A CONCEPTUAL FRAMEWORK TO MEASURE E-SERVICESCAPE ON A B&B WEBSITE

Myunghee (Mindy) Jeon
Iowa State University
Ames, IA, USA

and

Miyoung Jeong
University of Massachusetts,
Amherst, MA, USA

ABSTRACT
E-servicescape contributes to facilitating the online customer’s surfing experiences in the course of casual navigation, collecting information, or purchasing a product/service. Despite its importance, few studies on e-servicescape have been noticed in the context of the lodging industry, specifically bed and breakfasts (B&B). This study attempts to examine the dimensions of e-servicescape (ambient, design, search aids and slogans, and functional aspects) as antecedents of perceived e-servicescape quality of B&B Website. It also attempts to measure e-servicescape quality of a B&B Website. Additionally, this study investigates dimensions of the e-servicescape that are the most influential on customers’ decision-making in the selection of a B&B.

Key Words: Servicescape, E-servicescape, B&B Website, Perceived e-servicescape quality

INTRODUCTION
Bitner (1992) asserted that human behavior is influenced by the physical setting and the organization’s physical setting influences customer and employee behaviors. Customers seek evidence of the ultimate quality of the intangible service by observing the tangible elements (physical surroundings), called servicescape (Berry & Parasuraman, 1991). Service products are unique because they are generally produced and consumed simultaneously (Bitner, 1992). Service products are a combination of intangible and tangible components, such as a meal at a restaurant provided with services by wait staff. The actual service provided by the wait staff is intangible (Namasivayam & Lin, 2008). However, the service environment where the service is provided consists of both tangible and intangible elements (Namasivayam & Lin, 2008). Bitner (1992) defined servicescape as the built environment, which has artificial physical surroundings as opposed to the natural or social environment. Namasivayam and Lin (2008) described servicescape as the physical environment of an organization encompassing several different elements, such as overall layout, design, and décor of a store. The servicescape also includes aspects of atmospherics, such as temperature, lighting, colors, music, and scent (Bitner, 1992; Namasivayam & Lin, 2008). The servicescape is important, since it influences not only consumers’ cognitive, emotional, and physiological states but also their behaviors (Bitner, 1992; Namasivayam & Lin, 2008). Therefore, it is important for service organizations, including hospitality entities, to manipulate the servicescape effectively to enhance customer satisfaction and increase repeat business (Namasivayam & Lin, 2008).

Unlike the brick-and-mortar business environment, the Internet business has a unique element of business transactions and service environments because transactions occur online. While the offline service environment is termed as servicescape, in which a service experience is organized and delivered by service providers and experienced by a customer, the Internet service environment may be termed as e-servicescape, virtual servicescape (Mummalaneni, 2005; Vilnai-Yavets & Rafaeli, 2006), or cyberscape (Williams & Dargel, 2004). In the context of e-commerce, e-servicescape and atmospherics of a company’s Website facilitate customers’ surfing experiences in the course of collecting information and purchasing experiences. While dimensions of servicescape versus e-servicescape overlap at some degrees, they apparently differ from each other at various aspects, due to the characteristics of the e-commerce service environment, where customers do not encounter services provided by service employees physically. As the servicescape is crucial for the service organizations, the e-servicescape is critical for the service providers via the Internet.

Since the Internet has tremendously influenced the way of doing business in the hospitality and travel industries, Websites have become a valuable source for business. With proliferation of the Internet and its enormous
impacts on the lodging industry, almost every hospitality company operates its Website. According to the Travel Industry Association of America (2006), out of 216 million adults, nearly 121 million people (56%) use the Internet and approximately 101.3 million people (84%) used the Internet for their travel planning in 2005. Since online booking revenue has grown significantly, 52 percent of the reservations were made via online in 2005 compared to 40 percent in 2004 (Kerner, 2005). Hence, the virtual servicescape or e-servicescape is considered to be a crucial business source for lodging companies. Specifically, for independently-owned small-sized lodging businesses, such as B&Bs, it is important to ensure that they provide a quality e-servicescape to customers on Websites to be competitive in the e-commerce market. Internet-based marketing strategies enable small business owners to compete with large lodging corporations to keep their market share in the niche market by providing their unique service atmospherics both off line and online services.

