ESSAY 7: THE EFFECTS OF BRAND PROMINENCE, PRIOR GAME PLAYING EXPERIENCE AND GAME INVOLVEMENT ON BRAND RECALL IN ADVERGAMES

Abstract
This essay explores the effect of brand prominence on gamers’ brand recall as moderated by gamers’ prior game playing experience and game-involvement in the context of advergames, addressing the research questions 9 and 10. A 2 (brand placement strength: prominent versus subtle) x 2 (prior game playing experience: experienced versus inexperienced) x 2 (game involvement: high versus low involvement) between-subjects measures design is used. Empirical data is obtained from 220 Indian undergraduate and graduate management student gamers. A between-subjects measures ANOVA is used to test the hypotheses. Findings show that inexperienced gamers report higher brand recall in prominent brand placements than subtle brand placements whereas for experienced gamers, no significant difference in recall rates is found between prominent- and subtle-placement. Inexperienced gamers with low game-involvement playing an advergame with prominent brand placement report higher brand recall as compared to inexperienced gamers with high game-involvement playing an advergame with prominent brand placement. The study contributes to advertising literature by explaining the role of brand placement and its boundary conditions to create customers’ brand memory. Moreover, this study is the first step towards understanding the moderating role of game involvement in determining memory effects in the context of advergames.

8.1. Introduction
Today, customers are exposed to numerous advertisements across various communication channels. Presence of more number of companies, less product differentiation, adoption of
shorter ad formats and increase in the amount of commercial time over and over again have incited the consumers to develop ad-avoidance strategies that guard their psychic liberty (Rumbo, 2002). As advertising clutter lessens advertising viewing (Webb and Ray, 1979), increases avoidance (Rotfeld, 2006), weakens advertising memories (Webb and Ray, 1979), reduces the ability of the audiences to properly recognize the brand (Zhao, 1997), decreases media effectiveness (Kent, 1993) and has an undesirable impact on customers’ emotional responses to advertising (Zhao, 1997), companies have started engaging customers in new and non-traditional ways by using online media (Dahl et al., 2009). Placing the company’s products/brands in online media is one such new technique used by marketers today (Gould and Gupta, 2006).

It has been recognized that ad placements in online media pose a number of advantages over traditional advertising media, such as integrating brands with the environment (McCrindle, 2006), high involvement with the brand (McCrindle, 2006; Kinard and Hartman, 2013), creating constructive brand images (Rosado and Agante, 2011), effectively conveying subtle associations, familiarity and experiences (rather than a solitary factual point) (Lee et al., 2009) and inducing an experience of fun and escapism (Refiana et al., 2005; Lu and Wang, 2008). Furthermore, marketers are able to reach significantly more of its targeted customers through non-traditional media than traditional media (Dahl et al., 2009).

Online advergames is one such new technique used by marketers to promote their brands and enrich advertising messages (Gould and Gupta, 2006). Advergames are a form of branded entertainment which features advertising messages, logos and trade characters in a game format (Moore, 2006). These are the interactive online games embedded with brand messages to promote products to customers (Cauberghe and De Pelsmacker, 2010). The smart features of
advergames, such as ‘easy adjustability,’ ‘cost-effectiveness’ and ‘viral marketing ability’ differentiate it from traditional advertising media (Chen et al., 2012; Ipe, 2008). In addition, displaying advertisements in the background of the games gives a feeling of realism to the customers (Marti-Parreno et al., 2013). On an average, the amount of time spent on an advergame is about 7 to 30 minutes, which is significantly higher than the time spent on a TV advertisement (Ipe, 2008, p. 9).

