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Technology Acceptance Model and Shopping Orientation Applied to Effects of Image Interactivity Technology on Consumer Responses

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Abstract
In this study, we focus on levels of image interactivity technology of a web site and the technology acceptance model to examine factors influencing consumers' attitudes toward the online retailers.

Keywords
technology acceptance model, image interactivity technology

Disciplines
E-Commerce | Fashion Business | Marketing | Sales and Merchandising

Comments
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Technology Acceptance Model and Shopping Orientation Applied to Effects of Image Interactivity Technology on Consumer Responses

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Keywords: Technology Acceptance Model, Image Interactivity Technology

The impact of Web site interactivity on e-commerce has been emphasized in industry and empirical literature. Interactivity of a Web site facilitates communications, customizes presented information, allows image manipulation, and creates entertainment for the customer. “Image interactivity” enables creation and manipulation of product or environment images on a Web site to simulate (or surpass) actual experience with the product or environment (Fiore & Jin, 2003). According to Fiore and Jin, Image Interactivity Technology (IIT) allows the user to alter a product’s design features, background, context, viewing angle or distance, and to simulate the product’s operation on a Web site, leading to enriched product information through visual (non-textual) cues. Mix and match technology that simulates how products will look together and virtual model or virtual try-on technology (e.g., My Virtual Model®, imaginariX®) that simulates the appearance of apparel product combinations on a body form are two emerging types of IIT for apparel Web sites.

The Technology Acceptance Model (TAM) (Davis, 1989) was the theoretical framework. The TAM conceptualized perceived usefulness, perceived ease of use (Davis, 1989) and perceived enjoyment (Davis, Bagozzi and Warshaw, 1992) as key determinants of behavioral intentions. Researchers have successfully applied TAM to understanding Web site use (Teo, Lim, & Lai, 1999) and online shopping (Childers, Carr, Peck, & Carson, 2001). Previous study has indicated the importance of individual differences in technology usage and its acceptance (Agarwal and Prasad, 1999). In particular, Li, Daugherty, and Biocca (2002) suggested further investigation of the impact of utilitarian and hedonic shopping orientations on information processing styles during the use of IIT. However, we have found no studies that examine the application of TAM to an online shopping setting using IIT. Therefore, in the present study, we focus on levels of IIT of a Web site and the TAM to examine factors influencing consumers’ attitudes toward the online retailers. Shopping orientation, along with TAM, was used in the model that examines the role of individual differences in use of IIT.
Data were collected from 206 respondents using a between-subject experimental design. Two stimuli were used for this study. One stimulus, created by the present researchers, featured a traditional online shopping site, including thumbnails to enlarge product images. The other stimulus was an actual site that had the virtual model technology which made it possible to mix and match products in addition to try available products on a model, and rotate the mode. Before exposure to the treatment, subjects completed Babin, Darden, & Griffin (1994) eleven-item shopping orientation scale, tapping hedonic and utilitarian orientations. After exposure to a treatment, participants completed five-item scales for each of the TAM constructs: perceived usefulness, perceived ease of use, and perceived enjoyment, which scale were used by Childers et al. (2001). The seven items were used to measure attitudes (Bruner & Hensel, 1996); the five items were used to assess behavioral intention (Engel, Blackwell & Miniard, 1995; Wakefield & Baker, 1998). Data were analyzed using LISREL 8.54 to examine the proposed causal model.

Results of this study supported most of the study’s hypotheses. The results of LISREL for the conceptual model revealed that overall fit indices were acceptable. Chi-Square was 4.01 ($df = 10, p = .95$), GFI was .99, and AGFI was .98.
Figure 1 displays the results of the causal model analysis, including significant standardized path coefficients and t-values for each relationship as well as squared multiple correlations ($R^2$) for each endogenous construct. Results showed that the advanced level of IIT (i.e., virtual model technology for mixing and matching products on a body form) was perceived by respondents as more useful, easy to use, and enjoyable.
than lower level of IIT. The present study found that perceived enjoyment was the strongest effect on attitudes toward the online retailer among other TAM constructs. The results also showed that perceived usefulness and perceived ease of use had significant effects on attitudes and behavioral intention toward the online retailers. However, perceived enjoyment was not a significant factor in behavioral intention toward the online retailers; while there was a significant indirect effect of perceived enjoyment on behavioral intention. This suggests that the impact of perceived enjoyment on behavioral intention might be mediated by the attitudes toward online retailer. A utilitarian shopping orientation had a significant effect on perceived usefulness and perceived ease of use whereas hedonic shopping orientation had a significant effect on perceived enjoyment. This suggests that hedonic shoppers may be more likely to use the IIT features for enjoyment, fun and excitement, whereas utilitarian shoppers may be inclined to use IIT to increase shopping productivity.

Based on the results of the present study, we conclude that IIT can be an effective way of providing consumers a positive experience with the online retailers because of enhanced perceived usefulness, ease of use, and enjoyment. The advanced level of IIT can be enhanced attitudes and behavioral intention toward the online retailers. Whereas IIT can be expensive to operate; it is worth considering as a marketing strategy for affecting positive attitude and behavior of online customers. Thus, the present study supports TAM as a valid theoretical model to explain the effect of IIT on consumers and inspires future research related to IIT.

References


