Impact of Involvement and Cognitive Load on Affective Responses to Advergames and In-Game Advertising[*]

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Abstract

It has been long known that there are different ways of communicating promotional messages with branded entertainments. Among all, the two of them are notable; communicating the message through advergames and integrating the message/brand in the game; known as in game advertising (IGA). Deriving the positive effects of both from the literature, different variables that may reduce or increase the efficacy of them are studied. This study is an attempt to understand the effect of different variables on affective responses to advergames. In the paper, it is suggested from the literature that cognitive overload affects affective responses (i.e. attitudes toward the branded entertainment and the main brand that the game is specifically designed for) of game players. The authors aim to develop hypotheses trying to explain the effect of cognitive overload stimuli on the attitudes of the gamers. In the paper authors also suggested hypotheses about how involvement may affect cognitive overload outcomes. All those hypotheses are developed both for the advergames and IGA. As the last section, future research that will help to test these hypotheses are provided.

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[*]This study presented and printed at the proceedings of the 2nd Annual International Conference on Social Sciences, hosted by Yıldız Technical University, 2-4 June, 2016

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1 Introduction

As the consumers are more involved with the technology and become fluent users of the devices, it becomes easier for them to avoid traditional promotional messages. As a result, marketers try to find new and appealing methods to draw attention of the consumers to the promotional messages. Combining entertainment and brand messages is one such strategy that digital advertisers have begun to utilize. Following the idea, online branded entertainment concept has introduced by digital marketers. It takes the attention of millions of game players. Although young consumers are the main target, there are online game players of all age (Lenhart et al., 2008). Brands and/or commercial messages are successfully placed within this entertainment types (i.e. advergame and in game advertising (IGA).

Online brand/message placement has attracted the attention of advertising researches, consumer behavior researches as well as researches that work on information processing ability of humans (Russell and Stern, 2006). Across a broad range of brand placement efforts in traditional media, online entertainment is a notable exception. While players are having fun, marketers try to get to the target which is player's recognition and recall of the brand(s) placed in the online entertainment. Although assumed to be used effectively, a question still remains on the minds of the marketing practitioners as how effective is the branded entertainment.

Keeping the question in mind, there are many studies investigating the level of acceptance (Hernandez et al., 2004), advertising outcomes (Nelson, 2002; Mackay et al., 2009), effects of specific variables, such as prominence (Brennan et al., 1999; Grigorovici and Constantin 2004; Ozansoy Çadırcı and Sağkaya Güngör, 2016; Cauberghe and De Pelsmacker 2010), telepresence (Grigorovici and Constantin 2004; Nelson et al., 2006; ; Sukoco and Wo, 2011), involvement (Gross 2010; Cauberghe and De Pelsmacker 2010), familiarity with the brand (Brennan and Babin, 2004), game repetition (Cauberghe and De Pelsmacker 2010), cognitive load (Ozansoy Çadırcı and Sağkaya Güngör, 2016), and so on.

Despite many studies to understand the factors that influence the audience of the branded entertainment, there is still a high part of it remains undiscovered. The researchers studying cognitive overload or involvement separately are many, and most of them are mentioned above and also in the theoretical framework section. However, to our knowledge, there is no study that combines the two to investigate the effect on affective responses of game players. Thus, the purpose of the current study is to explain the basis that leads us to develop the hypothesis. We attempt to propose hypotheses on how over utilizing cognitive resources influence game players' affective responses to the main brand advertised in the game and to the branded entertainment itself, and how level of involvement change the effect of cognitive overload, if it does. Moreover, hypotheses will be developed in order to understand if there are any differences for different types of branded entertainment; namely advergaming and IGA. Throughout the study, the brand that the branded entertainment is specifically designed for is called main brand. This terminology is used in order not to confuse the main brand with the placed brands in IGA.

The paper is organized as follows. The first part is devoted to explain the environment specific to the branded entertainment. In this part environment, audience and game related factors will be discussed. Second part is to discuss the inherent load the advergames and IGA have on the players and the factors that cause this low cognitive load condition. The following part is to explain involvement and telepresence. In the last part, we discuss the interaction of the level of cognitive load (classified as low and high) and the involvement. We discuss whether involvement has any changing effect on the cognitive load effects on the basis of models and theories from the literature.