Furthermore, as evident from previous research, consumers’ processing of messages in traditional ad context and in online games are very different from each other (Grigorovici and Constantin, 2004; Obermiller et al., 2005). First, with traditional advertising, consumers usually identify the purpose of the advertisement in between the TV programs and this triggers consumer suspicion and persuasion knowledge, which can work to thwart and limit persuasive effects (Friestad and Wright, 1994; Obermiller et al., 2005), whereas advergames is less likely to trigger these defense mechanisms (Grigorovici and Constantin, 2004) as advergames are more hypnotic in nature. Secondly, when attending to traditional advertising, the ad is the only and primary focal activity for the viewer. With brand placement in online games, however, consumers are consciously attending the game playing content, and this occupies their primary attention (Grigorovici and Constantin, 2004; Lang, 2000; Lang and Basil, 1998). As a final point, the biggest difference between traditional advertising and in-game advertising (advergames) is in the realm of involvement and its effect on attention resources. A consumer is passively involved while watching television programs or movies whereas a consumer is actively involved while playing a game by altering and monitoring the course of events (Nicovich, 2005). Due to its mesmeric and involving nature, getting a brand seen and recalled may be far more difficult in the game context than is the case with movie or television advertisements (Chaney et al., 2004;
Nicovich, 2005). Hence, while studying the effect of advergames on consumers’ brand outcomes, game playing experience and game involvement factors cannot be ignored. Also, the brand placement literature (e.g., Cauberghe and De Pelsmacker, 2010; d’Astous and Chartier, 2000) shows that the position of placing the brands in the game, either at central position or at peripheral area of the game screen, does have an effect on gamers’ memory. Therefore, the effects of brand prominence or brand placement strength, gamers’ playing experience and their game involvement on consumers’ brand responses in the context of advergames need to be studied. Thus, this essay aims to investigate the cause and effect relationship of brand placement strength on brand recall conditioned upon gamers’ prior game playing experience and game involvement, which affect gamers’ attentional capacity and hence, their processing of in-game brand placements. Hence, this experimental study explores the interaction effect of brand placement strength, prior game playing experience and gamers’ game involvement on brand recall by taking the insights from the Limited Capacity Model of Attention (LCM: Kahneman, 1973) and Elaboration Likelihood Model (ELM: Petty and Cacioppo, 1986) as these models explain how cognitive resources are allocated when individuals comprehend both the game content and the brand content while playing an advergame.

The remainder of this study is organized as follows. In the next section, literature review is provided, followed by theoretical background and hypotheses. We then describe the research methodology and the results of hypotheses testing. Finally, we discuss the implications of our study findings and provide direction for future research.

8.2. Literature Review

Literature on online advertising shows that advergames could be more persuasive than traditional advertising on customers (Kureshi and Sood, 2009; Wade, 2004). For example, Moore (2006)
analyzed the elements of advergames that might appeal to children, used by the top food marketers in USA. Results revealed that advertisers incorporate features that aid in stimulating extended play of 15 to 20 minutes, much longer than any television commercial. Also, a study by Folkvord (2012) shows that when study participants played advergames-promoting healthy food, their intake of the advertised healthy food increased. Furthermore, Paek et al. (2014) provides an extensive content analysis of food advergames showing the persuasive nature of advergames that are targeted to children. Moreover, Folkvord et al. (2015) study investigating the effects of advergames promoting energy-dense snacks on snack intake, has shown that playing an advergame containing food cues increased total intake of the players. However, considerable debate exists about whether advergames impact brand memory or not. For instance, Hernandez and Chapa (2010) conducted an experiment to find out the impact of advergames on adolescents’ recognition and selection of products advertised in advergames. The results showed that after exposure to advergames, adolescents who showed positive attitudes toward advergames and adolescents who reported previous positive affection toward the product obtained higher brand recognition scores. It was found that out of 128 participants, 65.6% (n= 84/128) adolescents chose snacks endorsed in advergames over other snacks. The rest 34.4% (n= 44/128) selected other brands. Also, the findings revealed a positive relationship among liking, enhanced memory and snack choice.

Cauberghe and De Pelsmacker (2010) examined the effect of brand prominence and game repetition for a low involvement product (coffee) and a high involvement product (car) on 480 consumers’ brand recall and brand attitude. They used a 2 (brand prominence) × 2 (game repetition) × 2 (product involvement) between-subjects factorial design. Results showed that prominent brand placement lead to high brand recall than a subtle brand placement but no
difference was found in brand attitude between a prominent and a subtle brand placement in an advergame. Game repetition had no effect on brand recall, but had a negative impact on brand attitude. Also, game repetition for a high-involvement product resulted in negative attitudes whereas positive attitudes for a low-involvement product.

