Effectiveness of In-Game Advertisements: Gamer Competence and Recall Rate

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Abstract

The rate of recall of sponsored brands in sports video games has been studied extensively. These studies have generally concluded that in-game advertisements are effective as gamers are able to recall the sponsored brands. In addition, the studies established that the rate of recall can be affected by game characteristics including the placement of the brand within the game. Comparatively, there are fewer studies examining gamer characteristics affecting the rate of recall of in-game advertisements. In particular, due to the limited capacity for information processing, it has been theorized that game proficiency can lead to a higher rate of recall of advertisements. Proficient gamers use less cognitive resource in playing the game and consequently can attend to more peripheral information including advertised brands. However, there are few studies providing empirical evidence to support this claim. In this study, 71 respondents were recruited to play a PlayStation 3 car racing game, F1 2014. There were six sponsored brands along the racetrack. 19 of the respondents obtained race positions from 1 to 11 in a race with 22 contenders. An independent t-test was conducted to compare the differences in the rate of recall of sponsored brands between respondents who obtained better race positions with those who did not do as well. The respondents who obtained race positions between 1 and 11 (M = 1.53, SD = 1.35) recalled a higher number of brands when compared to the remaining 52 respondents who obtained race positions between 12 and 22 (M = 0.85, SD = 1.14) at the .05 probability level. The results provide empirical evidence that gamers who are more proficient are able to recall a higher number of sponsored brands.

Key words: Advertisement recall, In-game advertisement, Sponsorship, Limited Capacity for Information Processing, Game proficiency

JEL Classification: L83, M37
1. Introduction

In recent years, there has been growing interest from advertisers to use product placements in video games. The spending on product placements in video games, also known as in-game advertisements have been growing steadily over the years. In tandem, there is an increasing number of studies conducted on the rate of recall of sponsored brands in video games. These studies have generally concluded that in-game advertisements are effective as gamers are able to recall the brands that appear in the video games. In particular, the studies have established that the rate of recall is affected by game characteristics including the prominence of the brand within the game, the role of the brand in the game and the congruence of the brand with the game (Balasubramanian, 1994, Dardis et al., 2012, Lee and Faber, 2007, Leng, 2011, Schneider and Cornwell, 2005, Törn and Dahlén, 2008, Yang and Wang, 2008).

Comparatively, there are fewer studies examining gamer characteristics and the rate of recall of in-game advertisements. As the number of studies is small, the findings have only been indicative that gamer characteristics can affect the recall rate of in-game advertisements. According to the information processing theory (Lang, 2000), it has been hypothesized that gamer proficiency could affect the rate of recall of in-game advertisement. The aim of this study is to further examine this relationship between gamer proficiency and recall rate.

2. Theoretical Framework

Lang (2000) addressed that gamers have limited capacity for information processing. As such, in playing a game, gamers need to allocate cognitive resources between playing a game and processing other peripheral information including the sponsored brands in the game. Consequently, it has been hypothesized that the recall rate of in-game advertisements are affected by the gamer’s proficiency in playing the game. Proficient gamers use less cognitive resource in playing the game and are thus able to allocate more cognitive resources to attend to peripheral information including advertised brands. In comparison, less proficient gamers devote a large proportion of their cognitive resources in playing the game. As such, they have less cognitive resources left to attend to peripheral information and consequently, are likely to have a lower recall rate of sponsored brands.

However, there are few studies providing empirical evidence to support this hypothesis. A small number of studies have examined the proficiency factor by comparing recall and recognition rates across different games and game platforms. While these studies suggested that game proficiency has an effect on recall rates, they failed to provide empirical evidence to support the hypothesis (Dardis et al., 2012, Leng, 2011, Toh and Leng, 2014). The aim of this study is to examine the recall rate of in-game advertisements between proficient and less proficient gamers using the limited capacity of information processing model as the theoretical foundation.
3. Methodology

Specially developed games with fictitious brands are commonly used in research involving advertisement recall and recognition. This is to control for prior exposure to the games and advertisements (Lee and Faber, 2007). However, if a new video game is used, it will reduce the realism of the study. A specially developed game may not have game controls which are intuitive and hence, there might be a steep learning curve for gamers (Cianfrone et al., 2008). This can affect the attention paid to advertisements and indirectly, the validity and generalizability of the findings. Consequently, for this study, a commercially-available console game F1 2014 for the PlayStation 3 was used.

Following earlier studies, respondents’ unaided recall rate was used in this study. Unaided recall required participants to list down as many brands as they can remember from the game. The number of correctly recalled answers was used as the measure of the recall rate. Although there are criticisms to the use of recall as a method for measuring the effectiveness of in-game advertisements and more generally product placements, they are still the most common measure used in studies (Nelson, 2002, Yang et al., 2006).

The console game F1 2014 provides many different options including race track, weather conditions, driver and number of laps for varied gameplay. In order to control for the conditions of exposure, these options are pre-selected for respondents. The race track selected was the Singapore Grand Prix race track. On this race track, there were six sponsored brands. These were DHL, Emirates, Pirelli, Rolex, Singapore Airlines and UBS. On this track, there were 22 competitors at the starting line-up. The other options pre-selected were Lewis Hamilton as driver, clear weather condition and three laps of the race track.

Respondents from a tertiary institution were recruited for the study and provided with S$5 in vouchers as a token of appreciation. Prior to playing the game, all participants were informed that they were required to play a console game lasting not more than 15 minutes followed by answering a simple questionnaire. Respondents were not told the purpose of the study. Deception is necessary for such studies so that participants will not be primed to pay attention to the in-game advertisements while they are playing the game (Schneider and Cornwell, 2005, Leng, 2011). At the end of the game, the respondents were briefed on the true objective of the study and were given the opportunity to opt out of the study. None of the respondents opted out of the study after being told of the true purpose of the study.

4. Results and Discussion

A total of 71 respondents took part in the study. The mean age of the respondents was 23.24 years. 26 of the respondents (37%) were of female gender. The mean number of correct sponsored brands recalled by all respondents was 1.03 brands (SD = 1.23). The number of correct sponsored brands recalled was between 0 and 5 brands.
Respondents were further categorized into two groups depending on their level of proficiency in the game. As the possible race position was between 1 and 22, respondents who obtained race positions from 1 to 11 were considered more proficient gamers and were categorized in the first group \((n = 19)\). The remaining 52 respondents who obtained race positions from 12 to 22 were placed in the second group and were considered to be less proficient gamers.

An independent t-test was conducted to compare the differences in the rate of recall of sponsored brands between the two groups. Respondents who were more proficient gamers recalled a significantly higher number of brands \((M = 1.53, SD = 1.35)\) when compared to respondents who were less proficient gamers \((M = 0.85, SD = 1.14)\) at the .05 probability level \((t (69) = 1.96, p = .03)\).

5. Conclusion

The results from this study provide empirical evidence that gamers who are more proficient are able to recall a higher number of sponsored brands. Proficient gamers are able to dedicate less cognitive resource in playing the game and consequently are able to attend to peripheral cues better. Consequently, they have a higher brand recall rate when compared to less proficient gamers.

However, other studies have also shown that less proficient gamers can have higher brand recall rates. Less proficient gamers are more likely to be stuck at certain stages in the game. When there are advertised brands in these stages, the duration of exposure for less proficient gamers becomes prolonged and the gamers are more likely to recall such brands. For example, in car racing games, gamers are more likely to recall brands located at sharp bends where they are more likely to crash into (Schneider and Cornwell, 2005). This suggests that the relationship between gamer proficiency and brand recall rate is complex and merits further study.

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