2   Literature Review

In reality the placement of promotional messages in different forms of media is not a new phenomenon for marketers. Brands and product have been placed in movies, tv shows and video games for a very long time. Digital media has opened up new concepts like "advergames" with the movement toward gamification for marketing purposes (Kiracı & Yurdakul, 2012). The following section of the paper gives information on in-game advertising (IGA - classical brand placement within video games) and advergames (a new type of branded entertainment).

2.1   In-Game Advertising (IGA) Versus Advergames

In-game advertising (IGA) refers to the "inclusion of products and brands within a digital game"(Terlutter and Capella, 2013, p.95). IGA is defined as "the integration of non-fictional products and brands within the playing environment of video & computer games through simulated real life marketing communications mechanisms" (Smith, et al., 2014; p.99). Products can be integrated within a game differently. They don't always need to be integral to the game play. They can either be placed during gameplay or during the loading of the game (Terlutter and Capella, 2013). This type of advertising strategy is different than advergames, although earlier research on advergames views and defines advergames as a special form of IGA (e.g. Jung, et al., 2011). The reason behind this conception is that for IGA the companies buy advertising space in video games, and sometimes these games can be an advergame (An and Kang, 2014).

Different than IGA, advergames as a form of branded entertainment (Wise, et al., 2008), promote a single brand or product (Cauberghe and de Pelsmacker, 2010), they mostly are played on a brand's website (Bellman, et al., 2014; Wise, et al., 2008) for free (Hofmeister-Toth and Nagy, 2011). Mostly they are less complex than classical video games and have simpler designs (Cauberghe and de Pelsmacker, 2010). With the simplicity they provide in promoting the brand messages they have become a valuable communication tool especially when targeting children (de Pelsmacker and Neijens, 2012; Pempek and Calvert, 2009; Lee, et al.,2009; Gur?u, 2008; Folkvord, et al.,2013; An and Stern, 2013; An and Kang, 2014). While being used for promotional purposes they can also create traffic to the brand's website (Terlutter and Capella, 2013). In contrary to IGA, in an advergame the brand being promoted basically holds a central role during the gameplay and the game becomes a branded message (Chen and Rignel, 2001; Hofmeister-Toth and Nagy, 2011). With these characteristics advergames provide many opportunities for a brand including the persuasion of consumers toward buying, the provision of information about the brand and product, and mostly to create an advertising platform with the inclusion of the entertainment factor (Lee and Youn, 2008). The most important benefit of advergames is, as the player decides to be involved in the environment the game provides, the promotional messages provided in that environment become more relevant to the player (Ghirvu, 2012) and also in contrary to traditional advertising techniques the player becomes an active agent during the exposure to the messages (Calin, 2010).

2.2   The Audience and The Gaming Environment

The properties of the gaming experience highly affect the attitudes of players toward the game and brands being promoted. Different researchers tried to define the relationship between the gaming environment/experience and the attitudes formed following the gaming experience (Youn and Lee, 2008; Ing and Azizi, 2009; Sukoco and Wu, 2011; Hernandez, 2011; Herrewijn and Poels; 2013; Goh and Ping, 2014; Szuz, 2014; Wang, et al., 2015; Siemens, et al., 2015; Vanwesenbeeck, et al., 2016).

The first characteristic that was stressed by many researchers is the interactive nature of the gaming environment (Sukoco and Wu, 2011; Okazaki and Yagüe, 2013; Goh and Ping, 2014). Interactivity

allows players to get fully engaged and involved with the gaming experience and let them get loose from their physical environment (Goh and Ping, 2014), which is mostly referred as telepresence in gaming literature (Hussein, et al., 2010). In an advergame the gamers become highly involved with gameplay and promotional content presented in a game, as mostly playing a digital game calls for full attention of the player. As the players become more involved with the game activity they tend to feel different emotions during gaming experience. Positive or negative feelings during gameplay and the outcome of the experience are mostly referred as "immersion"(Herrewijn and Poels, 2013). To create immersive experiences a player should become involved during gameplay (Herrewijn and Poels, 2013).As players feel more immersed during an advergame feelings of teleprence emerge (Hussein, et al., 2010), and research shows that advergames are more superior to create immersive experiences when compared to other forms of product placements (Wise et al., 2008; Van Reijmersdal, et al., 2012).

