



## Full Length Article

## Effects of banner Ad shape and the schema creating process on consumer internet browsing behavior

Chih-Wei Liu <sup>a</sup>, Shao-Kang Lo <sup>b</sup>, Ai-Yun Hsieh <sup>c</sup>, Yujong Hwang <sup>d, e, \*</sup><sup>a</sup> Department of Finance and Banking, Shih Chien University, 70, Ta-Chih Street, Chung-Shan District, Taipei, 10462, Taiwan, ROC<sup>b</sup> Department of International Trade and Master of Science in Marketing, Chinese Culture University, 55, Hwa-Kang Rd., Yang-Ming-Shan, Taipei, 11114, Taiwan, ROC<sup>c</sup> Master of Science in Marketing, Chinese Culture University, 55, Hwa-Kang Rd., Yang-Ming-Shan, Taipei, 11114, Taiwan, ROC<sup>d</sup> School of Accountancy & MIS, DePaul University, 1 E Jackson Blvd, Chicago, USA<sup>e</sup> College of International Studies, Kyung Hee University, Yongin, Kyunggido, Republic of Korea

## ARTICLE INFO

## Article history:

Received 12 December 2017

Received in revised form

11 April 2018

Accepted 15 April 2018

## Keywords:

Banner ad

Advertising avoidance

Schema–congruence theory

Schema creation process

Eye-tracking

## ABSTRACT

In online environment, Internet users usually ignore the rectangular advertising block around the site because they have created advertising schema and have internalized that the information in rectangular blocks are advertising messages. Thus, to increase users' arousal and attention toward banner ads, we propose that changing the shape of banner ads produces schema-inconsistent and can break up existing schemata. In a laboratory experiment, participants' eye movements are tracked while they browse a website where the shapes of banner ads and the amount of exposure to them is manipulated. The results reveal that a banner shape that is incongruent with consumers' existing schema generates more browsing behavior than when the shape is congruent. However, after additional exposure to the new shape, browsing behavior is significantly decreased compared with the first exposure. This is the first study to offer evidence for the process of creating a new advertising schema by measuring participants' physiological behavior, and the findings have substantial implications for how advertising providers can attract Internet users' attention to banner ads.

© 2018 Elsevier Ltd. All rights reserved.

## 1. Introduction

The Internet is the most popular channel of communication in the world today (Wei, Jerome, & Shan, 2010). In recent years, the amount of time people spend online has substantially increased, accompanied by more online advertising. Advertisers have transferred a great proportion of their budgets from traditional to online media, because it facilitates rich content, strong interactivity, precise targeting, and low operating costs (Köster, Rütth, Hamborg, & Kaspar, 2014; Peng, Zhang, Zhang, Dai, & Li, 2014; Rzemieniak, 2015). Displaying banner ads is one of the oldest and most common types of online advertising (Zeff & Brad, 1999).

However, Internet users avoid looking at banner ads while engaging in online activities (Hervet, Guérard, Tremblay, &

Chtourou, 2011), which occurs because advertising diverts their cognitive resources from their main targets (Olivers & Humphreys, 2002) and interrupts the browsing and searching process (Cho & Cheon, 2004). To focus their main targets, users adopt various advertising avoidance behaviors, such as ignoring, skipping, or deleting content, to avoid being obstructed by advertising (Hervet et al., 2011). Thus, marketers and advertisers are motivated to work with technologies to attract more attention to online advertising (Grant, Botha, & Kietzmann, 2015; Ha, 2008). For example, interstitial, pop-up, large, and blinking advertisements emerged from an online context. However, such advertising that advertisers use to attract Internet users' attention has unexpectedly garnered negative responses from users (Cho & Cheon, 2004; Day, Shyi, & Wang, 2006; Lee & Ahn, 2012) because users can recognize advertisements easier due to their vivid patterns, inducing stronger physical advertising avoidance (Ryu, Lim, Tan, & Han, 2007). Thus, the motivation for this study is to overcome advertising avoidance behaviors, and to strive for the opportunity of grasping user's attention to advertising area on the website. This is the first step of conducting online advertising campaign; otherwise advertising

\* Corresponding author. School of Accountancy & MIS, DePaul University, 1 E Jackson Blvd, Chicago, USA.

E-mail addresses: [dualdrliu@gmail.com](mailto:dualdrliu@gmail.com) (C.-W. Liu), [shaokang@faculty.pccu.edu.tw](mailto:shaokang@faculty.pccu.edu.tw) (S.-K. Lo), [xay@faculty.pccu.edu.tw](mailto:xay@faculty.pccu.edu.tw) (A.-Y. Hsieh), [yhwang1@depaul.edu](mailto:yhwang1@depaul.edu) (Y. Hwang).

effectiveness (such as memory toward the brand, attitude toward the product and purchase intention) no longer exists if no one is viewing advertising.

Although people avoid viewing advertising in conscious process, advertisements can still create brand awareness by engaging users' subconscious attention and triggering unperceived memory production (Park, 2002; Telang & Bhatt, 2011). Implicit memories can cause users to develop a preference for a specific product, which is then placed into their consideration set (Janiszewski, 1993; Luo, Cook, & Karson, 2011; Yoo, 2008). In previous studies, users unconsciously scan and analyze the webpage to determine which block (advertising block and main content block) is relevant to their target. This stage is called "the preattention stage" (Gangseog Ryu et al., 2007; Yoo, 2008). In this stage, users increase unconscious scanning of banner advertisements. However, banner ads are usually presented as rectangle or square around the main content of a webpage since advertisement first premiered on websites. Because of users' website browsing experiences, they have created schema of banner ads and have internalized that the information in rectangular blocks around the site are advertising messages, and thus ignore the rectangular block around the corners by not scanning it directly. Thus, advertising avoidance behavior may still be triggered in the preattention stage.

