# “And Now a Word from Our Sponsors “

How product placement and brand repetition in sport video games affects the consumers’ brand recall & recognition, brand familiarity, brand attitude and purchase intention

Student Name: Wessel Westerhof
Student Number: 451371

Supervisor: Dr. Petra Tenbült

Master Media Studies – Media and Business
Erasmus School of History, Culture and Communication
Erasmus University Rotterdam

Master’s Thesis
*June 21, 2018*

## Statement of Originality

This document is written by student Wessel Westerhof who declares to take full responsibility for the contents of this document.

I declare that the text and the work presented in this document is original and that no sources other than those mentioned in the text and its references have been used in creating it.

The Erasmus School of History, Culture and Communication is responsible solely for the supervision of completion of the work, not for the contents.

## Abstract

With the continuous growth of the video game industry and the increasing popularity of Esports tournaments, gaming events and games themselves, product placement in video games have evolved into an exciting and profitable way to reach consumers. Especially in the sport video gaming genre, in-game advertisements offer new opportunities for the gaming industry and the advertisers. Earlier studies have focused on brand memory, brand location, and advertisement type, while repetition effects of advertisements is still an underdeveloped area of product placement research. Therefore, this study focuses on the effects of brand repetition and product placement in sport video games on brand recall, brand recognition, and brand familiarity of the sport video gamer. Even though previous research has studied the brand attitude and the purchase intention of the gamer, repetition effects have not been investigated. This research will also look at the effects of brand repetition and product placement in sport video games on consumer behavior to contribute to the existing literature on this subject. A 3 (repetition: high vs. low vs. none) design is used to test the effects of brand repetition and product placement on the sport video gamer. The respondents were asked to answer questions of one of the three online questionnaires with the different levels of repetition. The survey asked questions on brand recall and recognition, brand familiarity, brand attitude and purchase intention of the sport video gamer. The procedure entailed a pretest and the main experiment. Data analysis was conducted through SPSS and the use of paired-samples T-tests, Analysis of Covariance tests and linear regressions. The findings revealed no significant differences for brand repetition effects on the subjects, except for the brand recall of the more familiar target brand Adidas. The interaction between brand familiarity and brand repetition also showed no significant effect on the brand recall and the brand recognition. Although the study did not find many significant results, the research contributes to the existing literature on brand recall of more familiar brands and the consumer behavior of the sport video gamer. Moreover, the findings also contribute to the repetition effects in video games, which is still an underdeveloped area of research. The results will provide both academic and practical relevance for this study. Managerial implications, reliability, and validity, generalizability, limitations, and suggestions for further research are also addressed.



**Keywords**: Sport video games; Product placement; Repetition; Purchase intention; Recall

# Table of Contents

# 1. Introduction and research question

## *1.1 Introduction*

"The video game industry excels because it anticipates demand — giving people what they want before they realize that they want it — and drives trends in entertainment and across countless other sectors" (Gallagher, M.D., Entertainment Software Association 2017, p. 2).

Video games are extremely popular around the globe. People spend more time playing online video games, with the growing importance of the Internet in our daily lives (Van Reijmersdal, Jansz, Peters & Van Noort, 2010). The Internet and other online media, such as video games, have overtaken television networks as the most used medium in the United States and this is especially true for children under the age of 18 years (Hang & Auty, 2011; Nelson, 2002). A survey from Gentile (2009) concluded almost nine out of ten children between the ages of 8 and 18 years old watch less television (10.5 hours) compared to playing video games (13.2 hours) on a weekly basis (Hang & Auty, 2011).

The changed media habits of the consumer make organizations believe that advertising in video games can reach certain specific audiences (Walsh, Kim & Ross, 2008; Walsh, Zimmerman, Clavio & Williams, 2014; Marti-Parreno, Bermejo-Berros, Aldas-Manzano, 2017). Not only children are spending more time online in a gaming environment. Nearly 70% of males between the age of 18 and 34 years old has a video game console at home and they also play more video games instead of watching TV for entertainment purposes (Cianfrone, Zhang, Trail & Lutz, 2008). According to a study by the Entertainment Software Association (ESA, 2010), almost half (49%) of the gamers are between the ages of 18 and 49 years old, whilst 36% is above the 50-year mark and only a quarter is below the age of 18 (Walsh et al., 2014). The latest report by the ESA concluded the age of the average gamer had dropped to from 38 years old to 35 years old, which was a deviation from earlier years when the average age was steadily getting higher (Anderton, 2017; Entertainment Software Association, 2017). These statics are promising for advertisers.

From a marketing perspective, the video game industry has turned into one of the newest areas to invest in product placement and surpassed television and movies the most effective place to advertise. Already in 2007, Zachary Glass presented product placement in video games as the upcoming platform for advertisements and his statement is supported by

facts: annual video game spending has gone up with seven billion dollars between 2011 and 2016 (Anderton, 2017). According to Forbes, who presented an annual report of the Entertainment Software Association, the video game industry saw an increase of 1.2 billion dollars in digital content spending (Anderton, 2017). Another recent report by Statista (2016) claims that the industry has generated more than five billion dollars advertising from product placement in games during 2009 – 2016 and is expected to globally reach the total earnings of seven billion dollars in 2019 (Hwang, Ballouli, So & Heere, 2017).

Quite similar to advertising in movies, video games incorporate brands, products or logos within the digital content of the game (Van Reijmersdal et al., 2010, Kim & McClung, 2010). Yet, compared to media as television and movies, one of the main advantages of in-game advertising in video games is that the gamer spends much more time playing a single video game and is more exposed to the brand placed within that video game (Marti-Parreno et al., 2017). Walsh et al. (2008) argued how the new generation of young video gamers, together with the already established sport consumer market, would serve as a target audience for the product placement features in video games. However, not only the youngest generations are growing as a target audience. Gamers who have reached adulthood are still playing the video games of when they were teenagers themselves (Marti-Parreno et al., 2017).