Furthermore, a study by Harris et al. (2012) showed that after children’s exposure to unhealthy food advergames, they consumed lesser amounts of healthy food (i.e. fruits and vegetables) and more nutrient-poor snack foods (unhealthy food shown in the advergames). Also, children who played healthy food advergames showed an increase in healthy food (fruit and vegetable) consumption. Redondo (2012) tested the impact of product placements of M&M candies in casual advergame on adolescents’ brand attitudes. Findings showed that product placements in casual advergames had a positive effect on adolescents’ brand attitudes. A recent experimental study by Peters and Leshner (2013) explored the impact of game-product congruity and product placement proximity on advergame players’ brand memory, brand attitude, game enjoyment, and future intention to play, by using a 2 (congruity: congruent vs. incongruent) × 2 (proximity: central vs. peripheral) repeated-measures design. The findings revealed that players’ explicit memory improved for congruent/central game condition. The incongruent/peripheral game condition showed the smallest negative attitude change, high game enjoyment, and the highest intention to play again in the future. In consistent with the above mentioned studies, this study also provides the empirical evidence about positive effects of advergames on consumers’ brand memory, attitude, game enjoyment and future plan to play.

Recently, Folkvord et al. (2015) conducted a study to determine the potential moderating role of attentional bias (i.e., gaze duration, number of fixations, latency of initial fixation) in the impact of advergames promoting energy-dense snacks on children’s snacks intake. 92 children
participated in the study. A randomized between-subject design was used. Children were exposed to an advergame that endorsed either energy-dense snacks or non-food products. By using eye tracking methods, attentional bias during playtime was measured. The findings explored that playing an advergame containing food cues improved total intake. Also, more food intake was found in case of children with higher gaze duration for the food cues. Children with a faster latency of initial fixation to the food cues ate more of the advertised snacks as well. In consistent with previously discussed studies, this latest study (Folkvord et al., 2005) also proved that advergames do affect consumers recall, attitudes and other brand outcomes.

On the other hand, Mallinckrodt and Mizerski (2007) have argued that when participants were made to play an advergame, there was no impact of knowledge of the persuasive intentions on the consumers’ preferences for Froot Loops cereal (embedded brand in that advergame) compared to other cereals or food categories. In the same study, no link was found between the participant knowledge about the brand after playing the advergame and subsequent preferences and intentions to request Froot Loops cereal (cereal brand embedded in the advergame). Furthermore, a study by Tina and Buckner (2006) conducted an experiment to determine the effect of advergames on players’ brand recall and to examine the relation between attitude towards product placement and attitude towards advertising in general. Results showed that 86% (n= 36/42) were able to recall many details about the advergames after playing advergames but attitude results revealed that 50% (n=21/42) of the participants were negative about game advertising, 29% (n=12/42) were positive about the game advertising and 21% (n=9/42) were undecided about game advertising. 71% (n=15/21) of the participants who were negative about advertising in general were also negative towards game advertising whereas 50% (n=6/12) of the
participants were positive about advertising in general and also positive towards game advertising.

Nevertheless, the investigators have found the preliminary support for the effects of brand placements in movies or videogames on memory (e.g., Bellman et al., 2014; Gross, 2010; Kureshi and Sood, 2009, 2011), still much work is required to explore the effectiveness of brand placements in online games as it is highly important for advertisers to know and understand what other features of advergames and conditions would be more effective for in-game advertising. As research in advergames are more recent and limited (Kinard and Hartman, 2013) and majority of the studies have discussed more about advergame content (e.g., An and Kang, 2014; Lee et al., 2009; Moore, 2006; Paek et al., 2014; Quilliam et al., 2011) and very less attention has been given to know about the effect of different elements of advergames, such as brand placement strength and various conditions, such as prior game playing experience and game involvement, by which an individual elaborates cognitively while processing the in-game brand placements. As advergames are more fascinating and involving in nature which differentiate them from old traditional advertising media, hence, when the effectiveness of brand placements in advergames is to be studied then gamers’ playing experience and their involvement with the game could prove to be a few conditional significant factors which may work as differentiating factors to process in-game advertising and to create the brand recall. It is basically because of the fact that consumer’s attention capacity left to process in-game brand placements is influenced by and conditional upon elaboration components (e.g., Krugman, 1983; McClung et al., 1985). Thus, to fill this literature gap, the present study makes an attempt to provide an understanding of the impact of three important factors i.e. brand placement strength, prior game playing experience and game involvement on players’ brand recall.
8.3. Hypotheses Development

