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Digital Display of Car Showroom: Proposing an Emotional-Environmental Conceptual Model

Nur Hazwani Zolkifly[1]* and Md Nasarudin Hussin[2]

[1]*Faculty of Business Management, Universiti Teknologi MARA, Cawangan Perak, 32610 Seri Iskandar, Perak, Malaysia*

[2]*Faculty of Business Management, Universiti Teknologi MARA, Shah Alam, 40450 Shah Alam, Selangor, Malaysia*

ABSTRACT

A study conducted by Foresight Research reveals that customers are often at the showroom. However, car showroom is often being underutilized and following the old model of dealership. In contrast with other retail industries, car dealerships may have ignored the importance of digital display or signage in a car showroom. Hence, car dealers should consider re-strategising by embracing technology, especially to cater to the new generation's needs for better digital experience. Therefore, this study analyses how digital display in a car showroom influences customer's decision to purchase. Furthermore, the study proposes an emotional-environmental conceptual model based on Mehrabian-Russell environment psychology model and Donald Norman's concept on emotional design. Literature review suggests a significant role of digital displays, namely message content, placement, size and interactivity, in retail businesses. However, there is lack of empirical evidence to support the role digital displays in a car showroom. In the proposed conceptual model, environmental psychology taxonomies, namely stimulus, organism and response, were combined with three levels of user response namely visceral, behavioural and reflective taken from the emotional design model. The model allows car dealers and marketers to create a customer-centric digital display that may induce and influence the customer to purchase. Future research should explore the stimulus domain since it plays an important role in producing an immediate emotional response from the customer.

Keywords: : Car purchase, Digital display, emotional design, environment psychology model, store atmospheric

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E-mail addresses:
nurha743@perak.uitm.edu.my (Nur Hazwani Zolkifly),
mdnasar855@salam.uitm.edu.my (Md Nasarudin Hussin)
* Corresponding author

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INTRODUCTION

The term "atmospherics" was first used and defined by Kotler (1974) which refers to the conscious effort of sellers in designing a space to create certain effects in buyers. In other words, marketers design buying environments with the aim to produce specific emotional response in buyers which will increase their intention/probability to purchase (Kotler, 1974). Kotler (1974) also emphasised the importance of combining the retail environmental characteristics (store atmospherics) in stimulating a consumer to purchase. Meanwhile, Foxall (1997) describes store atmospherics as a medium by which a consumption environment produces emotional responses in customers, thus, prompting them to stay in the setting, browse, evaluate and purchase; or, discourage any of these activities. In short, atmospherics are part of an environmental design (Kotler, 1974).

Mehrabian and Russell (1974) proposed the environment psychology model which classified the environmental psychology into three domains: stimulus, organism and response. They (1974) define stimulus as a stimulus from the environment such as information rate or "load" of an environment, while organism refers to pleasure, arousal and dominance and finally response as an approach or avoidance behaviour. Donovan and Rossiter (1982) later adapted the model to the retail context and studied the effects of atmosphere and store design on shopping behaviour. Furthermore, Donovan and Rossiter (1982) translated the response domain into four responses: store patronage intentions, in-store search and exposure to a broad or narrow range of retail offerings, interactions with sales personnel and floor staff and lastly, repeat-shopping frequency, reinforcement of time and money spent in the store. These became the basis for the model development.

Store Atmospherics in a Car Showroom

At present, there is very few empirical evidence on the role of store atmospherics in showroom context, particularly those related to car showroom. Industry experts have noted that automotive original equipment manufacturers (OEMs) and dealers use traditional way of marketing due to proven sales and practice. Therefore, it appears that OEMs and dealerships are unwilling to employ new technology in the car showroom like interactive touch display due to many challenges including low returns on investments (ROI).

There is no doubt that the impact of digital customer is, disrupting the traditional car-buying experience and the competitive landscape (Car Buyers Want Better, 2015). According to Soon (2015), in the past, cars were mostly sold inside a showroom. But in recent years, dealers cannot rely solely on showroom sales. For instance, dealers nowadays display their cars inside shopping malls and public places to attract prospective buyers. Thus, the old method of selling cars is under risk if the businesses do not adapt to changing circumstances (Robertson as cited in Gallo, 2014).

A study by Accenture reveals that customers want better digital experience.