### *1.2 Background problem (scientific and societal relevance)*

Research on video games has societal relevance due to the increasing time spent on video games, growing gaming audience and the differences within the gaming community. Advertisers see business opportunities due to the growing video game popularity among the youngest generation and the fact that gamers also play video games in their twenties and thirties. Furthermore, research on the effects of video games on gamers is still relevant to both the society and in the corporate world. The effects on the gamer can be different. Certain factors as the gaming experience and frequency can influence the gamer's awareness of product placement in video games (Molesworth, 2006; Cianfrone et al., 2008; Kim & McClung, 2010). Another important factor to test the effectiveness of product placement in video games is brand repetition. According to Drèze and Hussherr (2003), brand repetition is the frequency of exposure a brand or product has in the traditional or new media environment. The effect of brand repetition on gamers is an interesting topic. Not only can brand exposure be increased in the video games, in comparison with television or movies, the gamer can play certain video games for a much longer time and, thus, will be more frequently exposed to the

brand repetition (Huang & Lin, 2006; Marti-Parreno et al., 2017). Moreover, some gamers play their favorite video game for several years, or a continue to play the newest version of a particular video game, which also leads to more brand exposure opportunities for advertisers and the gaming industry (Marti-Parreno et al., 2017). Although there has not been much research on message repetition in new media, Huang and Lin (2006) and Marti-Parreno et al. (2017) argued in favor of the effectiveness of increased ad exposure in their research on brand repetition in new media. Moreover, since gamers can play games for several years, advertisers believe video games offer more brand exposure to the consumer and thus creating more brand interaction (Marti-Parreno et al., 2017). The repetition of brands can increase the effectiveness of product placement in video games.

One specific section within the video game industry is Sport Video Games, also referred to as SVGs. In the last decade of the 20th century and the first decade of the 21st century, SVGs have become one of the most popular types of video games in North America (Cianfrone et al., 2008; Kim & McClung, 2010). Electronic Arts (EA) Sports is the biggest name when it comes to the sport video game market. EA Sports controls 70% of the SVG industry and both the *FIFA* (Soccer) and *Madden* (American Football) video games have sold over 100 million copies since the early 1990's (Cianfrone et al., 2008; Hong & Magnusen, 2017). More EA Sports video games are sold on both PlayStation 4 and Xbox One, two of the biggest video game consoles, making the organization a household name among the gamer community (EA.com). In the early 2010's, *FIFA* has become the bestselling SVG by EA Sports, generating almost a quarter of the total revenue for the company in 2014 (Markovits & Green, 2017). The SVG has improved its popularity even further in recent years. The *FIFA 2017* version was ranked second in total copies sold (over nine million) on Sony's PlayStation 4 console in 2016 (Statista, 2017), whilst EA Sports announced the SVG was the most sold video game on all consoles in 2016 (Grubb, 2017).

The video gaming industry's increasing earnings from video games encourage advertisers to keep exploring and investing in the (sport) video game market. Considerably more brands view EA Sports as a unique business with lots of in-game advertising opportunities (Hong & Magnusen, 2017; Hwang et al., 2017). EA Sports is an excellent example of the intensifying relationships between businesses, league representatives, and the SVG industry itself. EA Sports paid nearly 35 million dollars for the licensing rights of brand images for their NFL game and agreed to a renewed license deal for the soccer equivalent until 2022 (Kaplan, 2011; EA Sports, 2013; Kim & Ross, 2015; Markovits & Green, 2017). In exchange, brands like Adidas and Nike are constantly exhibited in the EA Sports SVGs.

Gamers can buy and wear these brands in several game modes and the spending on digital content led to 650 million dollars in earnings for EA Sports in 2017 (Ballard, 2017). The gaming audience is willing to pay for digital content and advertisers are able to get information on the gamer's brand interaction within the video game (Herrewijn & Poels, 2013). One can assume that brand repetition in SVGs is effective for brand interaction and might even lead to increased purchase intention of the sport video gamer. However, the effects of brand repetition on purchase intention of the gamer are still relatively unknown because most research has focused on brand recall, brand recognition, and brand familiarity.

Even though there has been an increasing amount of research done on product placement in sport video games, the literature in some areas within this subject is limited and more effort is needed to gain knowledge on the effects of product placement in SVGs on the consumers. Previous research on in-game advertisements has focused on the brand awareness, recall and recognition of the gamers (e.g. Nelson, 2002; Yang, Roskos-Ewoldsen, Dinu & Arpan, 2006; Cianfrone et al., 2008; Walsh et al., 2008, Walsh et al., 2014; Kim & Ross, 2015), type of placement (e.g. Grigorovici & Constantin, 2004), attitudes and effectiveness toward brand and product placement (e.g. Lee, Choi, Quilliam & Cole, 2009; Van Reijmersdal et al., 2010; Hang & Auty, 2011; Nelson, Keum & Yaros, 2004) and game difficulty level (Herrewijn & Poels, 2013; Hwang et al., 2017). However, there has been a lack of knowledge on the effects of repetition of product placement in SVGs in the existing literature. In order to get a better understanding of the effects of brand repetition, this research will also look at brand attitude and purchase intention of the sport video gamer.

### *1.3 Research question*

As mentioned earlier, there have been some studies on brand repetition in video games. One of the earlier studies by Yang et al. (2006) did include both the racing game genre (Psygnosis' *Formula 1*) and soccer game genre (EA Sports' *FIFA 2002*) but only researched the memory rates and brand recognition rates of gamers. Moreover, a recent study by Marti-Parreno et al. (2017) has explored repetition effects of brand familiarity on brand recall and brand recognition but only focused on the effects on a racing video game. This research will look at another field within the SVG industry, namely a soccer video game. Although racing video games and soccer video games both have primary and secondary tasks within the game that trigger the processing of product placement, soccer video games offer other advantages to

advertisers. Both video game types have turned into an ideal platform to continually include brand exposure, with static and interactive billboards around the soccer field or racing track and digital shops to purchase in-game brand products (Clavio, Kraft & Pedersen, 2009; Hong & Magnusen, 2017).

However, with the annual growing popularity of the *FIFA* video game series and the fact that soccer is still the most viewed sport in the world, the gamer playing the soccer video game might be or become more connected to the sport through the SVG. For example, the 2014 Football World Cup in Brazil saw higher viewership ratings due to the fact that gamers who played the *FIFA* video game had broadened their interest to the actual sport (Badenhausen, 2014). Furthermore, Hong and Magnusen (2017) found that sport video game identification and consumer behavior are related to each other since the soccer video game (just like the basketball and American football games) are more likely to purchase sport related brands that are also present in the SVG. Lastly, researchers have concluded more research on other gaming genres and purchase intention is needed. Thus, it will be interesting to see if consumer behavior is influenced by brand repetition.