The interactivity of the gaming environment and the feeling of control over the experience that the players feel are both elements of the flow. Hoffman and Novak (1996) suggest flow is facilitated with interctivity and creates an enjoyable experience for the player. Flow is highly related to the feeling felt during gameplay including feelings like self-arousal, control and pleasure (Vanwesenbeeck, et al., 2016). According to Hernandez (2011) control, challenges, gamer skills, arousal during gameplay, and their effects on attitudes of the players toward brand and the game are basic elements of the flow experience of the gamers. As digital games are mostly goal-directed, and present different achievements, they put gamers to a challenge (Herrewijn and Poels, 2013). As they face these challenges they can either feel accomplished or frustrated, and all these feelings affect their latter attitudes toward the content and the stimuli. The balance between a players' skills and the challenges they feel create the state of flow (Herrewijn and Poels, 2013).

2.3   Audience Responses Toward Advergames and The Gaming Environment

As like any other communication effort both IGA and advergames try to solicit consumers to respond in three distinct states. These states can be in the forms of, cognitive (brand recall, brand recognition, brand awareness, etc.), affective (brand attitude, attitude toward the stimuli ? in this paper the stimuli is either IGA or advergames ? etc.) and conative (purchase intension, purchase decisions, etc.) responses. In the context of advergames cognitive responses are highly tied to placement prominence and game brand congruity (Van Reijmersdal et al., 2012; Lee and Farber, 2007; Peters and Lechner, 2013; Kinard and Hartman, 2013). Cognitive responses are also affected by the feelings of telepresence and challenge felt during the experience (Rose, Clark, Samouel & Hair, 2012).

The interactive and immersive experiences are vitally important in advergaming. As these qualities of the gaming environment ascend the cognitive and emotional states of the players are influenced (Bailey, et al., 2009). In situations where consumers face interactive stimuli like advergames they create a response called "cognitive elaboration" (Schlosser, 2003). Cognitive elaboration refers to the players' rational and logical decision making processes (Schlosser, 2003). Acoording to the elaboration likelihood (EL) model, when the EL is high, consumers allocate more cognitive sources to a persuasive appeal (Cacioppo and Petty, 1984). The interactive nature and high levels of immersion are found to create positive attitudes toward the brand and the game (Sukoco and Wu, 2011; Szuz, 2014). According to Nelson (2002) interactivity by creating the feeling of control enhances the players' involvement with the product. During an advergame the interactivity is expected to happen between the player and promotional messages (Goh and Ping, 2014). Users feel control as they personally decide whether or not to interact with IGA components (Goh and Ping, 2014). Previous studies on advergames suggest that positive attitudes can only be created if the player experiences flow during gameplay (Hernandez, 2011; Van Reijmersdal, et al., 2012). As gamers experience high level of flow their attitudes toward the brand being promoted become more positive and low level of flow results in unfavorable attitudes toward a brand (Wang, et al., 2015), and together with involvement flow enhances their brand recognition (Lee

and Faber, 2007).

2.4   Game and Brand Relationships

In a gaming environment consumers' cognitive, affective and conative responses are affected by the relationship between the medium and advertised brand. Two important dimensions that affect consumers' responses are game-brand congruity and placement prominence. Both dimensions by altering the gaming environment and processing of the promotional content can either enhance or aggravate both cognitive and attitudinal outcomes.