More than half of the respondents in the study said that they would be interested to have interactive touch display that provides information on the available models during a visit to a showroom while the rest stated their desire to take a virtual test drive at the dealership (Car Buyers Want Better, 2015). Hence, it can be said the car showroom is often being underutilised.

Digital Display as an Atmospheric Stimulus

Digital display is part of visual merchandising elements (Marketing Essentials, 2012). It is associated with digital signage in retail. The most basic definition of digital signage is refers to it as a remotely managed digital display, typically tied in with sales, marketing and advertising. In automotive scene, digital signage is defined as a system through which content is portrayed on a digital flat-panel display-usually a plasma screen or liquid crystal display (LCD) (Kircher, 2007). In the industry, there are generally three components to digital signage: hardware which consists of the display and a player device of some sort, software which manages the system and feeds the content to the display; and content, the material that appears on the display (Kircher, 2007). Surprisingly, the industry analysts generally agree that content plays the most important role (Kircher, 2007).

Most of the studies on digital display and retail look into the role of digital display in settings such as shopping mall, public places and hypermarkets. They focus on the (1) impacts of digital display onto retailers in general and (2) the components of digital display which evoke customers' emotions. According to Newman, Dennis and Zaman (2006), digital display provides helpful information, creates a modern image, and increases shopping enjoyment. Next, digital display results in greater sales receipts, more items purchased, and more time spent at the hypermarkets, but they have minimal impacts in the supermarkets (Roggeveen, Nordfält, & Grewal, 2016). However, according to Roggeveen et al. (2016), in supermarkets and in smaller stores, digital displays do not affect sales and in fact, have reverse effect.

Huang, Koster and Borchers, (2008) found that the attractiveness of a digital display depends on several criteria such as positioning of the display (eye-level, regardless of content or format), display size (small display encourages prolonged viewing due to intimacy and comfort), content format (video) and content dynamics (control over screen-saver style information displays). Furthermore, with regard to content, Burke (2009) found that advertising effectiveness depends on both the content of the message (appeal type and product category) and the context and quality of exposure (audience need state, traffic speed and direction, message frequency and duration). Dennis, Newman, Michon, Brakus, and Wright (2010) found that the impacts of digital display on shopping mall's images and atmosphere are influenced by audio and video contents and location of screens. Whereas Roggeveen, Nordfält and Grewal (2016) state that content that

highlights price promotional elements increase sales, number of items purchased, and the time spent in the store.

Dennis, Brakus and Alamanos (2013) found that digital display advertisement with high hedonic information evoked affective experience and strengthened experiential processing. According to Dennis, Brakus, Gupta, and Alamanos (2014), content with high sensory cues evoke affective experience and strengthens customers' experience whereas messages high on 'feature and benefits' information evoke intellectual experience and strengthen customers' deliberative processing route. Besides, past studies have shown that digital display in retail context did have positive effect on customer behaviours with some mediating factors. Dennis et al. (2010) and Dennis, Michon, Brakus, Newman, and Alamanos (2012) showed that digital display did have positive effect on approach behaviours, mediated by positive affect and perception of retail environment.

The abovementioned studies unfortunately, did not use showroom context. According to Kircher (2007), the contents of digital display in car dealership should focus on dealership and customer's objectives. This digital display is supposed to be installed at the showroom and the service department (Kircher, 2007). He also suggested that an interactive kiosk could be installed for the purpose of providing useful information, instructions manual and some applications (Kircher, 2007). Through this, n, the digital display should be able to attract potential buyers and stimulate purchase.

The Elements of Digital Display

Four components of digital display are commonly discussed in their studies. The first is *message content* (Burke, 2009; Dennis et al., 2013; Dennis et al., 2014; Roggeveen et al., 2016; Huang, Koster, & Borchers, 2008; Newman et al.,2010). The second is *placement* (Newman et al.,2010), Huang et al., 2008; Kircher,2007). The third, according to Huang et al. (2008) is size and the fourth is *interactivity* (Kircher, 2007).

Overview of Digital Display in Malaysian Car Showroom

There is lack of studies on digital display in car showroom. However, prestigious car brands such as Audi and BMW have embarked on the digital car showroom technology a few years ago. For instance, Audi installed its power walls consisting of LED display screen where customers can configure their own cars (Gibbs, 2014). On the other hand, car manufacturers like Hyundai installed interactive screens where customers can see the list of potential cars and adjust its specifications in their shopping centre showroom (Charlton, 2014). According to industry experts, these changes were cautiously observed by Malaysian automotive dealers but not implemented due to many reasons.