This study will look at the in-game advertisements of the sport brand Adidas and the car brand Chevrolet in EA Sports *FIFA 18* video game and how product placement in the SVG and repetition influences the brand familiarity, recall and recognition and purchase intention of the sport video gamer. In order to attempt to provide an answer, the following research question has been formulated:

1. To what extent does brand repetition in SVGs influence brand familiarity, brand recall and brand recognition and, brand attitude and purchase intention of the sports video gamer?

According to Marti-Parreno et al. (2017), the repetition factor of product placement is regarded as an important feature whilst studying the effectiveness of advertising in both traditional and new media yet the amount of research on this subject is scarce. This research will contribute to a better understanding of the influences of repetition of product placement in new media, such as video games. Furthermore, recent research conducted by Hong and Magnusen (2017) and Marti-Parreno et al. (2017) argued previous studies have overlooked the significance of the connection between the specific SVG and the consumer. This study will also try to contribute to the existing literature on consumer behavior of the sport video gamer by looking at the brand attitude and purchase intention in the soccer SVG.

# 2. Theoretical framework

This section contains the theoretical framework concerning the research areas, which are associated with this thesis. Firstly, the definition of product placement and the development of product placement in the video gaming industry are examined. Secondly, the concept of The Limited Capacity Model of Mediated Message and the processing of product placement in video games are discussed. Third, earlier and recent research on brand recall, brand recognition and brand familiarity, and the effects of increased brand repetition on these topics will be examined. Fourth and lastly, the influences of product placement and the manipulation of brand repetition on brand attitude and purchase intention are discussed. The theoretical framework will offer a literature review of the topics of interest in this research and will lead to the formulation of the hypotheses.

## *2.1 Product placement in SVGs*

Over the past two decades, product placement has had several definitions. These definitions have been altered to show the development of the term or to make it more refined (Kim & McClung, 2010). In the 1990s, product placement was described as a sponsored message from a brand or product, either through audio or visual mass media, directed to the audience to influence them, while these mass media (e.g. TV networks) received payment for these advertisements (Balasubramanian, 1994; Gupta & Gould, 1997). Due to Nelson's (2002) claim that video games offered huge possibilities in certain markets, Hudson & Hudson (2006) introduced the term "branded entertainment." This definition incorporated the integration of the advertisement in both online and offline media and the interaction and collaboration between the brands and media (Hudson & Hudson, 2006). This interaction and integration would make the ad more fitting in the type of entertainment medium it was inserted (Kim & McClung, 2010). Other researchers as Hang & Auty (2011) and Van Reijmersdal et al. (2010) also focused on the integration of products or brands as sponsored messages in video games to persuade the consumer.

During the late 1980's, 1990's and the early 2000's, earlier research on attitudes towards general advertising, attitudes to an advertisement and attitudes on product or brand placement were conducted in the context of films or television (e.g. Andrews, 1989; Mackenzie & Lutz, 1989; Gupta & Gould; 1997) and video games (e.g. Nelson, 2002; Nelson

et al., 2004). Andrews (1989), Mackenzie & Lutz (1989) and Gupta and Gould (1997) all found a positive relationship between attitudes towards advertising in general and attitudes toward product placement. Nelson (2002) agreed and argued the audience was clearly not opposed to product placement because it adds realism, familiarity and/or development of a character to the public. Furthermore, showing the brand/product in a reliable environment through interactive media allowed product placement in films and video games greater reach than newspapers and other forms of traditional media (Nelson, 2002).

Being the third highest type of video game sold in the video gaming market as a whole (Entertainment Software Association, 2015), SVGs are seen as an attractive platform to influence consumers and their attitudes on brands and products (Nelson, 2002; Clavio et al., 2009; Hwang et al., 2017). Earlier research on product placement in new media and, in particular, video games has led to insightful information on the positioning of a brand or product and the effects on the consumer. Kim & McClung (2010) concluded that gamers do not see product placement in SVGs as a bad thing, with the exception of guns, cigarettes, and alcohol. The addition of guns, cigarettes, and alcohol to SVGs is non-existent, due to the fact that the inclusion of these products and brands does not reflect the realness that is expected from this type of video game. To ensure the realness within the video game for the gamer, the location of a brand or product within the SVG is considered a very important factor.

Whereas television and film used both visual and auditory product placement, product placement in video games is almost entirely visual due to the banners and billboards (Marti-Parreno et al., 2017). A Wauters' study (2009) on video game and television advertising concluded product placement influences the video gamer positively and the incorporated brands are perceived favorably. One concrete example is provided by the research organization Nielsen, who studied the product placement of the Gatorade in the EA Sports video games. Sales of the sports drink went up with 24% due to advertisements in the SVGs (Graft, 2010; Guzman, 2010). Although previous research has seen a positive relationship between general advertising attitudes and attitudes toward product placement of SVG gamers, to test the relationship, the first hypothesis is formulated as follows:

H1: There is a difference between attitude toward product placement and attitude toward product placement in SVGs among the sport video gamers.

However, this research does not expect to find a significant difference between the general attitude toward product placement and the attitude toward product placement in

SVGs. Thus, this study expects to reject H1 and keep the H0: There is no difference between attitude toward product placement and attitude toward product placement in SVGs among the sport video gamers.

To get a better understanding of how the consumer processes the advertisements within the gameplay of the video game, researchers have formulated and used information-processing models (Marti-Parreno et al., 2017). When looking at the effects of product placement in video games on the gamer, Lang's (2000) Limited Capacity Model of Mediated Message Processing is used frequently in recent research (Hwang et al., 2017; Marti-Parreno et al., 2017).

### *2.2 The Limited Capacity Model of Mediated Messages and the process of product placement types in SVGs*

While the integration of brands and products in video games has developed in the last two decades, gamers are now having a different gaming experience due to the variety of in-game advertisements. With the inclusion of products placed in the game, background music, virtual billboards and banners, and other realistic scenery features, playing the video game creates an environment where the consumer is surrounded by advertisements (Nelson, 2002; Marti-Parreno et al., 2017). With the emergence of SVGs on the center stage of the video game industry, sport brands and organizations consider those games as an exciting and profitable platform (Kim & Ross, 2015). Global multinational corporations as Coca-Cola, Adidas, and Nike have placed their products in the interactive games to attract different types of people and gamers and further create brand awareness (Walsh et al., 2014).

