environmental psychology. Thus, it is though that more comprehensive approach was provided to understand the structure of legibility in detail. This study identified three dimension representing event legibility (organization clarity, wayfinding and devices) and examined how these legibility dimensions influence attendees' emotions and behavioral intentions.

Kaplan and Kaplan (1979; 1987; 1992; 1995) who explained legibility in terms of evolutional aesthetics which focuses on tracing in the stages of mankind development process of the individual's environment preference stated that basic information need related to specific environment and places effects individual's preferences; and therefore, "clarity" is an important element related to the individual's preference of the environment/place and the interpretation of these places. Similarly, it is seen that this approach is also valid for event experience. In the study, it was found that "organizational clarity" is important for the occurrence of satisfaction of the attendees which in turn influences attendee's behavioral intentions. As it is known, an event website can be considered as a virtual environment which informs seminar attendees and prepares them for their potential experiences. Moreover, the event program prepared can be defined as another element which provides information which shapes event experience of the attendees. Thus, the information presented for the attendees in the websites and event program provide the attendees the opportunity to understand and interpret the event experience by the help of the organization, presentation and amount of the information presented. In line with this, when the event planners design the event websites, it would be effective for them to consider the necessary information related to the processes before and during the event in terms of forming the attendees satisfaction and it would be effective for the attendees' revisit to the event.

The study revealed that way finding and devices which provide the legibility of the seminar event are effective on attendees' satisfaction feelings. The findings obtained from the present study show that the classic approach presented for cities by Kevin Lynch is valid also for event experience. The basic principle which Lynch (1960, p. 49) points for the legibility of a city or place is individual's easy understanding the place organization and signs and finding their way and directions effectively. Similarly, the architecture or place organization of the hotel where the seminar is organized enables the attendeess find their ways and directions in the hotel and this causes the emergence satisfaction feeling of the attendees and the revisit to the event. It is believed that at the event preparation stage, the architecture and place organization of the hotel where the event takes place should be considered at the first hand during the hotel choice.

Furthermore, in related literature, limited number of studies on measuring the dominance feeling of the customers have been conducted. Donnovan and Rossiter (1982), who investigated the effect of services cape on customers' dominance feelings, stated that ta causal relation could not be found between retail environment services cape and dominance feeling. However, different from the mentioned study, in this study, a positive causal relations was found between way finding and devices dimension and attendees' dominance feelings. Moreover, the arousal dimension, which was measured by using the PAD scale developed by Mehrabian and Russell (1976), was omitted from the analysis since it could not provide distinguishing validity and it was not used in the theoretical model analysis. It is believed that the reason for this result is the emotion which is stated at the translation equivalence stage which includes the adaptation of the adjectives in this dimension into Turkish, and along with the hardship experiences, the attendees were not able to exactly understand the adjective pairs in the arousal dimension. Therefore, there is a need for a study which aims at determining the adjectives to be used in arousal dimension in the Turkish scale.

Limitations

Several limitations of the present study should be mentioned. First, since data from this study were collected from attendees of seminars as business events, results may not be generalized to other types of the business events. Second, although the sample size (N=134) in the study seems enough for structural equation modelling, it is quite low. In addition, the use of a convenience sampling approach could decrease external validity. Thus, future studies should consider developing a systematic design to better represent the population.

