

UNDERSTANDING CONSUMER'S BEHAVIOR WHEN SHOPPING ONLINE

*Dong-Her Shih, Department of Information Management National Yunlin University of Science and Technology, 123, Section 3, University Road, Douliu, Yunlin, Taiwan, R.O.C.
shihdh@yuntech.edu.tw*

*Kuan-Chu Lu, Department of Information Management National Yunlin University of Science and Technology, 123, Section 3, University Road, Douliu, Yunlin, Taiwan, R.O.C.
qq1214x@yahoo.com.tw*

Charlie C. Chen, Department of Computer Information Systems & Supply Chain Management, Appalachian State University, Boone, NC28608, USA, chench@appstate.edu

Po-Yuan Shih, Department of Finance National Chung Cheng University Min-Hsiung, Chia-yi, Taiwan, R.O.C. D04515002@ccu.edu.tw

ABSTRACT

With the growing ubiquity on Internet. Numerous shopping websites have been established amid this growth trend and produces a considerable amount of information on products with similar attributes; this induces cognitive confusion, making shoppers linger online, wasting both Internet and server resources. In this paper, the browsing behavior and attention span of consumers engaging in online shopping under time pressure were investigated. The findings are online consumers view fewer products when under time pressure. Suggestions in running business for shopping website operators are provided.

Keywords: cognitive remediation, consumer behavior, electroencephalogram (EEG), online shopping, time pressure

INTRODUCTION

E-commerce, which has grown exponentially because of Internet technology, has induced changes at market, industry, and economic levels, and has profoundly altered life, politics, and society (Drucker, 2002). Time pressure is an essential variable of consumer behavior; it prompts that a decision be made within a limited time (Ahituv et al., 1998). Most previous studies on shopping behavior have been conducted in a brick-and-mortar store; nonetheless, because online shopping is becoming increasingly more common, the cognitive process of online purchases warrants further research.

COGNITIVE REMEDIATION AND HYPOTHESES

Cognitive remediation is a standardized behavioral treatment program in which computerized drills are performed to facilitate improving cognitive functions such as working memory and verbal and nonverbal episodic memory, which can be enhanced through repeated drills (Bracy, 1995; Seltzer et al., 1997; Bell et al., 2001; Kurtz et al., 2007). Time pressure is an influential factor in consumer behavior (Howard & Jagdish, 1969); it can have a marked influence on decision-making and restrict information processing ability (Iyer, 1989). Its effects on the people's decision making intensify in the face of information overload (Davidson, 1989). Accordingly, this study argues that consumers under time pressure focus on fewer products to facilitate their product search on shopping websites. Based on the aforementioned argument, hypothesis was formulated as follows:

Hypothesis: Consumers view fewer products when shopping under time pressure than they would when shopping not under time pressure.

MATERIALS AND METHODS

In this study, a task was designed for 30 mentally and physically healthy subjects with online shopping experience. While wearing an electroencephalogram (EEG) cap, the subjects performed product searches on Taobao (a Chinese shopping website). During the experiment, each subject purchased 10 specific items from the 20 best-selling products sold on Taobao while under time pressure (10 minutes) and not under time pressure (unlimited) condition. This experiment was aimed at investigating whether the subjects focused on certain products when under time pressure.

RESULTS

The null hypothesis of the paired t test used in this section states that the difference in the number of products viewed by subjects between the two conditions is non-significant. The p value was 0.001, rejecting the null hypothesis at $\alpha = 0.05$. This indicates a significant difference in the number of products viewed between two conditions; specifically, the subjects under time pressure condition viewed more products. In addition, regarding the EEG analysis, a paired t test was conducted on the attention and meditation levels of the subjects when shopping under time pressure and not under time pressure conditions. The p value for the difference between the attention levels was 0.008; thus, the null hypothesis was rejected at $\alpha = 0.05$. The p value for the difference between the meditation levels was 0.572; thus, the null hypothesis was not rejected at $\alpha = 0.05$. These results indicate that under time pressure and not under time pressure conditions, the subjects differed significantly in attention but not in meditation. Their attention during online shopping was weaker while under time pressure.

DISCUSSION AND IMPLICATIONS

This finding corresponds with previous studies that have shown that consumers under time pressure tend to hasten their product selection (Iyer, 1989; Dhar & Nowlis, 1999). Therefore, comparing the results of the previous studies revealed that online shopping behavior under time pressure has not changed much despite the rapid development of the Internet and growing use of online shopping services over the past decade. Dhar and Nowlis (1999) noted that online stores typically offer discounts to rush purchases. Discounts promote consumption, and under time constraints, they can prompt quick purchase decisions. Shopping website operators can launch similar campaigns to encourage consumers shopping under time pressure, such as promotions and special offers, to boost sales and reduce the server load. The EEG results of this study on section 4 suggest that consumers engaging in online shopping are more attentive when not under time pressure, probably because they adopt the depth strategy under this condition, enabling them to focus on the content and depth of products they view (Jacoby et al., 1994). Thus, shopping website operators are suggested to improve the content and depth of their products during non-promotional periods to indirectly enhance consumer trust and approval.

CONCLUSION

Premised on cognitive remediation, this study investigated the behavior of consumers shopping online under time pressure, hypothesizing that consumers under time pressure focus on renowned brand products. However, the results show that consumers under time pressure view fewer products. The implications and the findings of this study may contribute to relevant academic research and online shopping businesses.

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