Numerous studies have shown the importance of understanding the design of e-commerce and e-service systems affects customer reactions (Cao & Zhao, 2004; Iqbal, Verma, & Baran 2003, Kim & Lee, 2002; Mummalaneni 2005; Rahul, Lakshmi, & Salam, 2003; Santos, 2003; Thompson, 2002; Vilnai-Yavets & Rafaeli, 2006). However, few studies on e-servicescape have been conducted in the context of the lodging industry, specifically with B&Bs. According to an empirical study on experiential marketing for B&Bs (Oh, Fiore, & Jeong, 2007), B&B owners emphasized the aesthetic and design aspects of their Websites the most by using high quality photos and organized Website structure. Compared to large, corporate chain hotels, B&Bs offer only limited service amenities to their customers. For this reason, B&B owners try to highlight their unique lodging service by targeting a niche market and customers who look for an experiential stay for their leisure travels. B&B owners tend to present high quality photos about their service offerings on their Websites in order to deliver simulated B&B experience to their prospective customers prior to their stay.

Therefore, this study attempts to examine the dimensions of the service environment on B&B Websites as antecedents of perceived e-servicescape. Furthermore, this study aims at investigating the relationships among e-servicescape and perceived service quality, and customers’ intention to use B&B Websites. More specifically, this study attempts to investigate which dimensions of the e-servicescape are most influential on customers’ perceived service quality of a B&B Website to boost online bookings or incoming calls for making reservations from prospective customers. It is posited in this study that four dimensions of e-servicescape determine customers’ perceived service quality of B&B Websites—ambient, design, search aids & slogans, and functions with the Website.

**REVIEW OF LITERATURE**

**Research on Servicescape**

All physical elements in venues of service providers such as lighting, signage, textures, materials, upholstery, color, music, fragrances, and temperature of the environment contribute to creating the servicescape (Namasivayam & Lin, 2008). Bitner (1992) viewed the servicescape as the packaging of services and categorized it into three components—ambient conditions, spatial/function, and signs, symbols and artifacts. Ambient conditions involve sensory elements, such as temperature, color, lights, noise, music, scent, and so on (Bitner, 1992), which affect customers’ perceptions of the service environment (Nguyen, 2004). Spatial layout embraces layout, equipment, furnishings, and so on (Bitner, 1992), which reflects physical and spatial environments where the service occurs. Signs, symbols, and artifacts relate to signage, personal artifacts, style of décor, and so on (Bitner, 1992), which contribute to creating an appropriate atmosphere and direct customers to service experiences during their service encounter (Nguyen, 2006).

The servicescape also affects the overall image of a service organization. In terms of marketing strategies, corporate image is important because it is associated with customers’ perceptions of the products/services offered (Zeithaml & Bitner, 2000), and, in turn, corporate image can influence customer satisfaction and ultimately customer loyalty (Andreassen & Lindestad, 1998). Moreover, a company’s image contributes to value addition and increases customer satisfaction during the consumption of products/services (Kandampully & Suhartanto, 2000). Also, a company’s image evokes service experiences and memories after the consumption of products/services (MacInnis & Prices, 1987). A study in the hotel services showed that corporate image and customer satisfaction are positively related to customer loyalty (Kandampully & Suhartanto, 2000). Nguyen (2006) tested the impact of cues related to service workers and servicescape in hospitality services in the context of corporate image. A linear relationship between corporate image and the servicescape was found in his study.
It has not been long since servicescape has been recognized as an important factor affecting the process of managing corporate image (Bitner, 1990; Nguyen, 2006). Servicescape is crucial in service organizations because a customer usually encounters servicescape prior to his/her interactions with a service provider (Namasivayam & Mattila, 2007). In their study, Namasivayam and Mattila investigated whether servicescape has an important effect on customers’ mood states. They empirically examined the joint effects of servicescape and the interaction with a service provider on customer satisfaction.

E-servicescape

E-commerce shares ultimately many service characteristics irrespective of offering products or services (Williams & Dargel, 2004). The atmospherics on a Website facilitate customers’ purchase experiences and are likely to influence customer feelings toward an organization (Mummalaneni, 2005). When sales or service encounters occur through the Website, the e-servicescape may become particularly critical because it is the key factor representing the organization to customers (Rafaeli & Pratt, 2005). The Internet allows customers a convenient way to explore a broader range of products and product attributes, and provides customers with chances to compare features of a product/service and prices on multiple Websites (Williams & Dargel, 2004). A study of virtual servicescape was conducted to examine the impacts of aesthetics and professionalism on customer feelings of pleasantness, satisfaction, and approach toward service interaction of a service organization (Vilnai-Yavets & Rafaeli, 2006). It was found that aesthetics aspects were influential on customers’ feelings of pleasantness, satisfaction, and approach toward service interactions, as well as professionalism which influences customer satisfaction. Williams and Dargel (2004) discussed intangible benefits of interactions with the Website as offerings of the cyberscape, such as saved time, convenience, and a reduced risk of customer dissatisfaction due to adequately provided information. The researchers also discussed how the Internet minimizes the risk of customers’ post-purchase dissatisfaction, since it enables customers to enhance their own search and evaluation capabilities. Moreover, it allows them to achieve this search and evaluation beyond traditional distribution channels and physical environments, designed and planned to manipulate internal cognitive and emotional responses (Williams & Dargel, 2004).

