

Impact of Game Speed and Persuasion Knowledge on Brand Recall and Brand Attitude



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The study explores the effect of speed of advergaming and persuasion knowledge on brand recall and brand attitude from attention and elaboration perspectives. Results indicate that fast-paced advergaming players report low brand recall and more favorable brand attitude than slow-paced advergaming players. Players with high persuasion knowledge report high brand recall but less favorable brand attitude than the players with low persuasion knowledge. This research contributes to the literature of online advertising and adds to the marketing knowledge on how to place brands effectively in advergaming considering the individual characteristics of advergaming and also the persuasion knowledge of gamers.

1. Introduction

Today the decor of advertising media is changing. Other than the old traditional media platforms such as newspapers, magazines, radio and television, today there are many more new media platforms available for advertisers which have made advertising effective but at the same time a challenge for them. Online games, mobile games, viral marketing and social networking are few such new non-traditional advertising platforms on which the big US companies have spent 16.6 billion US dollars to reach the targeted audience (Statista, 2014). According to a recent report by Newzoo Games Market Research, it is estimated that by 2016 the gaming market will become double and reach 23.9 billion US dollars (Newzoo, 2013)

Regardless of this increased importance of advergaming as a promotion gizmo, limited scholarly insights are available about the effectiveness of brand placements in online games. Although much scholarly work has been done by using brand recall and brand attitude as effectiveness measures but very little is known about the possible factors that affect brand recall and brand attitude in advergaming. The objective of the present study is to examine the role of two factors – game speed and persuasion knowledge in predicting the brand memory and attitude towards brands placed in advergaming.

2. Literature Review

2.1 Game Speed

To explain the effect of game speed on brand recall and brand attitude, we propose one possible convincing prognosis that the game speed generally impacts a gamer's capacity to process and elaborate the brands embedded in the game. We approach this issue from attention and elaboration perspectives i.e., the degree to which an advergaming player is capable for processing and elaborating upon the existing information in an advergaming. According to limited capacity model (Kahneman, 1973; Lynch & Srull, 1982), at any given point of time individuals can have a limited sum of mental resources. If an individual performs multitasks at a time, then his/her total mental capacity gets divided into two parts: capacity devoted to the primary task and capacity required for the secondary task. Capacity used for the secondary task is the spare capacity and the capacity which gets used for the primary task cannot be used for the secondary task. In an advergaming context, playing the game is the primary task for the game players and processing the in-game placements is the secondary task (Grigorovici & Constantin, 2004). The more mental resources that are required for playing the game, the less will be remaining for processing in-game placements. Therefore, it is predicted that when the speed of the game is slow, then a gamer's brand recall will be higher than that in the case of a fast paced advergaming. Hence, based on the above arguments, following hypothesis is proposed:

H1a: A slow paced advergaming results in high brand recall than a fast paced advergaming.

Furthermore, based on the above arguments, it is also predicted that when a gamer plays a fast paced advergaming, most of his/her mental capacity gets used up by for playing the game and is left with very less attentional capacity when compared to that of a gamer playing a slow paced advergaming. Thus, the gamer playing a fast paced advergaming will not be able to think much about the persuasive nature of advergaming, which in turn results in more favorable brand attitude than that in case of playing a slow paced advergaming. Hence, following hypothesis is proposed:

H1b: A fast paced advergaming results in more favorable brand attitude than a slow paced advergaming.

2.2 Persuasion Knowledge

To explain the effect of persuasion knowledge on brand recall and brand attitude, we propose one potential compelling prediction that the persuasion knowledge generally influences a gamer's ability to process and elaborate the brands embedded in the game. We approach this issue from persuasion knowledge model perspective i.e., the degree to which an advergaming player is capable for processing and elaborating upon his/her persuasion knowledge about an advergaming. According to

persuasion knowledge model (Friestad & Wright, 1994; Robertson & Rossiter, 1974) persuasion knowledge incorporates an understanding that the source of advertising formats is commercial and that there is persuasive intent. Public denigration regarding advergames focuses largely on the idea that people who play such advergames are uninformed of the commercial source and persuasive intent of advergames. It is presumed that due to advergames' embedded and involving nature, players have even more difficulty in recognizing the source and persuasive intent of advergames when compared to traditional advertising, such as television commercials and print advertisements (Livingstone 2009; Nairn & Fine, 2008). It is further assumed that a limited persuasion knowledge is associated with stronger reasoning and emotional responses (Kunkel et al., 2004; Livingstone & Helsper, 2006). However, the question remains as to whether this limited persuasion knowledge affects players' vulnerability to advertising's persuasive influence. Empirical evidence for this relation is scarce and inconclusive (Livingstone & Helsper, 2006). In addition, recent insights from neurophysiological development, psychological development, and advertising processing suggest that when gamers have acquired the necessary knowledge and understanding, they are more likely to activate and apply this knowledge as a critical defense while processing a persuasive message (Moses & Baldwin, 2005). Based on these arguments, following hypotheses are formulated:

H2a: Gamers with high persuasion knowledge reports high brand recall than the gamers with less persuasion knowledge.

