An explorative study of shopper-based salient e-servicescape attributes: A Means-End Chain approach

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ARTICLE INFO

ABSTRACT

This study aims to address the gaps inherent in existing studies by exploring the salient e-servicescape attributes. Employing the Means-End Chain (MEC) approach, empirical evidence was obtained through in-depth interviews with online shoppers using laddering technique to determine the most frequently mentioned attributes from four servicescape dimensions: (1) ambient; (2) design; (3) signs, symbols and artifacts; and (4) interaction. Accordingly, we laddered three levels of online shoppers' responses from concrete to less concrete abstractions, i.e. attributes, benefits, and end-desirable beliefs. As a result, seven salient e-servicescape attributes were identified. Each of the four dimensions suggests the attributes' linkage to benefits and end-desirable beliefs. Specifically, the study finds quality photograph, as the salient attribute of the ambient dimension, may set the point of initial attraction and move shoppers from understanding the product to linking the web site contents. In the design dimension, navigation bar, categorization, and simple arrangement are the salient attributes. Company logo represents the most salient attribute under the signs, symbols and artifacts dimension because it not only facilitates recognition and recall of prominent web sites, it also acts as the determinant of perceived risks. In the interaction dimension, although pricing information is the salient attribute that evokes happiness and confidence among online shoppers, it may dilute their perception on web site's success. Instead, confirmation mail can possibly act as a determinant to web site's success. By offering a finer granularity of information, our findings provide insights to online sellers on the salient attributes to consider in order to effectively promote their shopping web sites to create positive emotional response and buying behavior among the online shoppers.

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1. Introduction

Internet web pages as electronic servicescape (e-servicescape) have marked their significant presence in the business world and are predicted to continue to gain popularity (Bitner, Ostrom, & Morgan, 2008; Zeithaml, Parasuraman, & Malhotra, 2002). This is with the view that e-servicescape has been empirically proven to affect behavior at the point of purchase (Fagerstrom, 2010), loyalty (Kwon & Lennon, 2009), evoke shoppers' positive emotional response (Rosenbaum, 2005) and favorable purchase decision (Mummalaneni, 2005) based on a set of underlying attributes. Prior studies have attempted to identify the possible attributes that evoke positive buying behaviors (e.g. Barkhi, Belannger, & Hicks, 2008; Batra & Homer, 2004; Jeon & Jeong, 2009; Muller & Chandon, 2004; Park, Stoel, & Lennon, 2008). However, at the finer granularity, no clear indications are available to determine if the resulting attributes can be rendered as the base or final elements.

A number of studies suggest that there are the two sets of elements (base and final) to consider in the decision making process (Alba & Chattopadhyay, 1986; Zambardino & Goodfellow, 2007). Base elements refer to the foundation set for choosing considerations, whereas the final elements relate to individual's active and conscious buying decision (Fishbein & Ajzen, 1975). In a buying decision, only the final elements are sought (Fishbein & Ajzen, 1975). These final elements are often termed as salient elements because of their importance to a purchase decision (Cramphorn,

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2006; Kim & Karchersky, 2006). For this, Lin and Lu (2000) suggest that a cleverly designed web site – including its background, layout, and navigation bars – may form the front-stage impression and provide the theatrical evidence of servicescape which helps online sellers to evoke a positive buying behavior among the online shoppers.

Although the literature reveals that e-servicescape evokes positive emotional response and thus favorable purchase decision (Lightner, 2003; Ezeh & Harris, 2007; Harris & Goode, 2010), it is unclear what the salient elements are. Bitner (1992) suggests that there are four servicescape dimensions, namely (1) ambient; (2) design; (3) signs, symbols and artifacts; and (4) interaction. The electronic ambient dimension consists of visual cues (McKinney, 2004; Turley & Milliman, 2000), and auditory cues (Coyle & Thorson, 2001; Wu, Cheng, & Yen, 2008) which include quality photos, virtual tour, music effects, and animation attributes (Jeon & Jeong, 2009). However, the existing measures are mainly indirect, using the scale of attractiveness, pleasantness, brightness, livelihood, cheerfulness, and excitement (Mummalaneni, 2005). Thus, there remains no clear indication leading to any specific attributes.

The design dimension consists of layout and functionality (Harris & Goode, 2010). Layout refers to the grouping of products, placement of products, arrangement, organization, and structure of a web page (Turley & Milliman, 2000). Functionality, on the other hand, is the grouping, placement, arrangement, organization, and structure of a web page to facilitate usability. No conclusive evidence is found from the literature where one finding leads us to personalization superiority (Ho & Tam, 2005) while the other suggests customization and functionality (Harris & Goode, 2010).