To better understand how the consumer takes in the product placement messages from a media outlet, Lang (2000) developed The Limited Capacity Model of Mediated Messages. LCM is used as a model for information processing and was first used to research how television viewers were affected by the advertisements presented to them (Lang, 2000; Hwang et al., 2017). Two essential aspects regarding the processing of product placement in the model introduced by Lang (2000) are the notions of humans as information processors and that the storage they have for this information is limited. Furthermore, not all acquired information will be held in either the short- or long-term memory and once the consumer receives new information to process, earlier retrieved messages might vanish due to these new messages (Lang, 2000; Hwang et al., 2017; Marti-Parreno et al., 2017). Recent research (Walsh et al., 2014; Hwang et al., 2017) has categorized the three major types of in-game

advertising, namely static advertisement, product placement and auditory mentions. In comparison, static advertisements are considered less obtrusive or pushy compared to the other in-game advertisement types (Walsh et al., 2014).

Within the LCM method, research distinguishes between primary and secondary tasks to better comprehend how location placement and advertisement type is processed by the gamer. First, static advertisements in SVGs are mostly virtual billboards with the logo of the brand (Hwang et al., 2017). Second, product placement allows the gamer to interact with the product or brand. For example, *Tiger Woods PGA* video game allows the gamer to choose golf clubs, clothing and shoes of certain golf-related brands (Hwang et al., 2017). The third and last form of in-game advertising is the auditory mention, in which brands are both shown (static advertisement) and mentioned to the gamer (Hwang et al., 2017). Looking at the primary task, this involves several forms of playing the video game, such as interaction with the gameplay and the development of a character of the storyline. Examples of the secondary task are virtual billboards and audio commentary, which are altogether characterized as environmental or background features of the gaming experience (Grigorovici & Constantin, 2004; Dardis et al., 2015; Hwang et al., 2017; Marti-Parreno et al., 2017). However, Grigorovici and Constantin (2004) argue that in-game advertisements, when included directly into the gameplay or controlled by the gamer itself, can also be seen as a primary task.

### *2.3 Brand repetition on brand recall and brand recognition*

When looking at existing literature on product placement in SVGS, brand familiarity, brand recall and brand recognition are widely used to assess the effectiveness of in-game advertisements. Brand recall, the ability to bring back information without a sign of the information, and recognition, finding the information by recognizing the information through lists or other tools, are memory retrieval measures (Hwang et al., 2017). Brand familiarity can be described as earlier direct or indirect experience with the brand (Marti-Parreno et al., 2017). Regarding the positioning of product placement in SVGS, previous research has had different results on the gamer's brand recall and recognition. Both earlier research (Nelson, 2002; Grigorovici & Constantin, 2004) and recent research (Dardis et al., 2015) have argued in favor of foreground placement compared to background placement when it comes to brand recall rates and brand recognition rates of the consumer. However, some studies also presented the argument that the consumers' brand recognition and brand recall were also perceived more positively when the video game had both small, creative product placement as

well as bigger on-set placements like virtual billboards (Grigorovici & Constantin, 2004; Marti-Parreno et al., 2017).

Processing the product placement in a video game is proven to be more effective when it is seen as a primary task. Scholars have argued in favor of the effectiveness primary gaming tasks regarding brand recall rates by gamers and claim less significant findings were found for brand recognition and brand familiarity when secondary tasks (e.g. product placement) in video games were researched (Hang & Auty, 2011; Haiming, 2014). Moreover, recent research by Hwang et al. (2017) concluded that a gamer uses his attention levels processing primary tasks (e.g. understanding of and interacting with the gameplay) because the gamer cannot use that focus on secondary tasks at the same time. Marketers are advised to implement their advertisements of the brand or product into the primary gaming task to achieve higher recall rates from the gamers, whereas the brand recognition by gamers was already acceptable (Hwang et al., 2017).

Although research always emphasized the importance of making advertisements a primary task, examples of secondary tasks advertising have proved successful to increase brand recall, brand recognition, and brand familiarity. Lang's (2000) Limited Capacity Model of Mediated Message Processing claimed brand recognition is an easier memory task for people compared to brand recall since brand recall requires a higher level of processing within the brain. In addition, a connection between the short-term and long-term memory has to be acquired to store and remember the brand recall information (Lang, 2000; Marti-Parreno et al., 2017). Previous research on brand recall and recognition (e.g. Nelson, 2002; Cianfrone et al., 2008; Walsh et al., 2008; Walsh et al., 2014; Kim & Ross, 2015; Hwang et al., 2017; Marti-Parreno et al., 2017) found lower numbers for recall compared to recognition of in-game advertisements. However, brand repetition seems to have positive effects on brand recall. Furthermore, repetition also influences the recognition of brands or products in SVGS. Regarding the repetition of advertisements, Yaveroglu & Donthu (2008) and Homer (2009) have argued that recall has a positive relationship with the increase of repetition. Moreover, advertisement repetition research in new media saw better numbers for brand memory (Marti-Parreno et al., 2017). Thus, the following hypotheses are formulated:

H2. Brand repetition has a positive relationship with brand recall.

H3. Brand repetition has a positive relationship with brand recognition.

### *2.4 Brand repetition and brand familiarity on brand recall and brand recognition*

Even though there has been a consensus amongst researchers regarding primary and secondary tasks and their effectiveness on brand familiarity, brand recall, and brand recognition, recent research on repetition presents some deviations. The effects of brand repetition on brand recall and brand recognition in both traditional media, as television and movies, and the modern media as the Internet have been studied before (Yaveroglu & Donthu 2008; Marti-Parreno et al., 2017). Both Yaveroglu and Donthu (2008) and Marti-Parreno et al. (2017) have argued that the brand repetition has a positive relationship with the brand recall of both less and more familiar brands. Moreover, positive effects on brand recognition for more familiar and less familiar brands can be expected. The LCM model developed by Lang (2000) takes into consideration that brand familiarity is helpful in storing and processing the product placement and connects the old information of a brand or product with the new information (Hwang et al., 2017; Marti-Parreno et al., 2017).

Studies on the effects of increasing brand repetition are still insufficient in the video game genre and researchers are not always in line regarding brand familiarity and brand recall and brand recognition. Yaveroglu and Donthu (2008) and Marti-Parreno et al. (2017) argue that too much brand repetition might lead to boredom or even irritation, which leads to a negative attitude toward the brand. This can further influence brand recall and brand recognition. In their study, Marti-Parreno et al. (2017) saw higher rates for brand recognition compared to brand recall in their research. In addition, the authors came across deviations concerning repetition and brand familiarity. The same brand recall and brand recognition numbers could be reached by the more familiar and less familiar brands, which removes the incentive for less familiar brands to increase the number of messages in the video game (Marti-Parreno et al., 2017). On the contrary, however, Marti-Parreno et al. (2017) argued familiar brands were more effective for secondary task advertising (e.g. virtual banners) than unfamiliar brands in SVGs.