One of the major goals of advertisers is to increase brand awareness in using brand placements in games. It is often believed that whoever plays a game embedded with brand names will pay attention to in-game placements as well. Playing the game is the major activity for a game player that grabs primary attention. In view of the fact that embedded brands in a game are not the central object of attention, hence, it is very essential for the advertisers to find out whether their brand names/logos are actually being observed by the gamers or not. Literature on attention (e.g., Kahneman, 1973; Lang and Basil, 1998) presents two main aspects of attention: selective and intensive aspects. Allocated cognitive capacity for a particular task is the intensive aspect of attention and selective allocation of cognitive capacity in preference to others is the selective aspect of attention (Kahneman, 1973; Lynch and Srull, 1982; Olshavsky, 1993). LCM explains these selective and intensive aspects of attention (Kaheman, 1973). It assumes that mental resources are required for processing messages and at any given point of time, people can have a limited sum of mental resources (Kahneman, 1973; Lynch and Srull, 1982). Processing information consist of three sub-processes: encoding, storage and retrieval. Allocation of resources to all these three sub-processes develops the memory for a specific message. When the resources allocated to the sub-process are not sufficient then the receiver’s memory suffers for that particular message (Lang and Basil, 1998; Lang, 2000). For instance, cognitive overload limits the encoding of a specific message which results in poor recognition levels (Lang, 2000). According to this model, if an individual has to perform 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 secondary task (Kaheman, 1973; Lynch and Srull, 1982). 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 advergame context, playing the game is the primary task for the game players and processing the in-game placements is the secondary task (Grigorovici and Constantin, 2004). The more mental resources that are required for playing the game, the less will be remaining for processing in-game placements.

8.3.1. Brand Prominence and Prior Game Playing Experience

Given limited capacity for processing in-game placements in the context of advergames, various factors may affect the impact of advergames on gamers’ brand recall. One of these factors is the ‘in-game brand location’ i.e. whether the embedded brand is placed at center or at peripheral regions of the game screen (here referred as brand placement strength). The advertising literature has defined 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 and Lord 1998, p. 48). Bhatnagar et al. (2004, p. 108) has defined brand placement strength as “the number of brand mentions, visual or verbal inclusions or both, appearance in the foreground or background, actual usage and integration with the context”. A brand placement is called as 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 and Lord 1998, p. 49). A brand placement is called as a subtle brand placement in the game “when it is peripherally placed on game screen or in the background or when the brand size is very small” (Gupta and Lord 1998, p. 49). Thus, the position or size of the brand placed in the game, defines its prominence or placement strength, which may control its effect.

Prior studies on brand placements have shown that how prominent brand placements in games resulted in high brand recall than subtle brand placements (Cauberghe and De
Pelsmacker, 2010; d’Astous and Chartier, 2000; Gupta and Lord, 1998). With reference to LCM, a gamer playing a game is more bothered about playing that game or winning the game but least bothered about the brand placements in the game. Thus, when a gamer plays an advergame where the embedded brand is prominently placed (i.e. centrally located) then in that case the gamer may not require more spare capacity as processing of this prominently placed brand is more integral to the primary task (i.e. playing game in this context) and more noticeable. But on the other hand when a brand is subtly placed in the game then the gamer requires more number of attentional resources to process the in-game brand placement as embedded brand is not centrally placed but peripheral placed.

A few studies on prior game playing experience (e.g., Navon, 1984; Pham, 1992; Schneider and Cornwell, 2005) show that experienced gamers can anticipate about what, how and when things will happen and how to handle them, based on their prior game playing experience as their prior game playing experience provides them certain skills, expectations and schema which reduce their mental burden and hence, they are left with more spare capacity required for processing in-game placements which in turn results in high brand recall (Schneider and Cornwell, 2005). Based on these arguments following hypothesis is formulated:

\textit{H1a: For experienced gamers, there is no difference in brand recall between a prominent brand placement and a subtle brand placement.}

