Full length article

Advergame speed influence and brand recall: The moderating effects of brand placement strength and gamers' persuasion knowledge

Devika Vashisht [a], Marla B. Royne [b, *]

[a] IBS Hyderabad, IFHE University, Dontanapally, Shankerpally Road, Hyderabad, RR District, Telangana, 501203, India
[b] Department of Marketing & Supply Chain Management, Fogelman College of Business & Economics, University of Memphis, 3675 Central Avenue, Office 302A, Memphis, TN 38152, USA

ABSTRACT

This study explores the effect of advergame speed, brand placement strength and consumers' persuasion knowledge on brand recall from the perspectives of attention and elaboration. Results show that low-speed advergames result in high brand recall as compared to high-speed advergames. A two-way interaction effect between advergame speed and brand placement strength reveals that for a low-speed advergame, a prominent brand placement results in higher brand recall than a subtle brand placement; for a high-speed advergame, there is no difference in brand recall between a prominent brand placement and a subtle brand placement. Further, for a low-speed advergame with prominent brand placement, subjects with high persuasion knowledge report higher brand recall than subjects with low persuasion knowledge. However, for a high-speed advergame with prominent brand placement, there is no difference in brand recall between subjects with high persuasion knowledge and subjects with low persuasion knowledge. Implications are provided.

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1. Introduction

Advertising is continually changing. A number of new and highly effective advertising tools have emerged that have made advertising extremely effective, but also challenging. Advertising on the internet via online games, by viral marketing, or on social networks are but a few of the still new non-traditional advertising tools on which big corporations are expending significant dollars for their brand promotions (Goh & Ping, 2014; Gross, 2010). For example, the large US companies spent around 16.6 billion US dollars on advertising from 2012 to 2014 (Statista, 2014). One report projects the gaming market to double and reach nearly 23.9 billion US dollars by this next year (Newzoo, 2013). Despite this augmented status and the significance of advergames as an advertising opportunity, limited scholarly insights exist about the effectiveness of brand placements in online games. While considerable academic work has used brand recall as an advertising effectiveness measure, less is known about the potential factors that affect brand recall in advergames. Further, the elements of advergames such as game speed, location of brand placements in games and gamers' persuasion knowledge could be important factors in understanding consumer brand outcomes in the context of advergames.

Hence, the purpose of this research is to explore the conditions under which gamers' mental resources impact their processing of in-game brand placements. Specifically, this study explores the interaction effect of game speed, brand placement strength and persuasion knowledge on gamers' brand recall by utilizing insights from the Limited Capacity Model of Attention (Kahneman, 1973) and the Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994) because these theories 1) explain how cognitive resources are allocated when individuals discern both the game and brand content while playing an online game embedded with brand messages, and 2) explain how individuals process in-game advertising when they demonstrate their persuasion knowledge about advergames.

2. Background

2.1. Advergames

Advergames are the interactive online games embedded with

* Corresponding author.
  E-mail addresses: dev2007.d@gmail.com, vdevika@ibsindia.org (D. Vashisht), mstaffrd@memphis.edu (M.B. Royne).

brand messages to promote a company's products (Bellman, Kamp, Haddad, & Varan, 2014; Cauberghe & De Pelsmacker, 2010). These digital games are specifically designed to advertise a brand, service or product through entertainment (Kretchmer, 2004; Vashisht & Sreejesh, 2015a), and are a form of branded entertainment that features advertising messages, logos and trade characters in a game format (Moore, 2006). Advergames are the latest tools in online advertising used to lure and attract customers to play in branded environments (Edwards, 2003; Vashisht, 2015). Businesses refer to advergames as a form of "embedded advertising" (Wade, 2004). Various companies use advergames to communicate to their prospective customers (Vashisht & Sreejesh, 2015b). For instance, leading cereal company Kellogg's launched various advergames promoting its brand Froot Loops, while Jeep Wrangler Rubicon launched its advergame "EVO" in 2001, resulting in a significant increase in revenue; the company reported sales of more than 1000 Jeeps. Additionally, the US Army used an advergame for its promotion, "America's Army" which was considered a success (CGW, 2004).

Advergames are highly influential on customers as compared to traditional advertising media (Wade, 2004) because advergames have several advantages over traditional advertising such as arresting customers' attention for long time spans (Edwards, 2003), easy adjustability, cost-effectiveness and viral marketing ability (Ipe, 2008). Further, customers get more involved with the game as compared to their involvement when watching television ads as simply passive viewers of the TV program content (Nicovich, 2005). Prior research on different forms of advertising suggests differences between the customers' information processing mechanism used in the traditional ad context and that used in online games (Bellman, Kamp, Haddad, & Varan, 2014; Grigorovici & Constantin, 2004; Obermiller, Spangenberg, & MacLachlan, 2005). The basic difference is that in traditional advertising formats (e.g., commercial spots during and between TV programs), a viewer generally recognizes the motive behind the ad which triggers consumer suspicion and persuasion knowledge that works to attenuate the desired persuasive effects (Friestad & Wright, 1994; Obermiller et al., 2005). In online advergames, such defense mechanisms (Grigorovici & Constantin, 2004) are less likely to be triggered.