Furthermore, the study by Walsh et al. (2014) on influences of verbal and visual communication features on brand awareness found the same levels of recall and recognition for two of the brands (Gatorade and Old Spice). The lowest brand recall and brand recognition percentages (respectively 6.3% versus 6.4%) for *Madden 2009*, one of the SVGs used in this study, were quite identical (Walsh et al., 2014). This claim is supported by earlier research conducted by Nelson (2002) and Yang et al. (2006), who found that their participants who played either EA Sports' *FIFA* or a racing video game had brand recall and recognition

levels between the 25 and 30 % and as high as 40% (Walsh et al., 2014). More remarkable, according to Walsh et al. (2014), is that those respondents were able to recall a few of the less familiar brands after playing the racing video game. Lastly, other scholars like Kim & McClung (2010), Hwang et al. (2017) and Marti-Parreno et al. (2017) found out virtual billboards (background placement) contribute to the realness of the SVG and therefore work equally well (and sometimes even better) for brands or products familiar to the gamer. Although Marti-Parreno et al. (2017) did not find an interaction between brand repetition and brand familiarity on brand recall and recognition, this does expect higher brand recall and brand recognition numbers for the more familiar brand in the SVG than the less familiar brand. Therefore, the following hypotheses are formulated:

H4. Repetition will increase brand recall more intensively for more familiar brands than for less familiar brands placed in video games.

H5. Repetition will increase brand recognition more intensively for more familiar than for less familiar brands placed in video games.

### *2.5 Brand attitude and purchase intention*

In Nelson's (2002) study, gamers had divided opinions on brand placement in video games. However, research has shown developments within SVGs and the placement of (interactive) brands and products have considerably changed the attitude towards brands. Glass (2007) found a positive relationship between the placements of brands and the attitude toward that brand. The product placement is seen as part of the game environment and leads to a better brand recognition and attitude towards brands (Van Reijmersdal et al., 2010). The extension and progress in audiovisual content and technology, combined with the earlier mentioned licensing agreements, allows gamers to play SVGs that feel authentic and relatable to real life (Cianfrone et al., 2008; Van Reijmersdal et al., 2010; Walsh et al., 2014; Kim & Ross, 2015). EA Sports incorporated game modes within their SVGs where gamers can maintain and develop teams, players, and outfits for their pleasure. Just like the *FIFA* video game, EA Sports has made specific brands available in other SVGs online stores such as the racing game *NASCAR*, the golf equivalent *Tiger Woods PGA Tour* and National Hockey League (*NHL*) video game (Kim & McClung, 2010; Walsh et al., 2014). This has not only created an opportunity for new gamers to have a better understanding of specific sport brands

and their products or the sport itself, but the more experienced gamer was also stimulated to buy virtual items to design the team with the desired brand or team jersey to look like the actual player or team (Walsh et al., 2008; Kim & Ross, 2015; Hong & Magnusen, 2017). Thus, the sixth hypothesis is formulated:

H6a: Sport video gamers with favorable attitudes toward product placement in SVGs will also have a more favorable attitude toward the brands in SVGs.

H6b: Brand repetition in a SVG will lead to more favorable attitudes toward the brand.

In recent research, one area where development is needed is connecting the product placement in SVGs to consumer behavior (e.g. purchase intention). Recent scholars such as Hong and Magnusen (2017), Hwang et al. (2017), and Marti-Parreno et al. (2017) all suggested further product placement research needed to focus on consumers' behavior, especially purchase intention. According to Walsh et al. (2014), the previous research had shown how in-game advertising had limited effect on the brand attitude and purchase intention of the video gamer. However, other scholars have argued product placement does directly have an effect on either brand attitude and/or purchase intention. Te'eni-Harari (2014) and Vanwesenbeeck, Ponnet, and Walrave (2017) concluded in their studies that purchase intention is directly influenced by the attitude towards the brand. Moreover, Vanwesenbeeck et al. (2017) advocated that children need more information on in-game advertisements because of the effect the advertisements have on brand attitude and purchase intention. Therefore, the seventh hypothesis is formulated as follows:

H7a: Sport video gamers with favorable attitudes toward product placement in SVGs will be more likely to purchase a product they could see in SVGs.

H7b: Brand repetition in a sport video game will lead to more purchase intention among the sport video gamer.

This chapter gave an overview of the existing literature on product placement in SVGs and the processing of the in-game advertisements by referring to the theory of The Limited Capacity Model of Mediated Messages. These concepts were linked to the brand repetition and the effects of manipulating the exposure of advertisements within the SVG. Moreover, this section included a literature review of the topics of interest for this research, namely brand recall and recognition, brand familiarity, brand attitude and purchase intention. These subjects were also connected to the influence of the repetition of brands and/or products. This chapter also presented the hypotheses that will be operationalized in the following chapter on the research design and tested in the chapter on the results.

# 3. Method & research design

This section contains the research design of this study. This chapter discusses the methodology, the sample selection, operationalization, and data analysis. The paragraph on operationalization introduces the design and the manipulation. Thereafter, the test variables of this research and the survey item measurements will be explained. Following the test variables, the control variables and the manipulation check are also discussed. Lastly, the data analysis procedure and hypothesis testing will be addressed. This chapter will provide the information on how this experiment was set up before this study will continue with the section on the results.

## *3.1 Methodology*

This research will focus on how brand repetition in SVGs influences brand familiarity, brand recall and brand recognition of the sports video gamer and how brand repetition in SVGs influences the purchase intention of the sport video gamer. This study uses a quantitative method since the aim is to gather insights on consumer perspectives and attitudes towards brands and product placement and an exploratory study is suited to investigate these variables (Winkler & Buckner, 2006). According to Gravetter and Wallnou (2013), researchers use an experimental method to measure and compare group scores and, ultimately, show a cause-and-effect relationship between certain variables. In this experimental study, the variable brand repetition will be manipulated. Although video game research offers both quantitative and qualitative methods of analysis, this study will use a quantitative method to gain more knowledge of certain broad patterns regarding the behavior of sport video gamers instead of specific individual behavior (Williams, 2005). Furthermore, recent research such as Peters and Leshner (2013), Hwang et al. (2017), Marti-Parreno et al. (2017) and Vanwesenbeeck et al. (2017) all used questionnaires to study product placement effects on video gamers. Since the questions are already used in earlier researches on this subject, the internal consistency reliability, which is when you only want to test a set of items on one dimension, is included (Salkind, 2011). This research includes a pretest to test the design of the questionnaire. An experiment was conducted using the Erasmus Qualtrics website (erasmusuniversity.eu.qualtrics.com).