As evident from previous literature on gaming experience (e.g., Navon, 1984; Pham, 1992; Schneider and Cornwell, 2005), inexperienced players cannot forestall about what will happen next in the advergame. Since, they have not played the game, thus, their more amount of mental capacity gets used up for game playing and they remain with fewer amounts of mental resources to be used for in-game processing. Furthermore, when brand placements are
prominent, brands are more noticeable, which reduces gamers’ mental burden resulting in high brand recall than that in subtle placements (Cauberge and De Pelsmacker, 2010; van Reijmersdal et al., 2014). Based on these rationales, we assume that due to lack of prior experience of game playing, the inexperienced game players might need to assign more mental resources to try to play and master the game, thus leaving fewer resources for processing advertisements. As a result, the game players will block out those brands more which are subtly placed in the game than those which are prominently placed in the game. Consequently, limited spare capacity will decrease the performance of inexperienced game players on subtle brand placements more than it will do on prominent brand placements. Hence, we expect that inexperienced players will report high brand recall in prominent placements than that in subtle brand placements. Thus, following hypothesis is formulated:

\[ H1b: \text{For inexperienced gamers, a prominent brand placement results in high brand recall than a subtle brand placement.} \]

8.3.2. Moderating Role of Game Involvement

Involvement has been conceptualized in many ways, such as; it is defined as a process (Greenwald and Leavitt, 1984) and a state which is grounded in motivation (Cohen, 1983; Pham, 1992) in various studies. Program involvement is conceptualized as a motivational aspect of viewers’ involvement (Tavassoli et al., 1995) and as a state of motivation, arousal or interest towards a program or event that is evoked by particular motives (Rothschild, 1984). ELM (Petty and Cacioppo, 1986) can best explain the moderating role of game involvement in determining the persuasion effects of advergames on consumers’ brand recall. The model suggests two routes to persuasion: the central route and the peripheral route. In the central route, persuasion results from an individual's vigilant and thoughtful contemplation of the accurate virtues of the message
presented in favor of an activism whereas in case of peripheral route, persuasion results from an individual's association with the cues existing in the stimulus. An individual uses the central route when he/she is highly motivated and has ability to think about the persuasive message and its topic whereas an individual uses the peripheral route when he/she has very less motivation and has lesser ability to process the message. Thus, the probability of elaboration is determined by an individual's motivation and ability to evaluate the argument being presented.

As this model suggests that sometimes consumers are influenced mainly by “peripheral cues” in a persuasive message and that peripheral cues include any variable capable of affecting persuasion without analysis of the message arguments on the topic. Gamers’ game involvement is one such variable which does affect persuasion process as evident from advertising literature (e.g., Greenwald and Leavitt, 1984; Laverie and Arnett, 2000). The active interest in, engagement with and commitment to a game or an event define program/game involvement construct (Laverie and Arnett, 2000). It is defined as a state of motivation, arousal or interest towards a program or event that is evoked by particular motives (Rothschild, 1984). Based on the insights drawn from ELM (Petty and Cacioppo, 1986) theory it can be argued that when an individual is highly involved with the game, his/her motivation and the ability to process in-game advertising would be very less but for a less game involved gamer, the motivation to think and process in-game brand placements will be more. As a result, the less game involved gamer will not suffer much in processing in-game advertising resulting in high brand recall than a high game involved gamer.

Studies on program/game involvement have shown the mixed results of effect of brand placements in television programs, magazine articles and online games on consumers’ brand memory (e.g., Grigorovici and Constantin, 2004; Norris and Colman, 1992; Pham, 1992;
Tavassoli et al., 1995). Pham (1992) found an inverted U-shaped relationship between program involvement and brand memory. Studies on program involvement show that when a consumer is highly involved with a program then his/her focus on brand placements in program is very low as mental resources left to process in-game placements is very low and when the involvement in the program is low then the consumer’s attentional capacity available to process in-game brand placements is high and hence, in the latter case the brand recall is higher than that in the former case (Krugman, 1983; McClung et al., 1985). Thus, if it’s an inexperienced gamer playing an advergame with prominent brand placement, we predict that when the game involvement is low, the gamer is left with more spare capacity required for processing in-game placements which in turn results in high brand recall than with high game involvement. Hence, the following hypothesis is formulated:

H2: There will be a brand placement strength x prior game playing experience x game involvement interaction effect on brand recall, such that, playing an advergame with prominent brand placement, inexperienced gamers with low game involvement will report high brand recall compared to those with high game involvement.