Determinants of e-servicescape of a B&B Website

Building on the frameworks of previous studies on servicescape and customer relationships in service organizations in a physical setting (Bitner, 1992) and on the Website environment (Williams & Dargel, 2004), it is viewed in this study that Ambient/Aesthetic conditions, Design aspects, Search aids & slogans, and Functional aspects comprise the perceived e-servicescape and determine customers’ perceived e-service quality. It is also posited that the perceived e-servicescape affects the perceived e-service quality of a B&B Website. Further, the perceived e-service quality may affect a customer’s intention to use B&B service, in turn, the customer’s intention to use will lead to actual booking with a B&B.

In the context of e-servicescape, ambient conditions, design aspect, aesthetics dimension, and interaction with a Website will provide customers with communication cues. For example, when a customer accesses a B&B Website, he or she may sense the e-servicescape, based upon the elements of sensory appealing aspects, mainly visual and audio effects in e-commerce atmospherics, such as overall Website design, layout, use of space, color scheme, quality photos, animation effects, virtual tour, music, and sound effects. On top of these sensory appealing elements, e-servicescape involves interaction with the Website, instead of encountering service employees in a physical setting (see Figure 1).

Ambient conditions

Ambient conditions involve background characteristics of the environment, mainly affecting the five senses, such as temperature, lighting, noise, music, and scent (Bitner, 1992) in the physical service settings. In this study, it is viewed that ambient conditions of e-servicescape involves background characteristics, such as color, virtual tour (not all B&B Website will provide this feature), music or sound effects on a B&B Website. Virtual tour and sound effects may influence a customer’s feelings or impressions of a B&B Website. For example, if a B&B wants to emphasize its service feature of being located in woods, it can provide a 360-degree virtual tour for customers with the surroundings of the location, as well as sound effects, such as birds singing or water falling. In this case, a customer who has young children in his/her family may consider the B&B as a next vacation destination that can fulfill the dual purposes of relaxation time for adults and educational experiences for children. A study of music
Figure 1.
A framework for environmental dimensions affecting perceived e-servicescape

The results revealed that customers who liked the music played, rated the service quality and merchandise offered highly, as well as perceived service quality highly when classical music was played. However, most B&B facilities are run by owners or innkeepers in the form of small sized business having a limited number of guest rooms (less than 15 or so), thereby making comparably smaller revenues. Their Websites offer only limited service features rather than sophisticated high-tech based features on a Website. It is believed that making Websites, using cutting edge technology, may cost considerably high for B&Bs compared to their revenue. Thus, it is assumed the virtual tour feature may not be offered for every B&B Website, while most B&B Websites provide quality static photos.

For Website design, aesthetic aspects are important and are considered as the appearance or virtual attractiveness of a Website. It closely relates to types and sizes of fonts, the clarity and readability of texts (Madu & Madu, 2002), as well as quality photos with high resolution, use of appropriate visual presentations on a Website. A study found that customers expect to find aesthetic design in a service place and are more satisfied when the servicescape is aesthetic rather than unesthetic, regardless of the physical setting or the online setting (Hall & Hanna, 2004; Vilnai-Yavets & Rafaeli, 2006). It is viewed in this study that aesthetics reflect the aspects that communicate with customers implicitly, such as type and size of fonts, clarity and readability of text, quality of visual presentations and animation effects on a Website. Web pages should be clean, clear, and relatively simple, not causing a cluttered look. It is believed that ambient conditions reflect the aspects that influence customers’ perceptions in a holistic way in the Website service environment, such as quality photos, harmonized color scheme, animation effects, virtual tour, music, and sound effects on a Website. Consequently, it is posited:

P1] Ambient/aesthetic conditions positively affect perceived e-servicescape on a B&B Website.