H2b: Gamers with less persuasion knowledge reports more favorable brand attitude than the gamers with high persuasion knowledge.

3. Research Methodology

3.1 Development of Stimulus Material

A pretest was conducted to select the stimulus for the independent variable, game speed which was manipulated during the study. It was conducted in two stages. In stage 1, a focus group interview with 8-10 student gamers was conducted to select a few advergames which could be used in the study. In stage 2, randomly selected participants who regularly play the online-games (50 gamers) were called to a computer laboratory. First, they were shown a self-paced advergame (speed value '0' on semantic differential scale) and then were asked to rate the speed of the selected advergames on a semantic scale ranging from -3 to +3 (-3 = very slow; + 3 = very fast) after playing them for specified period of time. Based on the mean ratings, fast advergames (above average) and slow advergames (below average) were selected for the study.

3.2 Study Participants and Procedure

The participants were selected from a large Indian University. Studies reported that 90% of teens are gamers (mediaedge:cia, 2005), which supports the use of student sample for this study. Gamers selected were between the age group of 18-24 years. First, a random selection of students was conducted from a list of all the University students. Then, after seeking their game playing interest they were randomly assigned to different advergames to be played on the given computers. After exposure to advergames, participants were asked to fill up the questionnaire, with items of manipulation checks and eliciting their responses to brand recall and brand attitude.

3.3 Independent Variables

Two independent variables were used in this study. These were game speed and persuasion knowledge. Game speed was a manipulated variable and persuasion knowledge was a measured variable. To measure persuasion knowledge, the two aspects were measured: understanding of the source and understanding the persuasive intent of the advergame. Understanding of the source was measured with the question "Who created the game?", with the following response options; "Froot Loops", "My teacher," "A Supermarket," "A Gaming Website," or "The Researcher." By providing bogus answers, yeah-saying effects were minimized. The first response was coded as 1 (correct) and the remaining responses were coded as 0 (incorrect) ($M = .45$, $SD = .41$). Understanding persuasive intent was measured with the question "Why do you think this game is online?", with the following response options; "to make respondents like Froot Loops," "to show what you can buy in stores," "because people like it," or "because the Prime Minister likes it" (Owen, 2008). The first response was coded as 1 (correct) and the remaining responses were coded as 0 (incorrect) ($M = .57$, $SD = .50$).

3.4 Dependent Measures

Brand recall and brand attitude are the dependent variables in this study. Brand recall was measured by asking the participants to mention the names of the brands that appeared in the advergames. Two coders, who were blind to the treatments, coded the number of brand names recall. If a participant listed an advertised brand correctly, it was coded as a correct response by the coder. An answer was coded as an incorrect response if the participant did not list the advertised brand or listed a non-advertised brand name. The numbers of correct responses ranged from 0-4 as there were four different brands embedded in the advergames. Intercoder reliability was checked and found successful ($\pi = 0.87$).

Brand attitude was measured by presenting the participants with 10 possible brand names. They were informed that all brands did not appear in the games and then they were asked to identify and mark against the brand name which they feel have appeared in the game that they played. Out of 10 brand names 4 were brands appeared in the games whereas the rest 6 were foils. To reduce the guessing process, recognition task was used to measure brand attitude (adapted from Lee & Faber, 2007).

4. Results

4.1 Manipulation Check

To inspect the manipulation of game speed, respondents were asked to rate the perceived speed of the advergaming by using the same measure used in the pretest. A one way ANOVA showed a significant difference between ($F(1,222) = 71.662, p < 0.05$) between fast paced advergaming ($M = 4.055$) and slow paced advergaming ($M = 3.016$). Results of the study showed that the manipulation was successful.

4.2 Hypothesis Testing

To test the hypotheses, a series of independent sample t tests were run with game speed and persuasion knowledge as grouping variables and brand recall and brand attitude as test variables. Table 1 and Table 2 summarize the results of the analysis.

Table 1 Independent Samples t-test (Game Speed)

	Game Speed	N	Mean	SD	t-value	df	Sig.
Brand recall	Slow	118	4.055	1.13	8.465	222	0.000
	Fast	106	3.016	0.59			
Brand attitude	Slow	118	2.654	0.56	8.788	222	0.000
	Fast	106	3.917	1.05			

Table 2 Independent Samples t-test (Persuasion Knowledge)

	Persuasion Knowledge	N	Mean	SD	t-value	df	Sig.
Brand Recall	Low	134	3.015	0.58	8.443	222	0.000
	High	90	4.054	1.12			
Brand attitude	Low	134	3.915	1.03	8.656	222	0.000
	High	90	2.545	0.52			

Results indicate that gamers who played slow paced advergaming reported high brand recall than fast paced advergaming players (H1a) ($M_{\text{slow paced advergaming recall}} = 4.055, M_{\text{fast paced advergaming recall}} = 3.016, p < 0.05$). Consistent with H1b fast paced advergaming players reported more favorable brand attitude than the slow paced advergaming players ($M_{\text{fast paced advergaming attitude}} = 3.917, M_{\text{slow paced advergaming attitude}} = 2.654, p < 0.05$). Furthermore, players with high persuasion knowledge reported high brand recall than low persuasion knowledge players (H2a) ($M_{\text{high persuasion knowledge recall}} = 4.054, M_{\text{low persuasion knowledge recall}} = 3.015, p < 0.05$). Consistent with H2b subjects with low persuasion knowledge reported more favorable brand attitude than subjects with high persuasion knowledge ($M_{\text{low persuasion knowledge attitude}} = 3.915, M_{\text{high persuasion knowledge attitude}} = 2.545, p < 0.05$). Therefore, we found support for all the proposed set of hypotheses.