8.4. Research Methodology

8.4.1. Overview

As the current study’s overall objective is to examine the cause and effect relationships of brand placement strength on brand recall and moderating roles of prior game playing experience and game involvement, the appropriate research design employed is an experimental design (Malhotra et al., 2012). The following sections present the experiment in detail, including development of stimulus materials, participants and design, manipulation of independent variables and measurement of dependent variable.
**8.4.2. Development of Stimulus Materials**

Two pretests were conducted to select stimuli for the experiment. Pretest 1 was performed to select stimulus for the treatment variable, brand placement strength (prominent versus subtle placement), which was manipulated during the experimentation. It was conducted by conducting a focus group interview with 10 student gamers to select a few advergames which could be used in the study and then asking another set of randomly selected participants (40 gamers) to play the advergames after briefing them the instructions and information required for the game play. Then they were asked to rate the extent to which they feel the brand is prominently placed in each game on a Likert scale (1 = “not at all prominently placed” to 5 = “very prominently placed”). Based on the mean ratings, the prominent brand placement advergames (above 2.5), and subtle brand placement advergames (below 2.5) were selected for the study. A second pre-test was conducted to select scenarios to manipulate gamers’ advergames involvement. Bitner (1990) noted that scenarios are role playing experiments that allow expensive or difficult manipulations to be more easily operationalized, provide the researcher with control over otherwise unmanageable variables, and facilitate compression of time by summarizing events that might otherwise unfold over days or weeks. Scenario based approach allows researchers to manipulate the independent factors of interest into various levels which is not possible with retrospective approaches. Moreover, scenario based approach minimizes the difficulties associated with recall-based designs, such as memory biases and consistency issues (Smith et al., 1999). Game involvement scenarios were created through expert interviews with three professors working in the area of marketing from a University. These professors generated six game involvement scenarios (3 scenarios for high game involvement and 3 scenarios for low game involvement). Then, 30 student respondents were randomly selected and they provided their realism responses
to these scenarios. The realism responses were obtained on a five point Likert scale (1 = “strongly disagree” to 5 = “strongly agree”), adapted from Shiv and Fedorikhin (1999). Based on the realism scores, out of these six scenarios, two scenarios were selected for the final study. In the selected high game involvement scenario subjects were instructed that their views on online games were very important as the game developers and game designers need their valuable suggestions on online games to improve game’s quality before its launch in the market. Also, they were told that if the game developers find their suggestions really worth, they would be awarded a cash prize of Rs.5000 with a commendation certificate from the company which would help them even in their job placements too. Also, they were communicated that if they would score high in the given game then they would get a favorable chance to win Rs.10000 cash in a lottery. In low game involvement scenario no such statements about ‘importance of their views’ and ‘a chance to win Rs. 5000 or placement offer or a chance to win lottery’ were made in the low involvement condition (See Appendix).

8.4.3. Participants and Design

The participants were selected from a large Indian University. Studies reported that 90% of teens are gamers (mediaedge:cia, 2005), which supports that the use of student sample is appropriate for this study. Participants selected for this study were between the ages of 18 and 24 years. First, a random selection of students was conducted from a list of all the University students and then, they were asked to rate their game playing interests on a five point Likert scale (1 = “not at all interested” to 5 = “very much interested”). Only those students were chosen for the study that showed game playing interest score more than the average (2.5). After seeking their game playing interest they were randomly assigned to one of the four experimental conditions (brand placement strength: prominent or subtle x game involvement: high or low).
participated in the study. These respondents were called to a computer laboratory where they were asked to play the advergames on individual consoles for a given time period. Respondents were randomly assigned to the different experimental conditions and advergames which to be played on the given computers. After exposure to advergames, participants in all the four conditions were presented a questionnaire depicting the manipulated scenarios followed by manipulation check scales, measures for non-manipulated independent variable (prior game experience), and dependent measure.