Design aspects
In retail or service settings, spatial layout and functionality of the physical surroundings are particularly important (Bitner, 1992). Bitner defined spatial layout as the ways in which machinery, equipment, and furnishings are arranged, the size and shape of these items, as well as the spatial relationships among these items, while functionality is the ability of the equipment and furnishings to perform their functions. In this study, design aspects are viewed in the context of the e-servicescape as overall structure, layout, wisely used space, and easy navigational functions on the Web pages. It is essential to achieve the design of a Website that attracts and retains a customer’s attention. Findings from Geissler’s (2001) study showed that Website design directly influences the conversion
process from a site visitor to a customer. His research examined aspects of designing and maintaining effective Websites from the perspective of Website designers. Specifically, respondents who are Website designers were asked about elements holding a customer’s attention in the study and they answered that the home page design appeared to be crucial to capture the impatient online customer’s attention. The researcher concluded that the homepage should be clean, clear, relatively simple, brief, and to-the-point since customers may not be sure whether they are even in the right place when they enter Websites, according to the results of interviews. Poorly designed Websites will not contribute to holding customers, but turn them away from visiting again to the Website (Madu & Madu, 2002; Wofinbarger & Gilly, 2003). Therefore, it is proposed:

P2] Design aspects positively affect perceived e-servicescape on a B&B Website.

Search aids & Slogan

Sign, symbols, and artifacts communicate with customers explicitly or implicitly (Bitner, 1992) in the physical setting. They can be used to create awareness from customers because any materials, such as company name and logo, help to facilitate customer awareness (Bitner, 1992). For example, if a hotel is well-known to customers and customers usually recognize the company’s logo, such as Marriott, its use is helpful to create customer awareness. Furthermore, when customers enter the building of a service provider, the signage helps customers find directions to the dining hall, banquet rooms, or restrooms. Also, the displayed interior artifacts enable customers to become aware of the characteristics of the service provider, who targets customer groups. In physical settings, artifacts are important environmental objects that communicate less directly than signage with customers, giving implicit cues to customers about the overall impression of the place. The quality of materials used in construction, artwork, ornaments, wall finish, floor coverings, and personal objects displayed in the physical environment will communicate with customers in a symbolic way, creating an overall aesthetic impression (Bitner, 1992). For example, customers will be able to notice children’s high chairs and coloring materials provided by a family restaurant.

In the online context, certain aspects also can be used to communicate with customers explicitly and implicitly, such as company name, logo, or symbols that can create customer awareness (Geissler, 2001). However, keywords used on search engines, such as Google.com and Yahoo.com, will replace the function of signage to help customers locate B&B Websites. In addition to keywords, using meta-tags helps customers locate a Website based upon the technique of pop up (Geissler, 2001) on search engines as well. For example, if customers try to find a B&B in a farmhouse style in order to have his/her children experience it for a holiday getaway, then the customer will type the keywords “farm house” and “B&B.” In this case, a B&B Website using a keyword “a farmhouse” for the search engine will pop up as search results. These keywords and meta-tags can be an important part in communicating company image online, as well as used as labels, signs, symbols, or artifacts that determine the characteristics of their target market. Using keywords on search engines helps customers locate Websites easily and quickly (Geissler, 2001). Also, using slogans or catch phrases will draw Internet browsers’ attention more effectively than using plain text on Websites. Thus, search aids and slogans are considered as important factors of e-servicescape in this study.

P3] Search aids and Slogan positively affect perceived e-servicescape on a B&B Website

Functional dimension

During service encounters in the physical environment, social interactions between and among customers and employees exist. Bitner (1992) discussed dimensions of the organization’s physical surroundings influence customer and employee behaviors. Employee interactions with customers in the online context are limited to the interaction between customer and a B&B owner when a customer seeks information on a Website. Therefore, no direct interaction with employees in the online setting is assumed. Thus, interactions with employees in a physical setting can be replaced by interactions between customer and B&B Website. Quick and prompt responses from a Website administrator will enhance the interaction effect.

Outcomes of using a Website often involve the intangible benefits of interaction with the Website such as saved time, convenience, and a reduced risk of dissatisfaction, due to the enhanced availability of information (Williams & Dargel, 2004). Customers can save their time to choose a B&B facility by searching online, instead of contacting travel agents or contacting B&Bs either via telephone, fax, or email. This brings convenience to the customer as well. Using Websites enables customers to compare various B&Bs in terms of available services, features, and prices, which benefits customers to conclude an informed decision-making and, in turn, minimize the risks of dissatisfaction after staying at the B&B. By providing the functions of ease of navigation, quick access, and
short downloading time on a Website, a B&B can extend its time saving conveniences to prospective customers. Quick access to linked pages and no broken links are important to appeal to customers on a Website. Moreover, a B&B Website can help customers make informed decisions by providing adequate information that encompasses a wide range of related information, such as services and amenities, available activities, prices, transportation, location, local area information, and weather.