2.4.1   Game and Brand Congruity Effects

One of the most important characteristics of advergames that has impact on brand attitudes and recall is the game-product congruity (Wise et al., 2008; Gross, 2010). This characteristic is also referred as fit between the brand and the content of the advergame (Okazaki and Yagüe, 2012; Goh and Ping, 2014). Congruity (fit) refers to "the extent to which the advergame matches with the theme or image of the advertised brand" (Goh and Ping, 2014). Game- brand congruity can be defines as "the extent to which the product category embedded brand is related to the content of the game" (Lee and Farber, 2007; p.79). Lee and Farber (2007, p.79) propose different dimensions to further define game- brand congruity, which includes function, lifestyle, image and advertising. They are summarized in Table (1).

Table 1: Dimensions of Game-Brand Congruity

Dimensions	Definition
Functional Congruity	It occurs when the product category being promoted is a central object within the advergame
Lifestyle Congruity	This dimension is related to the relationship between the lifestyle of the player and the lifestyle that the player associates with the product or brand being promoted in an advergame.
Image Congruity	It occurs when brand image is found to be related to the image of the game.
Advertising Congruity	This dimension is related to the perceptions of the player on the appropriateness of the brand being promoted within an advergame.

The fit between the product and game affects the responses of the players (Okazaki and Yagüe, 2012). Past research on the acceptance of IGA and its relationship with consumers' cognitive and affective responses has shown that game-brand congruity is a determining element that creates favorable cognitive outcomes (Lee and Farber, 2007; Peters and Lechner, 2013; Kinard and Hartman, 2013). Brand game congruency alters the advertising effectiveness through the processing of the advertising message. High level of brand-game congruity enhances the realism of the gaming environment and players' immersion in not impaired (Chang, et al., 2010). As the congruency between the game and the placed brand increase players generate more positive attitudes both toward the brand and the advergame (Huang and Yang, 2012).

Research on advergames suggests for high levels of game-brand congruity players' explicit memory enhances and their attitudes become more positive (Wise, et al., 2008; Waiguny, et al., 2012; Ing and Azizi, 2009; Peters and Leshner, 2013). The reason behind this situation is the congruity's effect on message persuasiveness (Waiguny, et al., 2012; Waiguny, et al., 2014). Also congruity helps consumers to encode advertising stimuli within an advergame easier, and as a result players can match this information with their previous experiences with that particular product and brand (Peters and Leshner,

2013). When players are exposed to congruent brands during their gameplay they can recall and recognize the brand following the advergame (Gross, 2010). But there are studies that resulted in contrary to these findings (Gross, 2010). The reason of these differences in literature is the multidimensional nature of congruity as Lee and Farber (2007) suggests (Peters and Leshner, 2013).

Advergames can create high levels of interactivity between the player and the content (branded messages). As the congruity between the advergame content and the brand increase players can more easily process the advertising content during gameplay (Goh and Ping, 2014) as players become more engaged and involved with the advergame (Wise, et al.,2008). Most of the time an advergame contains only one brand, players become cognitively more active to process the game-brand congruity, and their cognitive and affective responses toward the advertised stimuli differ from IGA (Wise et al., 2008).

2.4.2   Brand Prominence and IGA

Placement prominence in a game is an important element in generating the desired responses of players. Brand prominence can be defined 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). There are two main ways to place a brand in a game. They can either be placed prominently or subtly (Terlutter & Capella, 2013). When the brand is highly visible in a game and can be identified by the player easily; it is prominently placed (Gupta and Lord, 1998). But other aspects also determine the prominence of a placement. These include the size of the placement, position of the placement and its centrality to the action during the game (Gupta and Lord, 1998).

Past research shows that placement is highly related to consumers cognitive responses, where game involvement is mostly related to affective responses (Hudson and Hudson, 2010; Van Rejimersdal, et al., 2012).A study that investigates prominence of placement on cognitive and affective responses of consumers was conducted by Cauberghe and De Pelsmaker (2010). According to their findings prominent placements enhances brand recall (cognitive responses), but prominence had no effect on brand attitudes (Cauberghe and De Pelsmaker, 2010). There are other studies that feature the possible effects of prominence on brand recall and recognition (Van Rejimersdal, et al., 2012; Peters and Leshner, 2013). The prominence of a brand in any medium can influence players memory and facilitate the recall of the brand from their memory (Peters and Leshner, 2013). In the situation of subtle placement players find it harder to recall the brand being placed in a digital game, as the brand is not an integral element of gameplay (Lee and Farber, 2007). Besides brand recall attitudinal responses are harder to work with when placement prominence is taken into consideration. There is a possibility that the players will perceive a prominent placement and generate negative affective responses (Terlutter and Capella, 2013).