8.4.4. Independent Variables

Three independent variables were used in this study. These were brand placement strength, prior game playing experience and game involvement. Brand placement strength and game involvement were manipulated variables and prior game playing experience was a measured variable. Game involvement was manipulated by variations in the study instructions (See Appendix). Prior game playing experience was measured by asking the participants to indicate whether they play digital/video/computer/online game in an average week. 60% (n = 132) reported typically playing games in an average week, while 40% (n=88) did not play any games.

8.4.5. Dependent Measure

Brand recall is the dependent variable 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 it found to be satisfactory ($\pi = 0.87$).

8.5. Results

8.5.1. Manipulation Checks

8.5.1.1. Brand Placement Strength

To test the manipulation of brand placement strength, respondents were asked to indicate the extent to which they feel the brand is prominently placed in each game by using the same measure used in the pretest. A one way Analysis of Variance (ANOVA) showed a significant difference between ($F(1,218) = 69.542, p < 0.05$) between prominent placement advergames ($M = 3.996$) and subtle placement advergames ($M = 2.916$). Results of the study showed that the manipulation was successful.

8.5.1.2 Game-Involvement

Manipulation check of scenario realism for game involvement was done and the two scenarios were found realistic. After scenario realism check, during the study, the manipulation of players’ game involvement was verified by asking the respondents to rate the extent to which they were involved in the advergame on a five point Likert scale (1 = “not at all involved in the game” to 5 = “highly involved in the game”). A one-way ANOVA showed a significant difference ($F(1,218) = 35.149, p < 0.05$) between high game involvement ($M = 3.898$) and low game involvement ($M = 2.932$). Results of the study showed that the manipulation was successful.

8.5.2. Hypotheses Testing

A $2 \times 2 \times 2$ between-subject measures ANOVA with brand recall as the dependent measure and brand placement strength (prominent or subtle), prior game playing experience (experienced or inexperienced) and game involvement (high or low) as the predictor variables was conducted.
Brand placement strength × prior game playing experience was found to have a significant effect on brand recall ($F(1, 204) = 420.63, p < 0.05$). Results showed that prominent brand placements (versus subtle brand placements) resulted in high brand recall for inexperienced gamers ($F(1, 204) = 770.65, p < 0.05$, $M_{\text{inexperienced}/\text{prominent placement}} = 5.00, M_{\text{inexperienced}/\text{subtle placement}} = 3.80$). But for experienced players, there was no significant difference in the recall rates between prominent brand placements and subtle brand placements ($F(1, 204) = 1.70, p > 0.05$, $M_{\text{experienced}/\text{prominent placement}} = 4.00, M_{\text{experienced}/\text{subtle placement}} = 3.80$). These findings supported H1a and H1b. Consistent with H2, we found a significant brand placement strength × prior game playing experience × game involvement interaction ($F(1, 204) = 73.45, p < 0.05$). Also, results showed that inexperienced gamers playing prominent brand placement advergames in low game involvement condition reported high brand recall ($F(1, 204) = 421.56, p < 0.05$, $M_{\text{inexperienced}/\text{prominent placement/low game involvement}} = 5.40$), compared to high game involvement condition ($M_{\text{inexperienced}/\text{prominent placement/high game involvement}} = 4.20$). Therefore, support for all the proposed set of hypotheses was found.

8.6. Discussion

The current study explores the potential effects of brand placement strength and prior game playing experience on gamers’ brand recall. As predicted inexperienced gamers reported high brand recall in prominent brand placements than subtle brand placements, whereas for experienced gamers no significant difference was found in the recall scores between prominent brand placements and subtle brand placements. These findings support the capacity theory (Kahneman, 1973) and the theory on experience (Navon, 1984) that more amount of spare capacity would be available with experienced player as he is very much familiar with the game and hence, the effect of brand placement strength becomes minimal resulting in no or very less
change in brand recall. But, on the other hand, inexperienced players might need to allocate more mental resources to try to maneuver the brand placed in the game, thus leaving fewer resources available for processing in-game advertisements. And when the placement is prominent, the brand is highly noticeable, which reduces the mental burden for inexperienced gamer to process in-game placements resulting in high recall as compared to that in subtle placements.