References

- Anderson, J. C. and Gerbing, D. W. (1988), "Structural equation modeling in practice: A review and recommended two-step approach", Psychological Bulletin, 103, pp. 411-423.
- Bitner, M.J. (1992), "Servicescapes: The Impact of Physical Surroundings on Customers and Employees", The Journal of Marketing, 56(2), pp. 57-71.
- Brislin, R.W., KLonner, W.J. and Thorndike. R.M. (1973), Cross-cultural research methods, USA, John Wiley & Sons, Incorp.
- Churchill, G.A. (1979), "A paradigm for developing better measures of marketing constructs", Journal of Marketing Research, 16(1), pp. 64-73.
- Countryman, C.C. and Jang, S. (2006), "The effects of atmospheric elements on customer impression: The case of hotel lobbies", International Journal of Contemporary Hospitality Management, 18(7), pp. 534-545.
- Davis, L., Wang, S. and Lindridge, A. (2008), "Culture influences on emotional responses to on-line store atmospheric cues", Journal of Business Research, 61, pp. 806–812.
- Donovan, R.J. and Rossiter, J.R. (1982), "Store atmosphere: An environmental psychology approach", Journal of Retailing, 58, pp. 34-57.
- Foxall, G. and Hackett, P. (1994), "Consumer satisfaction with Birmingham's International Convention Centre", Service Industries Journal, 14(3), pp. 369–380.
- Hair, J.F., Anderson, R.E., Tahtam, R.L. and Black, W.C. (1998), "Multivariate data analysis with readings, Englewood Cliffs, N.J.: Prentice-Hall.
- Heide, M. and Grønhaug, K. (2006), "Atmosphere: conceptual issues and implications for hospitality management", Scandinavian Journal of Hospitality and Tourism, 6(4), pp. 271–286.
- Heise, D. R. (1969), "Some methodological issues in semantic differential research", Psychological Bulletin, 72(6), pp. 406-422.
- Hightower, R., Brady, M.K. and Baker, T. L. (2002), "Investigating the role of the physical environment in hedonic service consumption: An exploratory study of sporting events", Journal of Business Research, 55, pp. 697-707.
- Holbrook, M. A. (1986), "Aims, concepts, and methods for the representation of individual differences in esthetic responses to design features", Journal of Consumer Research, 13(3), pp. 337-347.
- Izard, C. E. (1977). Human emotions, New York: Plenum Press.
- Jang (Shawn), S. and Namkung, Y. (2009), "Perceived quality, emotions, and behavioral intentions: application of an extended Mehrabian–Russell Model for restaurants", Journal of Business Research, 62(4), pp. 1-10.
- Kaplan, S. (1979). Perception and landscape: Conceptions and misconceptions. National Conference on Applied Techniques for Analysis and Manage-ment of the Visual Resource, Incline Village, Nevada, April 23-25, 1979. http://www.fs.fed.us/psw/publications/documents/psw_gtr035/psw_gtr035_05_s-kaplan.pdf.
- Kaplan, S. and Kaplan, R. (1978). Humanscape: Environments for people, North Scituate, Mass.: Duxbury Press.
- Kaplan, S. and Kaplan, R. (1989). The Experience of nature, Cambridge University Press.
- Kaplan, S. (1987), "Aesthetics, affect and cognition: environmental preference from an evolutionary perspective", Environment and Behavior, 19(1), pp. 3-32
- Kaplan, S. (1995). Environmental preference in a knowledge-seeking, knowledge-using organism. In J. H. Barkow, L. Cosmides& J. Tooby (Eds.) The adapted mind: Evolutionary psychology and the generation of culture. Oxford University Press, USA.
- Kim, W.G. and Moon, Y.J. (2009), "Customers' cognitive, emotional, and actionable response to the servicescape: A test of the moderating effect of the restaurant type", International Journal of Hospitality Management, 28, pp. 144–156.
- Kwortnik, R.J. (2008), "Shipscape influence on the leisure cruise experience", International Journal of Culture, Tourism and Hospitality Research, 2(4), pp. 289-311.
- Lee, Y.K., Lee, C.K., Lee, S.K. andBabin, B. J. (2008), "Festivalscapes and patrons' emotions, satisfaction, and loyalty", Journal of Business Research, 61, pp. 56–64.
- Lin, I.Y. and Mattila, A.S. (2010), "Restaurant servicescape, service encounter, and perceived congruency on customers' emotions and satisfaction", Journal of Hospitality Marketing & Management, 19(8), pp. 819-841.
- Lin, I.Y. (2004), "Evaluating a servicescape: The effect of cognition and emotion", Hospitality Management, 23, pp. 163–178.
- Lynch, K. (1960), The image of a city, Cambridge, MA: MIT Press.
- Mattila, A.S. (1999), "An Analysis of means-end hierarchies in cross-cultural context: What motivates Asian and Western business travelers to stay at luxury hotels?", Journal of Hospitality & Leisure Marketing, 6(2), pp. 19-28.