## *3.2 Sample selection*

For this study, a convenience sampling will be used to find participants. Previous research on product placement, brand awareness and familiarity and purchase intention used convenience sampling (Sung & de Gregorio, 2008; Walsh et al., 2008; Peters & Leshner, 2013; Walsh et al., 2014; Marti-Parreno et al., 2017). Master theses usually have 30 participants per group (Methodological Guidelines Thesis Research) and Morse (1994) has argued in favor of 30 to 60 people per group in for quantitative analysis. The sample size for this experiment will be 120 participants. Each group (one control group and two experimental groups) will contain 40 participants. The student sample of Hwang et al. (2017) had 116 participants. However, according to Morse (1994), it is better to overestimate the sample size of a study when it is still unsure how many participants will be part of the questionnaire.

The sample will consist of three specific groups. The first group that is part of this study is college students in the Netherlands. Even though there is some critique concerning research on college students, Sung and de Gregorio (2008) have argued in favor of selecting students for video game research purposes (Marti-Parreno et al., 2017). Moreover, recent scholars such as Peters and Leshner (2013), Hwang et al. (2017) and Marti-Parreno et al. (2017) used university and college students in their research on product placement in video games. The second group of this study is people that only finished high school or are in their last year of high school. The third and final group includes a few Dutch E-sports video gamers since this fairly new community has different characteristics in comparison with the average gamer and average student. Moreover, this group, having much more interaction with the video game, has not been mentioned in earlier research. With nearly 30% of the male and female gamers in the age group between 18 and 35 years old (ESA, 2017), this study will focus on this age group. The pre-test of the questionnaire will be executed between February 16$^{th}$ and March 1$^{st}$, 2018. The distributing and collecting of the final questionnaire will be from March 2$^{nd}$ till April 6$^{th}$, 2018.

## *3.3 Operationalization*

### *3.3.1 Design*

This study implemented a 3 (repetition: high vs. low vs. none) design. Advantages of this design are that participants will be measured by the four test variables; fewer respondents are needed and random assignment is not needed to ensure internal validity (Charness &

Kuhn, 2012). Participants of this study will be divided into three groups. An experimental method always includes one control group, in which the researcher shows control and makes sure there are no other variables that can cause change and experimental group(s) that have the manipulation variable to see if other variables are influenced by the manipulation (Gravetter & Wallnou, 2013). To indicate the characteristics of the sample, the participants will be asked to answer demographic questions. These questions will include the age, gender, education level and ethnicity. To measure the use of SVGs, the questionnaire will ask how many hours per week the participant spends on SVGs. The question will be formulated as follows: "How many hours, on average, do you play the FIFA video game per week?" Since this research is about sport video gamers, participants will only be included in the analysis if the respondent played at least one hour of the video game on a weekly basis. All the groups will start answering the questions concerning demographics. After the demographics, all three groups will watch a short video clip of generic FIFA 18 gameplay with in-game advertising. This clip with gameplay will include target brands Adidas and Chevrolet. After the short video clip, the questions that are considered the control variables in this research will be presented to the participants. The gameplay is included to establish the reality of live football broadcasting with brands competing with each other to reach the consumer (Marti-Parreno et al., 2017).

### *3.3.2 Manipulation*

The next section of questions in the questionnaire will divide the groups into one control group and two experimental groups. The participants were randomly assigned to the control group, experimental group one, and experimental group two. To manipulate the repetition, conditions in the experimental groups were altered. Marti-Parreno et al. (2017) have measured repetition through manipulation of gaming experience. This research will increase brand repetition of Adidas and Chevrolet by displaying advertisements of in-game digital content. The control group and both experimental groups will watch the clip of video gameplay, which includes the target brands Adidas and Chevrolet as foreground and background ads. To manipulate brand repetition, both experimental groups will be exposed to another video including the target brands Adidas and Chevrolet. However, the length of the video and the amount of foreground and background ads of the target brands Adidas and Chevrolet will be different. In this design, experimental group one will be exposed to a static video without moving images (low repetition) and experimental group two will experience a

dynamic advertising video clip accompanied with inserted text (high repetition). This research is partly based on earlier research by Yaveroglu and Donthu (2008), who used an online experiment with web pages including increased brand exposure, and the study Marti-Parreno et al. (2017) on brand repetition and brand familiarity on the brand memory of the sport video gamer. However, the experiment has opted to let the participants watch the brand exposure through in-game ads in a video instead of playing the game itself.

In this study, the control group will not see any other form of advertisement and thus will not be subject to the repetition increase. This group will go directly to the next set of questions on attitude towards product placement, brand attitude, and purchase intention. The two experimental groups will be exposed to increased brand repetition. Experimental group one will be shown a video from EA Sports introducing four special Adidas kits for a special game mode in the video game. This stagnant video image, with background music, will be available for ten seconds and will then disappear, thus encouraging the participant to move on. On the Adidas kits, four other brands (Jeep, Chevrolet, Fly Emirates and T-Mobile) will be visible. The participant will only be able to see the still image before moving on to the next set of questions. They will answer the same questions as the control group. Experimental group two will see the video 40-second long video of the introduction of four special Adidas kits by EA Sports for the special game mode within the video game. Instead of showing more gameplay, the stagnant video image and video are chosen because the target brands (Adidas & Chevrolet) are more visible to the participant. Furthermore, although the formats are other types of advertisements, it is clearly stated it involves digital content for this particular video game. The experimental groups will continue to answer the questions on attitudes towards product placement, brand attitude and purchase intention after the short video.