In the context of advergames the placement prominence is rather different than the forms of IGA. Advergames let players to interact with the brand placement, as the brand in an advergame is the central element of the gaming experience. This is called an "active" placement (Nelson, 2002). In the form of active placement the interactive nature of the gaming experience is expected to create higher levels of product/brand awareness (Tina and Buckner, 2006). Unlike other media types in an advergame players are exposed to the brand and advertising messages for longer periods and with a repetitive nature (Waiguny, et al., 2012).

3   The Effects of Involvement and Telepresence

The games are designed in the way to take the player in. The longer a person plays the game, the higher chance the marketer has to expose him/her to the brand. As the gamer is totally immersed in and absorbed by the game, s/he experiences flow. It is characterized by (1) a seamless sequence of responses facilitated by the interaction with machine, (2) intrinsic joy, (3) loss of self-consciousness,

and (4) state of self-reinforcement (FitzGerald and Arnott, 2000). It is further manifested by a sense of control, cognitive immersion, time distortion, and a feeling of presence in the game (Nakamura and Csikszentmihalyi 2002).

Csikszentmihalyi (1975, p. 36) defined the flow as 'the holistic sensation that people feel when they act with total involvement', as he first introduced the concept to the literature. It implies that the flow state is best experienced when the player is totally involved with the game. When the player totally focuses his/her attention to the game, and gets lost in online gaming environment, the player is said to be totally involved (Sadowski and Stanney, 2002). The involved player loses the sense of time and being, and moves to an unconscious state (Hernandez, 2011). The challenge here is to make the player to notice the brand. Dual process theories of persuasion (Chaiken, 1980; Petty et al., 1981; Petty and Cacioppo, 1986) suggest that, when the user cannot process the information, he relies on heuristic-driven processing (Yoon et al., 2011). Thus, the player will pay more attention to peripheral cues (Yoon et al., 2011). It implies that, in such condition, if the object in concern creates positive affect, people are more likely to form positive attitudes (Winkielman et al., 1997). Branded entertainments are capable of inducing involvement and immersion which are essential components of experiences of presence (Tamborini, 2000; Tamborini and Bowman, 2010). Different from involvement, which is being in a state "to take no notice of thoughts and perceptions outside the game" (Refiana et al., 2005; p.108), telepresence is the state that a person feels as if he was present at a place created by a medium other than his true location (Hernandez, 2011). It is a constituent element of flow that affects product placement outcomes in games (Grigorovici and Constantin 2004; Nelson et al., 2006). Telepresence has two dimensions: interactivity and vividness (Hernandez and Chapa, 2010; Sukoco and Wu, 2011; Nelson et al., 2006). Through these dimensions, it has an effect on attitudes toward the brand and branded entertainment (Steuer, 1992). If the telepresence is supported with its two dimensions, it leads to more positive attitudes (Sukoco and Wu, 2011) through the enjoyment and pleasure felt during the play. Those positive attitudes are transferred to the brand in the game (Nicovich, 2005; Lee and Youn, 2008) through affect transfer (Fiske and Pavelhack, 1986). Another effect of telepresence is observed in information processing capacity. As the level of telepresence in the game increases, players become more aware of the promotional content in the game (Besharat et al., 2013).

Those two constructs, i.e. involvement and telepresence, related to the audience, are inherent characteristics of branded entertainment. According to Chaudhuri and Buck (1997), involvement can be viewed as the motivational potential of the advertising domain.