Second, the advergame task becomes the focal point of the consumer's attention, but in television ads, watching the program is the primary focus (Grigorovici & Constantin, 2004; Lang & Basil, 1998; Lang, 2000). Finally, unlike traditional forms of advertising media, advergames are very hypnotic and enthralling in nature because focusing on the location of brands in the game becomes secondary and a less important task for the players (Nicovich, 2005). Hence, game speed, the brand placement strength and players' persuasion knowledge may be important characteristics that cannot be ignored in understanding consumer response to advergames.

2.2. Advergame speed

Game speed of an advergame is the overall pace of the game that includes the steering speed, the pace with which the objects placed in the game move, and the type and the difficulty level of game task in the advergame (Vashisht & Sreejesh, 2015b). To understand and study the impact of game speed on players' brand recall, we apply the limited capacity model (LCM) of attention (Kahneman, 1973; Lynch & Srull, 1982). According to the LCM, an individual has a limited amount of attentional capacity at any given point of time and when multitasking, division of total attentional capacity occurs in two parts: one is for the primary task and the rest (the spare capacity) is necessary for the secondary task. The less capacity used for the primary task, the more spare capacity is

available for the secondary task. For an advergame player, game playing is the primary task where processing of in-game brand placements is the secondary task (Grigorovici & Constantin, 2004). The more attentional capacity used for game playing, the less remaining for processing in-game brand placements.

As digital games have become more challenging both graphically and attentionally, game-playing influences visual processing (Blumberg, 1998; Green & Bavelier, 2006) and in particular, visual processing of objects either by increasing the attentional resource or affecting the pre-attentive processing (Reisenhuber, 2004). Studies show that higher attentional capacity is required for steering and the gaming task in fast video games than slow games (Kureshi & Sood, 2009). This stress to perform quickly on numerous game controls leads to a needed increase in perceptual load to play a fast game as opposed to a slow game. Further, the attentional load becomes greater in fast games because of the high speed as compared to slow games (Vashisht & Sreejesh, 2015b; Vashisht, 2015). Based on the LCM, in fast games, with the increasing strain of the primary task (game-playing), mental capacity needed to process the secondary task (here in-game brand placements) gets washed-out (Lavie, 1995; Lavie & Cox, 1997). In contrast, because of less difficulty in the slow game less mental capacity is used for game-playing and more spare capacity remains which is high enough to process in-game placements. Thus, based on such rationale, it is expected that brand recall of a low-speed advergame player will be greater than that of a high-speed advergame player. Hence, the following hypothesis is offered:

H1. A low-speed advergame will result in higher brand recall than a high-speed advergame.

2.3. Brand placement strength

The advertising literature defines brand placement strength (or brand prominence) as "the extent to which the appearance of the brand possesses characteristics designed to make it the central focus of audience attention" (Gupta & Lord, 1998, p. 48). The brand placement is considered a prominent placement in an advergame when "the product or other brand identifier is made highly visible by virtue of size and/or position on the screen or its centrality to the action in the scene" (Gupta & Lord, 1998, p. 49). In contrast, a brand placement is defined as a subtle brand placement in the game "when it is peripherally placed on the game screen or in the background or when the brand size is very small" (Gupta & Lord, 1998, p. 49). Thus, the location or size of the embedded brand defines its prominence or placement strength which may control its effect.

Existing research has found that prominent brand placements (focal brand placements) produce higher recall than subtle brand placements (peripheral brand placements) (e.g., Cauberghe & De Pelsmacker, 2010; Gupta & Lord, 1998; Herrewijn & Poels, 2014; Homer, 2006; Nelson, 2002; Russell, 2002; Van Reijmersdal, Jansz, Peters, & Van Noort, 2010). Vividness effects explain the dominance of prominent product placements in advergames. Steuer (1992) conceptualizes vividness as "the representational richness of a mediated environment as defined by its formal features: that is the way in which an environment presents information to the senses." When a message is emotionally appealing, tangible and imagery provoking and contiguous in a sensory, chronological or spatial way, then it is said to be a vivid message (Nisbett & Ross, 1980). Thus, a prominent brand placement would be perceived as more thrilling, which ultimately results in higher brand recall than a subtle brand placement.

Based on the limited capacity model (Kahneman, 1973), it is expected that in low-speed advergames, less attentional capacity