It should be easy to navigate a Website and the site should consider using controlled navigation to help customers familiarize with its layout and a company’s offerings (Geissler, 2001). Giessler suggested that controlling the navigation process helps customers be exposed to the entire Website and may increase consumer involvement and comfort levels. In general, it is believed the more involved and comfortable customers are with the Website, the more likely they are to linger and purchase online. Information content is considered as one of the important factors influencing a customer’s perception and evaluation of a Website, along with Web page design, managerial issues, and overall site design (Hanna & Millar 1997; Spiliopoulos, 2000). A variety of information and the comprehensiveness of its coverage are considered primary indicators of information adequacy (Ho & Lee, 2006; Jeong & Lambert, 2001; Yang, Cai, Zhou, & Zhou, 2005). Website technical function and features are important to determine the perceived e-servicescape. Therefore, it is proposed:


**Perceived e-servicescape quality**

Researchers categorized three levels of reactions to the servicescape from the customers’ perspectives—cognitive, physiological, and emotional (Bitner, 1992; Nguyen, 2006; Tombs & McColl-Kennedy, 2003). At the cognitive level, customers perceive the servicescape from various non-verbal cues, such as interior design, décor, upholstery, furniture quality, furniture layout, and so on. These cues are indicators of the company’s capability in servicing its customers. In the context of e-servicescape, design and functional aspects such as layout, use of space, overall structure of the Website will reflect cognitive levels of reaction. The physiological reaction involves ambient conditions resulting from the physical surroundings, which may cause comfort or discomfort feelings during service encounter (Nguyen, 2006).

In the context of e-servicescape, feelings from ambient conditions, such as color, font type and size, quality of visual presentations, animation, music, and sound effects will reflect the physiological level of reaction, whether or not customers feel comfortable to use the Website. Based upon the physiological reaction, customers will either proceed or quit the course of service consumption in the physical setting (Nguyen, 2006). Also, in the e-service setting, customers will be affected at some degree, whether they continue to surf on the Website or quit, based upon their physiological reaction. If they feel tired of surfing due to distracting color scheme and distorted structure of a Website, they will be tempted to exit the Website as quickly as possible. This phenomenon will not be helpful to build a positive image of a B&B either. An emotional reaction may be induced from the servicescape and affect customers’ attitudes and behavior (Mattila & Wirtz, 2001). As such, e-servicescape may induce an emotional reaction of customers, such as likeness or dislikeness of the Website. Consequently, e-servicescape strongly influences customers’ perceptions of a Website’s service quality. Without providing relevant and expected service quality, a Website will not be able to capture customers’ attention and retain it long enough to complete online transactions (Wolfenbarger & Gilly, 2003).

**Intention to use a B&B service**

Reactions of perceived e-servicescape quality result in attracting customers, who prolong their surfing time on a Website, and finally intend to book with a B&B either via Website, fax, or calling. Many B&B Websites are not equipped with taking reservations online. Therefore, customers may need to request booking via email, telephone, or fax. The basic logic here is the more customers enjoy surfing on a Website and the more comfortable they feel with it, the more likely customers will intend to purchase a product or service online (Geissler, 2001). Customers’ intention to use the service of a B&B will be the key predictor of their purchase activities with a particular B&B. The intention of using the B&B service is a key predictor and a pre-requisite of their actual use of B&B services. Thus, it is proposed:

P5] Perceived e-servicescape quality positively affects customers’ intention to use a B&B service.

**IMPLICATIONS**

Findings of this study will shed light on the determinants of e-servicescape on B&B Websites that affect customers’ decision-making procedures to select their B&B experiences. This study posits that ambient conditions,
design aspects, searching aids & slogans, and functional aspects of a B&B Website are the major elements of the e-servicescapes that affect perceived service quality of a B&B Website.

B&B Websites are believed to contribute to the business’ bottom line by creating advertisement opportunities and saving costs on publishing and mailing brochures. By determining elements of e-servicescape, B&B owners or innkeepers will be able to establish Website strategies to make their Websites more attractive to customers by providing quality e-servicescape. Also, from a well-established B&B Website, customers can conveniently collect information about the facility, such as amenities, location, and other travel-related information, without calling the B&B. In the end, quality e-servicescape must be the fundamental factor affecting perceived service quality of a B&B Website, which evokes customer intention to book at a B&B and eventually contributes to actual booking with a B&B.

REFERENCES


*Journal of Retailing 77*(2), 273-289.