5. Discussion and Implications

The current study explores the potential effects of advergaming speed and gamers' persuasion knowledge on brand recall and brand attitude. As predicted gamers who played slow paced advergaming reported high brand recall but less favorable brand attitude. On the other hand, fast paced advergaming players reported low brand recall but more favorable brand attitude. These findings support the capacity theory (Kahneman, 1973) and the persuasion knowledge theory. These results are very important for advertising practitioners because selecting media that increases the brand recall and improves brand attitude of the consumers through entertainment is a planning strategy that has been widely used by media planners. Hence, the findings of this study can help the advertisers to develop effective advergaming that can increase consumers' brand recall and can build more favorable brand attitude by keeping in mind the two main elements of the advergaming i.e. the speed of the advergaming and gamers' persuasion knowledge. An appropriate blend of these two factors if kept in mind while designing the advergaming then this implementation would absolutely increase the brand responses desired by the advertisers and the companies.

6. References

1. Friestad M. & Wright, P. (1994), "The Persuasion Knowledge Model: How People Cope With Persuasion Attempts", *Journal of Consumer Research*, vol. 21, no. 1, pp. 1-31.
2. Grigorovici, D. M. & Constantin, C.D. (2004), "Experiencing Interactive Advertising Beyond Rich Media: Impacts of Ad Type and Presence on Brand Effectiveness in 3D Gaming Immersive Virtual Environments", *Journal of Interactive Advertising*, vol. 5, no. 1, pp. 31-53.
3. Kahneman, D. (1973), *Attention and Effort*, Prentice Hall, Englewood Cliffs, NJ.

4. Kunkel, Dale, Wilcox, B. L., Cantor, J., Palmer, E., Linn, S. & Dowrick, P. (2004), Report of the APA Task Force on Advertising and Children. Selection: Psychological Issues in the Increasing Commercialization of Childhood, American Psychological Association, Washington DC.
5. Lee, M. & Faber, R. J. (2007), "Effects of Product Placement in On-Line Games on Brand Memory: A Perspective of the Limited-Capacity Model of Attention", *Journal of Advertising*, vol. 36, no. 4, pp. 75-90.
6. Livingstone, S. & Helsper, E. J. (2006), "Does Advertising Literacy Mediate the Effects of Advertising on Children? A Critical Examination of Two Linked Research Literatures in Relation to Obesity and Food Choice," *The Journal of Communication*, vol. 56, no. 3, pp. 560–584.
7. Livingstone, S. (2009), "Debating Children's Susceptibility to Persuasion — Where Does Fairness Come In?" *International Journal of Advertising*, vol. 28, no. 1, pp. 170–174.
8. Lynch, J. G. & Srull, T. K. (1982), "Memory and Attentional Factors in Consumer Choice: Concepts and Research Methods." *Journal of Consumer Research*, vol. 9, no. 1, pp. 18-37.
9. Mediaedge:cia (2005), "Playing With Brands", available at: <http://www.meeglobal.com/output/Page1463.asp> (accessed May 15 2014).
10. Moses, L. J. & Baldwin, D. A. (2005), "What can the Study of Cognitive Development Reveal About Children's Ability to Appreciate and Cope With Advertising?" *Journal of Public Policy & Marketing*, vol. 24, pp. 186–201.
11. Nairn, A. & Fine, C. (2008), "Who's Messing With My Mind? The Implications of Dual-Process Models for the Ethics of Advertising to Children," *International Journal of Advertising*, vol. 27, no. 3, pp. 447–470.
12. Newzoo (2013), "Infographic Mobile Games Market to Double in Size Until 2016 and Reach 23.9 Bn", available at: <http://www.newzoo.com/insights/infographic-mobile-games-market-to-double-in-size-until-2016-and-reach-23-9bn/> (accessed October 14 2014).
13. Owen, L. H. (2008), "The Role of Conceptual Fluency in Children's Processing of Incidental Forms of Advertising Doctoral Dissertation", Lancaster University.
14. Robertson, T. S. & Rossiter, J. R. (1974), "Children and Commercial Persuasion: An Attribution Theory Analysis," *Journal of Consumer Research*, vol. 1, no. 1, pp. 13–20.
15. Statista (2014), "Video Game Industry – Statistics & Facts", available at: <http://www.statista.com/topics/868/video-games/> (accessed September 27 2014).