The signs, symbols, and artifacts dimension refers to the labels (e.g. company's name and logo, and department's name), directional signs (e.g. log in items, new arrival items and discounted items), company's policy and rules (e.g. communication rules and buying policy), and artifacts (artwork and backdrop) (Bitner, 1992). The use of symbols, directional signs, and artifacts (e.g. personalized items and new items) complement the overall message and forms a lasting customer impression (Jeon & Jeong, 2009). Although these attributes pose strong influence in creating awareness as well as conveying overall impression and maintaining focus on the web sites (Bitner, 1992), this dimension receives the least attention.

Interaction is the dimension that promotes communication between sellers and buyers. Bitner (1992) and Zeithaml et al. (2002) suggest that the ability to perform and fulfill customer's needs relies on the quality interaction derived from the physical evidence, and that Kondardt, Wandke, Balazs, and Christophersen (2003) and Mason (2002) conclude that a responsive seller is accessed through prompt message sent to buyers. Therefore, the use of sellers' responsiveness, feedback, time taken to reply buyers' inquiry, and information on frequently asked questions serve as the interaction attributes (Palmer, 2002). The measurement of this dimension often relies on indirect measures (e.g. time saving, reliability and responsiveness). In this sense, the use of indirect measures has led online sellers to greater challenge to identify, re-design, and improve the influential attributes related to the success of shopping web sites (Williams & Dargel, 2004).

This paper attempts to address the issues highlighted as there is no clear evidence as of yet to delineate the contributions of web site elements at the attribute level. Building upon the currently available studies, we employ a more profound systematic method to identify the salient e-servicescape attributes in relation to their most frequently visited sites. To achieve this objective, the Means-End Chain (MEC) approach is adopted through the hierarchical value map (HVM) analysis (Olson & Reynolds, 2001). The MEC approach refers to understanding the underlying reasons for choosing a product through identifying, filtering, and linking

three-level hierarchical chain of customers' response from concrete to less concrete abstractions, i.e. attributes, benefits, and end-desirable beliefs to determine the final set of response on salience consideration (Kuisma, Laukkanen, & Hiltunen, 2007; Olson & Reynolds, 2001).

Salience consideration relates to an individual's active recall of choices in memory (Alba & Chattopadhyay, 1986). The MEC approach identifies which e-servicescape attributes an individual considers as the top-of-mind awareness factors in evaluating the preferred shopping web site. These factors are probably the most influential drivers for an individual's preferences (Gutman, 1982). Thus, identifying the salient e-servicescape attributes can lead to the individual's conscious reasons for choosing a shopping web site. Similar justification can also be found in Olson and Reynolds (2001), suggesting the MEC approach as the systematic method to elicit the final set (salience) of consideration.

We adopt the MEC approach because of two reasons. First, this approach is useful to explore a finer level of salient e-servicescape, thereby complimenting the deficiency in literature. Second, the fundamental values of attributes, benefits, and end-desirable beliefs underpin many works of scholars. For instances, the famous SERVQUAL model by Parasuraman, Zeithaml, and Berry (1985), which leads to the development of E-S-QUAL (Parasuraman, Ziethaml, & Malhotra, 2005); the development of consumer categorization processes (Gutman, 1982); the application in the context of human–computer interaction (Subramony, 2002); and the formation of food retail positioning strategy (Devlin, Birtwistle, & Macedo, 2003). Moreover, the MEC approach can be used to solve some of the challenges related to e-servicescape when it comes to understanding and explaining purchasing behavior.

The outcome is expected to provide a better comprehension of the MEC process between the shopping web sites and individual online consumers, allowing online sellers to strategize ways to enhance their shopping web sites' success through the salient e-servicescape attributes identified in this study. As Mason and Staude (2009) put it, identifying the salient e-servicescape attributes benefit online sellers the most as the most influential driver to successful shopping web sites. This is the most important contribution of this study.

The rest of the paper is organized in the following ways. It begins with the understanding of servicescape, followed by e-servicescape and how its salient attributes are elicited. The methodology employed is discussed next. In the discussion section, the research and practical implications are provided. The final section concludes the paper and suggests possible future research directions.

2. Literature review

Zeithaml et al. (2002) define servicescape as the environmental cues that affect customers impersonally. It refers to the surrounding evidence that is closely related to customer perception, satisfaction (Zeithaml et al., 2002), purchase intention, and trust (Harris & Goode, 2010). In fact, studies have suggested strong relationship between servicescape and customer response, particularly in evoking pleasure and arousal reactions (Bitner, 1992; Harris & Goode, 2010; Tsang & Tse, 2005).

The presence of Bitner's (1992) four servicescape dimensions thus reflects the seller's intention to inform, attract, and evoke favorable purchase decisions. However, the evidence on web pages can arouse senses in seeing and listening only. The remaining senses of tasting, touching, and smelling are impossible to exist in the Internet setting. Because of this, evaluating the physical servicescape evidence (e.g., physical surrounding of shop, interior design, and lighting) may not be the same as evaluating