As the player is in a more flow-like experience, the perception of the game becomes more pleasing and fun (Hoffman and Novak, 1996); which leads to higher affective responses (Nakamura and Csikszentmihalyi, 2002). Also many of the previous researches suggest a positive relationship between flow experience and attitudes (Hoffman and Novak, 1996; Lee and Chen 2010; Van Noort et al., 2012). M Lee (2007) depicted that game involvement level of the veteran gamers' facilitated a rise in brand awareness which is a cognitive response. Thus, as the player is more involved with the game, it is expected that the player has more positive responses toward the game. Though, it is not yet clear that whether involvement will cause more positive responses toward the main brand in the branded entertainment, especially if the player is cognitively overloaded.

3.1   Effects of Game Involvement on Cognitive Load

Previous researches suggest that there must be a level of cognitive capacity left unused to process further information (Huh et al., 2015; Lee and Shen, 2009; Vermeir et al., 2015). In the branded entertainment domain, there are some conditions that deplete cognitive capacity. Some examples are; (1) multi-tasking (Paas et al., 2003; Sukoco and Wu, 2011), (2) increased cognitive involvement (Hoffman and Novak, 1996; Klimmt and Vorderer, 2003), (3) confusing presentation (Mayer and Moreno, 2003) (4) presence of extraneous material (Mayer and Moreno, 2003) (5) presence of redundant information

(Sweller, 2011; Moore and Rideout, 2007).

Among the ones mentioned as the cognitive capacity depleting resources, we develop hypotheses that focus on cognitive overload through multi-tasking and involvement as the basis of this paper.

Cognitive load theory states that, people experience cognitive overload when they are exposed more than one task at a certain period of time. For example, trying to keep a number in mind while playing a game is multi-tasking. Each of the tasks requires certain level of cognitive capacity and reduces resources. According to human cognitive architecture theorists, working memory, which handles conscious cognitive processing, is capable of overcoming only a very limited number of interacting elements, and this number is possibly no more than two (Paas et al., 2003).

When there is enough processing capacity, people have more chance to engage in exhaustive information processing (Yoon et al., 2011). Therefore, information is processed in a detailed fashion. On the other hand, when there is cognitive overload, because people are using more cognitive resources that inhibit them to elaborate information presented to them (Lee and Shen, 2009), processing capacity is limited. That's when they rely on heuristic nature of information (Yoon et al., 2011).

Game involvement is another condition that determines the level of cognitive effort exerted (Lee and Faber, 2007). There are two levels of involvement associated with two modes of reception: rational, low level of involvement and engaged, high level of involvement (Klimmt and Vorderer (2003). Following Klimmt and Vorderer's (2003) argument, high level of involvement is the one that demand more cognitive capacity, thus leaving less resource to process further information. However, an advergame to be mentioned as successful, it must be involving. As Lewis and Porter (2010) stated game environments entail high cognitive load conditions because of users' high involvement.

Although it is stated that depleting cognitive resources will prevent the player's responses to the commercial content, dual processing theory (Chaiken, 1980; Petty and Cacioppo, 1981; Petty and Cacioppo, 1986) opens up a new perspective. Theory states that involved people pay more attention to the message content. Moreover, in high involvement condition, centrally placed brands get a greater memory recall (Lee and Faber, 2007). According to Lee and Shen (2010), in the limited cognitive capacity condition, information is processed with selective attention and perception to cope with overload. It seems that as people are more involved with the game, although they are cognitively loaded, their attention level increases. As the theory states, this increased attention is directed to the commercial content which should be one of the central objects of the game.

There are other studies supporting the positive effects of cognitive overload on the branded entertainment setting. Yoon et al., (2011) posits that under high cognitive load condition, people's attitude toward the main brand is more positive. Furthermore, in the study by Ozansoy Çadırcı and Sağkaya Güngör (2016), they find that cognitively loaded players will recall the prominently placed brands better. However, those findings are on cognitive responses.