Proposed by Piaget and Inhelder (1969), the theory of cognitive development is explained as one kind of knowledge representation, which is a way of presenting information in brain memory. A schema is a cognitive framework that helps interpret and organize information. Once a schema is built, people use it as the standard for make judgments about the objects they encounter (Kean & Albada, 2003). Schema is also called cognitive schema. Mandler (1982) further proposed schema-congruence theory, which suggests that a person uses his or her own knowledge and experience to interpret messages when information is consistent with their existing schema. Schema congruity is processed less elaborately and can be easily overlooked because it does not stimulate arousal (Lee & Faber, 2007). By contrast, when information is inconsistent with the existing schema, extra cognitive processing is needed to process incongruity, people are stimulated and pay more attention to the information. Thus, we propose that changing the shape of banner ads (e.g. diamond, oval, and hexagonal) produces schema-inconsistent and can break up existing schema, increasing users' arousal and attention. That is, users' fixation length and fixation count on new shape of banner ad are higher than on banner in rectangle (square) shape. However, through the process of accommodation, schema can be changed and altered by experience or learning new things (Piaget & Inhelder, 1969). After repeatedly seeing the new banner shapes, users' schemata may be extended to include them and attention decreases once again. Although we cannot completely understand how schemata change in users' brains, the schema-congruence theory notes that this process can be inferred by observing users' behavior toward newly shaped banner ads after a period of browsing time. Thus, we propose that repeated exposure to banner ads whose shape is incongruent with consumers' schemata generates a lower observation count and observation length compared with the initial exposure.

To overcome advertising avoidance behaviors and catch users' eyesight on banner ads, this study has two purposes. The first is to employ Mandler (1982) schema incongruity theory to understand browsing behavior following the implementation of new banner ad shapes that are incongruous with users' existing schemata. The second is to understand the disparity between browsing such banner ad for the first time and after substantial exposure. We conduct a laboratory experiment to investigate the effects of banner shape on scanning behavior toward banner ad.

## 2. Literature review

### 2.1. Banner ad avoidance

The Internet has made online advertising the major channel of commercial communication around the world. Online advertising is defined as any paid form of information about products in an online environment without geographical boundary limits (Kotler & Armstrong, 2010; Wei et al., 2010), and it seeks to promote brand images and encourage users to click on the ads for more information (Peng et al., 2014; Wei et al., 2010). Various types of online advertisements exist, including banners, pop-up ads, and keyword advertising (Rodgers & Thorson, 2000), of which banner ads are the most popular form (Zeff & Brad, 1999).

However, most advertisements are ignored because they generally disturb people while they are focused on other activities (Duff & Faber, 2011). According to Chatterjee (2008), online advertising avoidance behavior can be divided into two categories, "cognitive advertising avoidance" and "physical advertising avoidance." Cognitive advertising avoidance is an automatic process through which Internet users unconsciously avoid fixating on the visual range of advertising (Chatterjee, 2008; Cho & Cheon, 2004), and, thus, do not need to abandon their goal-related browsing behavior or task. When cognitive advertising avoidance is unsuccessful or when a user actively attempts to avoid advertising, physical advertising avoidance behavior may be triggered (Chatterjee, 2008). Physical advertising avoidance is a process through which Internet users consciously use an action or mechanical device, such as scrolling down a Web page to skip a banner advertisement or closing an online pop-up advertisement, to avoid advertising exposure (Edwards, Li, & Lee, 2002; McCoy, Everard, Polak, & Galletta, 2007). In an online environment, banner ads are small rectangle (square) that appear over, under, and beside the desired content when users visit a webpage (Telang & Bhatt, 2011), thus, are not likely to obstruct searches or other tasks. Therefore, cognitive advertising avoidance (e.g., ignoring) is a sufficient technique for avoiding interference from banner ads. This phenomenon of ignoring banner ads is also known as banner blindness (Hervet et al., 2011).

Much of the prior research on banner ads focuses on the click-through rate. For example, Doyle, Minor, and Weyrich (1997) demonstrate that the click-through rate is higher if the banner ad is placed approximately one-third of the way down the page. Li and Bukovac (1999) and Robinson, Wysocka, and Hand (2007) argue that larger banner ads lead to better comprehension and more ad-clicks than small banner ads. Additionally, Tsang and Tse (2005) determine that animated color, text, and graphics have significant effects on the click-through rate. However, effective advertising should not only focus on the click-through rate, but on enhancing brand awareness (Sundar & Kalyanaraman, 2004). Park (2002) suggests that although users do not click on banner ads and often avoid looking directly at them, they still subconsciously influence users' brand awareness and recognition. The implicit memory of the brand product becomes a choice in users' consideration sets (Janiszewski, 1993) and fosters favourable attitudes toward advertised products (Luo et al., 2011).

In short, banners remain effective, regardless of click-through rate, if they attract attention. However, users may not be motivated to look at most advertising they encounter online because the ads tend to interrupt or interfere with their desired online activities (Cho & Cheon, 2004). Thus, users may adopt advertising avoidance behaviors, such as ignoring, scrolling down or blocking advertising (Baek & Mariko, 2012; Kelly, Kerr, & Drennan, 2010). Most online users are familiar with the positions of banners versus the main content on websites and they can recognize banner ads without

Download English Version:

<https://daneshyari.com/en/article/6835814>

Download Persian Version:

<https://daneshyari.com/article/6835814>

[Daneshyari.com](https://daneshyari.com)