## *3.4 Test variables*

### *3.4.1 Brand recall & recognition*

To assess the gamers' awareness of brand recall and brand recognition in SVGs measures were adopted from those used in previous studies (Cianfrone et al., 2008; Walsh et al., 2008; Walsh et al., 2013, Hwang et al., 2017, Marti-Parreno et al., 2017). Participants are not informed to focus on the featured brands in the short clip of the gameplay with regards to brand recall and brand recognition. First, to measure unaided recall, participants are asked to ''list as many brands/corporations you remember seeing advertised in the video game you

saw a short clip played of.'' This will happen after the manipulation check question in the questionnaires of both the control group and the experimental groups. Brand recall was a dichotomous variable in this data analysis since the brands were measured separately and coded "1" if the brand was recalled by the participant and "0" if the brand was not recalled by the participant.

Second, brand recognition will be measured. To assess the brand recognition of the video gamer, the participants will see a question that lists 10 brand names. This list included brands that appeared in the short video clip of the video game gameplay of the game as well as brands, which did not appear during the clip with gameplay. The follow-up question will ask the participants ''Advertisements for which of the following were displayed during the video game." The participants can check the boxes of the brand names they believe appeared in the short clip of *FIFA 18* gameplay. If they appeared in the gameplay according to the participant, the box "Yes" will be checked. If not, the box "No" will be checked. Just like brand recall, brand recognition was a dichotomous variable in this analysis and coded "1" if the brand was recognized and "2" if the brand was not recognized by the participant. In previous research (e.g., Walsh et al., 2008, Walsh et al., 2014), the brand recognition question is always asked after the brand recall question on the questionnaire. According to Walsh et al. (2014), presenting brands before asking the brand recall question can cause the corruption of the awareness data since people will be able to check the boxes of certain brands without them actually recognizing those brands.

### *3.4.2 Brand familiarity*

To assess brand familiarity, this study uses measurements from a study conducted on SVGs. The measures are adopted from a previous study by Marti-Parreno et al. (2017). The participants will be asked to rate brand familiarity of the two target brands (Adidas & Chevrolet) and two brands in the same product group. This study uses Reebok as the sport brand and BMW as the automobile brand. In this case, Adidas will be considered the more familiar brand whereas Reebok is less popular and thus less familiar. In the automobile product group, BMW will be considered the more familiar brand and Chevrolet will be considered the less familiar brand. The participant will rate the brand familiarity of the four included brands (e.g., " Adidas is a brand I'm familiar with") on a five-point Likert scale. On this five-point Likert scale, a "1" will be categorized as strongly disagreeing with the statement, while a "5" will be considered as strongly agreeing to the statement.

### *3.4.3 Attitude toward product placement*

To assess the Attitude toward Product Placement measures were adopted from Gupta and Gould (1997) and Kim & McClung (2010). Kim & McClung (2010) used a study from Gupta and Gould (1997) in which attitude towards product placement was measured in movies and adjusted the study to make it compatible for SVGs and product placement. In the modified survey by Kim & McClung (2010) participants were asked questions on three different topics, namely acceptability of product placement, attitude towards product placement and SVGs demographics. In this study, the acceptability of product placement will not be measured. The study from Gupta and Gould (1997) contained a total of sixteen attitude items and those sixteen items were divided into four sub-dimensions (Kim & McClung, 2010).

The first sub-dimension is the attitude toward product placement in general. Secondly, attitude toward product placement in SVGs will be a sub-dimension following the attitude toward product placement in general. The participants will first answer how they perceive product placement in general too because the type of product or brand in SVGs influences the attitude of sport video (Kim & McClung, 2010). Thirdly, the participants will be asked about perceived realism (i.e. whether the product placement adds to realism). Fourth and lastly, the restriction of product placement in SVGs (i.e. whether it is allowed for all products to be placed in the SVG as in-game advertisements) will be questioned. To measure the degree of agreement from the participant, a five-point Likert scale will be presented. On this five-point Likert scale, a "1" will be categorized as strongly disagreeing with the statement, while a "5" will be considered as strongly agreeing to the statement.

### *3.4.4 Brand attitude and purchase intention*

To assess brand attitude, this study uses measurements from studies conducted on SVGs (Hwang et al., 2017) and the more violent first-person shooter video game (Yoo & Pena, 2011). The participants are presented with a four-item, five-point semantic differential scale for the two brands (Adidas & Chevrolet) to measure the attitude towards the brands. For example, participants will answer questions such as, "For me, the brand Adidas is _____", with the items ranging from *very appealing* to *very unappealing, very valuable* to *very invaluable, very pleasant* to *very unpleasant, and very likable* to *very unlikable*. On this five-point semantic differential scale, a "1" will be categorized as very appealing, while a "5" will

be considered as very unappealing. This structure remains the same for very valuable to very invaluable, very pleasant to very unpleasant and very likable to very unlikable. The measurements are adjusted to be more relatable to the Dutch sample.

To assess purchase intention, this study uses adjusted measurements from a study conducted by Vanwesenbeeck et al. (2017) on in-game ads in social network games. To measure the degree of agreement from the participant, a five-point Likert scale will be presented. On this five-point Likert scale, a "1" will be categorized as strongly disagreeing with the statement, while a "5" will be considered as strongly agreeing with the statement. The two-item scale used by Vanwesenbeeck et al. (2017) will be adjusted accordingly to the brands (e.g. I am willing to buy a [type of clothing] of [brand name]).

### *3.5 Control variables & manipulation check*

To ensure that no differences in this group existed, control variables were included in this study. The term control variable relates to the unchanged element throughout the experiment and the attempts of the researcher to adjust the explanatory variables and eliminate effects connected to sampling, manipulation and other independent and dependent variables (Cook, Campbell & Day, 1979; Pedhazur & Schmelkin, 2013). In their study on repetition effects, Marti-Parreno et al. (2017) used 'perceived easiness to follow video gameplay', 'ability to understand video gameplay' and 'gaming experience' as control variables. Hwang et al. (2017) included these control variables and used a seven-point Likert scale to measure these variables. Since this research will expose the participant to the gameplay of a video game instead of making them play the video game, this research will alter the control variables accordingly. Regarding controlling 'perceived easiness to follow video gameplay', the participant will answer, "I find this gameplay clip of *FIFA 18* easy to follow" on a five-point Likert scale. On this five-point Likert scale, a "1" will be categorized as strongly disagreeing with the statement, while a "5" will be considered as strongly agreeing with the statement.