Based on observations, in Malaysian automotive dealership, there are three areas where digital display is usually installed. First, showroom exterior (LED signage), inside the showroom (near car display) and third, in service department (customer lounge). However, most digital displays

(/signage) were installed for the purpose of displaying advertising, promotions and some information. In the service department (customer lounge), it merely displays local television programmes. Unfortunately, the interactive screens are yet to be adapted by any Malaysian car dealers.

Emotional Design Model

The concept was introduced by Donald Norman and has been vastly applied or studied from the product and web design perspective. It has never been tested in the retail context nor combined with other marketing theories. Based on this concept, Norman (2004) listed three levels of information processing comprising three levels (1) visceral (2) behavioural and (3) reflective. Visceral level refers to spontaneous and immediate user's response towards appearance of a product (Norman, 2004). This takes places through five human senses which are sight, hearing, taste, touch and smell (Norman, 2004) and done subconsciously (Norman & Ortony, 2003). According to Norman and Ortony (2003), at this level, this is known as perceivable features and it is biological based. The second level, behavioural relates to the function and use of an object (Norman & Ortony, 2003). Norman and Ortony (2003) added that the reactions at this level are "expectation-induced". This is derived from the user's experience obtained through daily behaviour and learning process (Norman, 2004). Since it is obtained through experience and learning, it differs from one person to another and based on ones' culture (Norman & Ortony, 2003). Furthermore, at this level a user is concerned with usability of a product (Norman, 2004). Tranctinsky, Katz and Ikar (2000) confirmed that perceived usability is related to emotional design concept because of emotional-induced element in product attributes. Lastly, at the top of emotional design model is reflective level. It comes from the reflection of reasoning process and likely to dispense value and meaning toward products (Norman, 2004). Moreover, responses at this level are consciously done using intellectual processing. In sum, these three levels of user's response interact with one another and form a customer's action towards a product.

An Emotional-environmental Conceptual Model for Digital Display of Car Showroom

This study has proposed a conceptual model for digital display in a car showroom. This model combines Norman's emotional design model with environment psychology model proposed by Mehrabian and Russell. In this study's model, digital display stimulate emotional states, thus, influencing customers' response. The components of digital display satisfy the emotional design of customers to meet their aesthetic, functional, socio-political and economic requirements in car showroom. Thus, the model helps car dealers and marketers to generate guiding principles in designing a specific digital display.

In Stimulus-Organism-Response (S-O-R), any stimulus that stimulates

positive emotional states/affects is relevant since customers' affective responses may determine their final decision. Sherman, Mathur and Smith (1997) confirmed that the environment in the store and the emotional state of the consumer may be important determinants of purchase behaviour, though cognitive factors may largely account for store selection and for most planned purchases within the store. Greenland and McGoldrick (1994) found that both the emotional and cognitive factors are hard to separate and will influence one another. In addition, Lam (2001) indicates emotion as an important factor that encourages a customer to make a quick decision to purchase. Lam (2001) emphasised that emotion will elicit more direct response from customers with very little impact on their thinking, feeling or body comfort. This has become a basis for connecting environmental psychology theory with emotional design model. Both model aims to capture customers' interest at the first sight which is crucial, at least to enable a showroom to be considered as a potential place to purchase. The connections between two models are presented in Figure 1.