Developing further on the arguments above, affect transfer model (Fiske and Pavelhack, 1986) states that "congruency between two items facilitates affect transfer from one to other" (Liu et al., 2010; p.318). Thus, pairing a brand advertisement with a branded entertainment that evokes positive emotions can prompt positive affective response to the main brand through transfer of affect. And the vice versa is also applicable. Parallel to this argument, van Reijmersdal et al. (2012) state a positive relationship between advergame involvement and attitude toward brand, mediated by game attitude. Thus, players who are involved should experience more positive attitudes towards the game, which will be transferred to the brands.

Associating the name of the brand with an enjoyable experience is assumed to influence the attitudes positively via affect transfer and association activation (van Reijmersdal et al., 2012). Another concept that is supporting the affect transfer model is spill-over effect. As stated by van Reijmersdal et al. (2012; p.35) spill-over suggests "the effects of an appreciated context, such as involvement with the game, carry over to embedded commercial messages". Thus, the feelings for the brand benefit from the positive feelings associated with the game.

We can make some inferences on the effects of interacting level of cognitive load and involvement. Building on the lines of thoughts of the previous researches, the followings are the hypotheses proposed as an attempt to discover the effects:

H1: When there is HIGH cognitive load on game player, high involvement will result in player's more positive attitudes toward the (1) main brand and (2) branded entertainment both in advergame and IGA.

H2: When there is LOW cognitive load on game player, high involvement will result in player's more positive attitudes toward the (1) main brand and (2) branded entertainment both in advergame and IGA.

H3: When there is low cognitive load on game player, LOW involvement will NOT result in player's positive attitudes (1) toward the main brand and (2) toward the branded entertainment both in advergame and IGA.

H4: When there is high cognitive load on game player, LOW involvement will result in player's positive attitudes (1) toward the main brand and (2) toward the branded entertainment both in advergame and IGA.

4 Conclusions and Future Research

It is proposed to test the hypotheses developed in this paper empirically. A $2 \times 2 \times 2$ experimental design is recommended in this regard. Branded entertainments could be specifically constructed for the study or among already existing ones, two, one advergame and one IGA, could be selected with a careful examination. There are many branded entertainments available for an experimental design in the digital world. They could be used in a laboratory setting. The main advantage of the real game is that the participants are actually playing the game it will add realism to the experiment (Waiguny et al., 2013). However it is not possible to control all influencing factors.

It is proven that advergames itself insert cognitive load to the gamer (Huh et.al. 2015; Mayer and Moreno, 2003). It can be considered as low-level cognitive load. However, in order to test the hypothesis, there must be an additional cognitive load that will take the attention away from the game and reduce the information processing capacity of the player. This could be accomplished in various ways. It is reasonable to assume that, players are experiencing cognitive overload when they are required to complete two tasks at a time. Dual-task approach has a proven feasibility to insert a cognitive load on the gamer (Brünken et al., 2003). It is usually implemented in the studies by asking the participants to remember a number as a second task while doing something else (Macrae etal., 1993; Lee and Shen, 2009; Beilock and Ramirez, 2011). Another method could be asking the players to accomplish multiple tasks at a time in the game, thus reducing the information processing capacity. Designing the experiment with a control group (that has the low load condition), there may be reached a conclusion regarding hypothesis H1 and H2.

Branded entertainment is designed to be involving. With no disturbing factors around, it is expected that the player intrinsically enjoy the game, and be taken into a state where he/she loses self-consciousness (FitzGerald and Arnott, 2000). However, with some outside manipulations players could be taken back to their conscious state, being less involved with the game. A task that must be accomplished outside the game, and not related with the game or continuous speaking with the players on a subject that they must listen but not related to the game while they are playing could reduce the degree of involvement. On the other hand, a game that takes the attention of the player would fully involve the player in the game. Setting the involvement at low and high levels, conclusive testing of hypotheses H1 ? H4 would be accomplished.

With the suggested research design there may be tested the interaction effects of various factors. Although the hypotheses proposed in this paper are only for the main effects of the variables of

interest, it would be feasible to test two-way interactions. For instance, cognitively loaded player is expected to be less involved with the game. With another manipulation on the respondents, whether the involvement would change the effect of cognitive load has on player could be tested.

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