This essay also has looked at the moderating role of game involvement on relationship between brand placement strength and prior game playing experience on gamers’ brand recall. As expected, inexperienced gamers with low game involvement playing an advergame with prominent brand placement showed high brand recall than those with high game involvement. This finding supports the theory on relation between program involvement (here game involvement) and brand memory. When the involvement with the game is low, game playing will consume less attentional resources and thus, more spare capacity will be available to process in-game advertisements. The finding here emphasizes that while investigating the impact of brand placements in games on memory, scholars should also consider the game involvement construct as its effect on brand responses in the context of advergames cannot be ignored.

8.7. Limitations and Scope for Future Research

One of the limitations of this study could be that it used only two levels of brand placement strength and two levels of game involvement. Effect of moderate level of game involvement on gamers’ brand recall can be further investigated. Another limitation of the study could be that it is conducted on Indian gamers; hence findings of the study can be further tested by conducting the same study on gamers of other countries where the usage rate of online games is different from that in India. One more limitation of the study could be that it examined the moderating effect of game involvement on gamers’ brand recall, but moderating effect of various other
factors, such as game-product congruity and product involvement can be investigated in future research.

8.8. Theoretical and Managerial Implications

In examining the persuasive impact of advergames, many scholars offer various theories to provide insight into how consumers process such interactive, branded entertainment. Using the elaboration likelihood model, some researchers argue that consumer process advergames peripherally, based on simple associations and cues (Moore and Rideout, 2007). Thus, consumers may focus their attention on simple aspects of the advergame like branded characters, colorful animation, and stimulating music, which, consecutively, influences their perceptions and attitude towards the embedded brands (Moore and Rideout, 2007). Other researchers suggest attention theories, such as LCM, to provide insight into how persuasive attempts impact consumers’ responses (Kahenman, 1973; Navon, 1984). Even though a substantial amount of research subsists regarding the nature of advergaming, there is a dearth of research in developing a theoretical base to apprehend the present role and future potential of advergaming as a long-term strategy to create brand awareness among customers in an entertaining way. Hence, this study provides a better understanding about the factors which make advergames successful for an advertising campaign from attention and elaboration perspectives.

Also, this study provides an empirical knowledge to the marketers and game developers on how to implant brands effectively in advergames considering the individual physiognomies of each advergame. The most vital feature of an effective advergame is its entertaining game content, because the desired communication impact to transfer positive effect from an entertaining media experience to the brand is higher. This piece of work explores that not all the entertaining games are equally effective in realizing this goal. Based on our findings, we reason
that the type of brand placement and gamers’ prior game playing experience influence gamers’ brand recall. The findings of the study show that inexperienced gamers’ brand recall is high in case of prominent brand placement as noticeability of brand is high here as the spare capacity required to process in-game brand placements is sufficient, resulting in high memory.

This finding is very important for advertising experts. If high brand memory is the primary goal for advertisers, then prominent-placements might be considered a better media strategy for in-game advertising than subtle-placements. Further, this essay shows that gamers’ game-involvement also impacts brand recall. Findings show that inexperienced gamers playing advergames with prominent brand placements, report higher brand recall in low game-involvement condition than in high condition. These results are very important for promotion specialists because selecting media that increases the brand memory of the consumers through entertainment is a planning strategy that has been extensively used by media designers today. Hence, advertising executives should also think about designing advergames by taking into account the game-involvement factor to validate that the implementation has the robust positive impact on consumers’ memory.

The study also has some serious implications on society as well. The study findings can be very fruitful for advertisers, policy makers and the society if implemented properly. For the betterment of society best educative advergames can be designed through which good social habits among youth especially the college going students, can be developed. For example, in today’s world where young students get exposed to a number of ads promoting unhealthy jerk food that becomes the root cause for a no. of health problems, it becomes very difficult for educators and parents to cultivate healthy food eating habits among young kids. Thus, to educate the society, some very educative and entertaining advergames can be developed which can
actually make this generation aware about living healthy and better lives. Thus, advertising policy makers and game developers can design advergames which can raise discussion and education for pro-health believers and campaigners and other non-profit organizations looking to implement interactive media in youth obesity prevention campaigns. Hence, the three main elements of advergaming – brand placement strength, game experience and involvement can be taken into consideration while making such educative and informative advergames for the betterment of society.