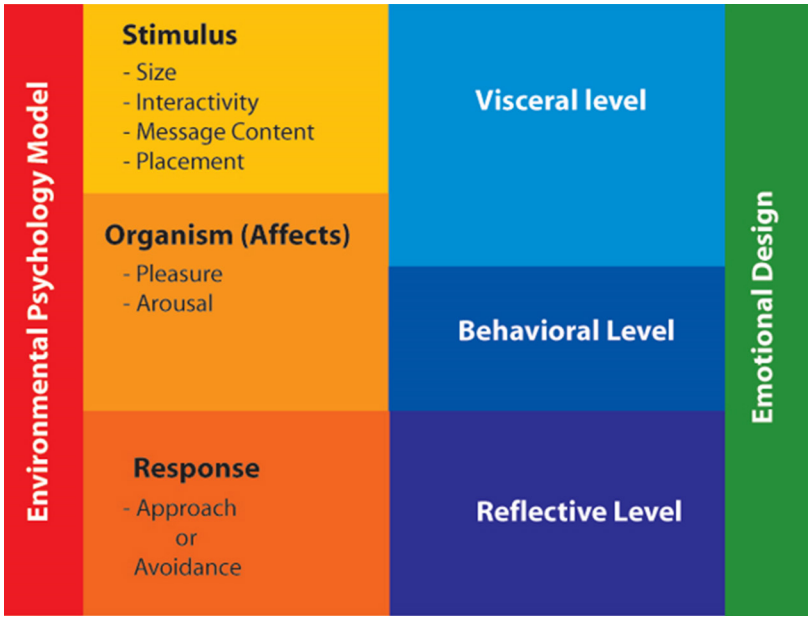

Figure 1. Emotional-environmental conceptual model for digital display in car showroom

On the first level, *stimulus* and *visceral* level are connected whereby the former from an environment or an object form spontaneous and immediate reaction towards the appearance of an environment. Visceral refers to customer's immediate reaction and are based on five human senses (Norman, 2004). In this study, the elements of digital

display act as stimulus to the customer. Four components of digital display (stimuli) which are content, placement, size and interactivity should be designed accordingly for customers to feel good about their purchase behaviour (Norman, 2004). Therefore, in the process of designing digital display, marketers should manipulate five human senses that affect customer's visceral response by emphasising on aesthetics value of each digital display's elements. At this level, immediate decision will be made by customers whether it is good or bad without prior experience (Norman & Ortony, 2003).

At the second level in S-O-R, *emotional affects* consisting of pleasure and arousal takes place. However, based on the emotional design model, emotional responses are developed immediately at the first level. Hence, the model in Figure 1 connected organism with visceral and behavioural level simultaneously. Since visceral level is "perceptually-induced", therefore a person will form emotional affects based on their perceptions (Norman & Ortony, 2003). Secondly, in behavioural level, our past experience and expectations will trigger our emotional responses (Norman & Ortony, 2003). Therefore, these have become the basis for the improvement of the original model by Mehrabian and Russell.

Besides, in *behavioural level*, customers respond towards the function of an object. Therefore, marketers should be aware of consumer's perception of functionality and usability of the digital display in specific and the showroom in general. If the consumer perceives that the digital display is functional, they will find it usable thus, leading to the perceived usability of the showroom. However, both should have aesthetic values. Even though the display in the car showroom is functional and usable, without visceral designs, it may lead to negative responses.

Based on the interaction of previous two levels, *responses* will form. Customers will generally respond in two ways i.e. approach or avoidance behaviour. However, from the emotional design perspective, these refer to *reflective level*. It relates to customers' personal reflection to rationalise their decision by using the highest level of intellectual capability (Norman, 2004). This process is derived from visceral affective response and behavioural perception process and customers will base their decision based on their reasoning process. Therefore, by implementing visceral and behavioural design in a digital display, a car showroom will likely attract prospects to approach a showroom.

The first level refers to how customer respond towards the digital display specifically and the showroom environment in general, while the second level refers to how a customer responds towards the function of the digital display and showroom. At the final level, customers rationalise their approach behaviour in a particular car dealership which in turn may lead to a deal being concluded. In this study context, the approach behaviour reflects patronage intentions and purchase intention. This level is derived from the visceral and behavioural design according to digital

display elements. The abovementioned discussions on both concepts are used in designing a customer-centric digital display that are utilised in a car showroom.

CONCLUSION

The OEMs, dealers and marketers should identify and implement digital display technology to enhance the showroom environment in efforts to stimulate customer's to purchase by appealing to the latter's emotion and on store atmospherics. The proposed conceptual model can be used to enhance customer purchasing behaviour. The conceptual model is a product of the environmental psychology model and emotional design model that allows the creation of an attractive showroom. Both models are focused on capturing customers' interest at the first sight. This enables a showroom at least to be considered as a potential place to make purchase decision. It is suggested future research l refine the stimulus domain consisting of content, placement, size and interactivity since the latter play an important role in stimulating customer's immediate emotional response using digital display technology.

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