- McDonnell, A. and Hall, C. M. (2008), "A Framework for the evaluation of winery services cape: A New Zealand case, "PASOS Revista de Turismo Patrimonio Cultural, 6(2), pp. 231-247.
- Mehrabian, A. (1972), Nonverbal communication, Chicago, Aldine-Atherton.
- Mehrabian, A. (1976), Public places and private spaces: The psychology of work, play and living environments, New York: Basic Books.
- Mehrabian, A. and Russell, J.A. (1976), An approach to environmental psychology, Cambridge Mass.; London: M.I.T. Press.
- Mullen, M. R. (1995), "Diagnosing measurement equivalence in cross-national research", Journal of International Business Studies, 26(3), pp. 573-596.
- Namasivayam, K. and Mattila, A.S. (2007)," Accounting for the joint effects of the services cape and service exchange on consumers' satisfaction evaluations", Journal of Hospitality & Tourism Research, 31(1), pp. 3-18.
- Namasiyayam, K. and Lin, I. (2004), "Accounting for temporality in services cape effects on consumers' service evaluations", Journal of Foodservice Business Research, 7(1), pp. 5-22.
- Nasar, J.L. (1994), "Urban design aesthetics: The evaluative qualities of building exteriors", Environment and Behavior, 26(3), pp. 377–401.
- Nasar, J.L. (1987), "Effects of sign complexity and coherence on the perceived quality of retail scenes", Journal of the American Planning Association, 53(4), pp. 499-509.
- Nasar, J.L. (1997), New developments in aesthetics for urban design, In E. H. Zube and G. T. Moore (Eds.) Advances in environment, behavior and design. Springer.
- Nasar, J.L. (1989), Perception, cognition and evaluation of urban places, In I. Altman and E. H. Zube (Eds.). Public places and spaces. New York: Plenum Press.
- Newman, A.J. (1995), "Is the way-forward bright?", Professional Marketing, 3(5), pp.24–25.
- Newman, A.J. (2007), "Uncovering dimensionality in the servicescape: towards legibility", The Service Industries Journal, 27(1), pp. 15–28.
- Oostendorp, A. and Berlyne, D. E. (1978), "Dimensions in the perception of architecture: Multidimensional preference scaling", Scandinavian Journal of Psychology, 19(1), pp. 145–150.
- Osgood, C.E., Suci, G.J. and Tannenbaum, P. H. (1957), The Measurement of meaning, Urbana: University of Illinois Press.
- Passini, R. (1984), Wayfinding in architexture, New York: Van Nostrand Reinhold.
- Plutchik, R. (1980), Emotion: A psycho evolutionary synthesis, New York: Harper and Row.
- Russell, J.A. and Mehrabian, A. (1978)," Approch-avoidance and affiliation as functions of the emotion-eliciting quality of an environment", Environment and Behavior, 10(3), pp. 355-387.
- Russell, J.A., Lewicka, M. and Niit, T. (1989), "A cross-cultural study of a circuplex model of affect", Journal of Personality and Social Psychology, 57(5), pp. 848-856.
- Ryu, K. and Jang, S. S. (2007), "The Effect of environmental perceptions on behavioral intentions through emotions: the case of upscale restaurants", Journal of Hospitality & Tourism Research, 31(1),pp. 56-72.
- Sim, J., Mak, B. and Jones, D. (2006), "A model of customer satisfaction and retention for hotels", Journal of Quality Assurance in Hospitality & Tourism, 7(3), pp. 1-23.
- Soriano, M.Y. and Foxall, G.R. (2006), "A Spanish translation of Mehrabian and Russell's emotionality scales for environmental consumer psychology", Journal of Consumer Behavior, 2(1), pp. 23-36.
- Titus, P.A. and Everett, P.B. (1995), "The consumer retail search process: a conceptual model and research agenda", Journal of the Academy of Marketing Science, 23(2),pp.106-119.
- Wakefield, K.L. and Blodgett, J.G. (1994), "The importance of services capes in leisure service settings", Journal of Services Marketing, 8(3), pp. 66-76.
- Wakefield, K.L. and Blodgett, J.G. (1999), "Customer response to intangible and tangible service factors", Psychology & Marketing, 16(1), pp. 51–68.
- Wakefield, K.W. and Baker, J. (1998), "Excitement at the mall: Determinants and effects on shopping behavior", Journal of Retailing, 74 (4), pp. 5I5-539.
- Weisman, G. (1981), "Evaluating architectural legibility: Wayfinding in the built environment", Environment and Behavior, 13, pp. 189-204.
- Wirtz, J. (1994), "The Affect literature in psychology—A review for consumer behaviourists", Asian Journal of Marketing, 3, pp.49–70.
- Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", Journal of Marketing, 60(2), pp. 31-46.