To measure 'ability to understand video gameplay', the participant will answer, "To what extent did you feel able to successfully understand the gameplay clip of *FIFA 18*?" On the five-point Likert scale for this control variable, a "1" will be categorized as not at all able to successfully understand the video gameplay, while a "5" will be considered as extremely able to successfully comprehend the video gameplay within the questionnaire. In the demographic section, the controlling variable of gaming experience is already present with

the question “how many hours per week the participant spends on SVGs?” Marti-Parreno et al. (2017) previously claimed that the controlling variable gaming experience could be specifically altered to the type of SVG in question. Therefore, to measure the ‘gaming experience’ of soccer SVGs, the participant will answer, “Playing soccer video games is one of the things I do every day.” On this five-point Likert scale, a “1” will be categorized as strongly disagreeing with the statement, while a “5” will be considered as strongly agreeing with the statement.

To investigate whether the manipulation was successful, a manipulation check was included to verify if the participants understood how many visual media they had seen throughout the questionnaire. During the experiment, a researcher examines the relationship between the independent variable, which is manipulated, and the dependent variable. To make sure outside conditions do not influence the measurement of the dependent variable, a manipulation check is necessary (Perdue & Summers, 1986). According to Perdue and Summers (1986), the two main conditions of the manipulation check are that the manipulation leads to the measurement of the dependent variables that were directly manipulated and “the manipulations did not produce changes in measures of related but different constructs” (p. 318). The participants will be asked how many types of visual media (gameplay, video, picture) they encountered throughout the questionnaire. To make sure the manipulation is effective, the participant will see a blank space to state their answer instead of boxes with “Zero”, “One” and “Two.” If the participants in the control group answer with “1” type of visual media and both the experimental groups answer “2” types of visual media, their answers were correct and the manipulation was successful.

### *3.6 Data analysis*

The information from the completed questionnaires was entered into a computer database and analyzed using SPSS 24.0. Before the main experiment, a pretest was conducted to identify whether the English design of the questionnaire was suitable for Dutch respondents and to test the survey items on brand familiarity, attitude towards the target brands and purchase intention. To test brand familiarity, a Paired Samples T-test will be conducted on the target brands (Adidas and Chevrolet) and the dummy brands (Reebok and BMW). This test is used to determine whether Adidas can be considered a more familiar brand (BrandFamiliarityAdidas) and Chevrolet can be considered a less familiar brand (BrandFamiliarityChevrolet) in this research. After brand familiarity, the attitude toward the

brand survey item will be tested. For the attitude toward the brand Adidas (BrandAttAdidas) and the attitude toward the brand Chevrolet (BrandAttChevrolet), Cronbach's alpha will be tested to ensure internal consistency for the target brands Adidas and Chevrolet. Furthermore, a Paired-Samples T-test will be conducted on the target brands Adidas and Chevrolet. This test will be included to determine whether there is a difference in brand attitude between a sport brand and a car brand. Lastly, the survey item purchase intention will be tested. Again, a Paired Samples T-test was conducted on the target brands Adidas (PurchIntAdidas) and Chevrolet (PurchIntChevrolet) to determine whether there is a difference in purchase intention between a sport brand and a car brand.

For the main experiment, a total of seven hypotheses will be tested. However, hypothesis 6 will consist of hypothesis 6a and 6b and hypothesis 7 will also be formulated as a hypothesis 7a and 7b. Furthermore, three control variables will be tested to make sure there are no differences between the three conditions (one control group and two experimental groups). The three control variables, the perceived easiness to follow gameplay (EasyGameplayFollowControl), the ability to understand the video gameplay (AbilityUnderstandGameplay) and the gaming experience of the video gamer (GamingExperience) will each be tested through an ANOVA to ensure that there are no differences between the control group, experimental group 1 and experimental group 2. Thereafter, Hypothesis 1 through hypothesis 7b will be tested. To test H1, a Paired Samples T-test will be conducted. To test H2, H3, H4, and H5, ANOVA tests were conducted. To test H6a, H6b, H7a, and H7b, Linear Regression tests were conducted. Table 1 gives an overview of the variables used to test the hypotheses and a description of the operationalization.

*Table 1- Variable Description*

| Variables | Meaning |
|---|---|
| **Test variables** | |
| AttProdPlacementGeneral | The attitude toward product placement in general |
| AttProdPlacementSVG | The attitude toward product placement in SVGs |
| BrandRecallAdidas | The brand recall of the brand Adidas |
| BrandRecallChevrolet | The brand recall of the brand Chevrolet |

| | |
|---|---|
| BrandRecogntionAdidas | The brand recognition of the brand Adidas |
| BrandRecognitionChevrolet | The brand recognition of the brand Chevrolet |
| BrandAttAdidas | The brand attitude of the brand Adidas |
| BrandAttChevrolet | The brand attitude toward the brand Chevrolet |
| PurchIntAdidas | The purchase intention for the brand Adidas |
| PurchIntChevrolet | The purchase intention for the brand Chevrolet |

**Manipulation Variable**

| | |
|---|---|
| BrandRepetition | The manipulation of brand repetition for the control group (none), experimental group 1 (low) and experimental group 2 (high) |

**Fixed Variables**

| | |
|---|---|
| BrandFamiliarityAdidas | The brand familiarity of the target brand Adidas |
| BrandFamiliarityBMW | The brand familiarity of the dummy brand BMW |
| BrandFamiliarityChevrolet | The brand familiarity of the target brand Chevrolet |
| BrandFamiliarityReebok | The brand familiarity of the dummy brand Reebok |

**Control Variables**

| | |
|---|---|
| EasyGameplayFollowControl | The perceived easiness to follow video gameplay |
| AbilityUnderstandGameplay | The ability to understand the video gameplay |
| GamingExperience | The gaming experience of the video gamer |

This chapter gave an overview of research design of this study and the method used for this experiment on product placement in SVGs and the effects of manipulating the brand repetition. This section discusses the sample selection, explains the operationalization and the manipulation, and presents the test variables of this research. Moreover, the control variables and the manipulation check were also included and described. Lastly, the data analysis procedure and the description of the variables were discussed as well. This chapter contributes to this research by outlining the operationalization of the topics discussed in chapter two and explaining the analysis procedure, which continues in the following chapter on the results of this study.

# 4. Results

This chapter consists of the results of the pretest and the main experiment. This section starts by explaining the procedure and aim of the pretest in this research. Afterward, the testing of the design of the questionnaire will be discussed and the results of the survey items of the pretest will be presented. A brief conclusion on the important findings of the pretest will follow before the introduction and demographics of the main test are outlined. Following the demographics, the manipulation check and the control variables will be discussed. Lastly, this section presents the results of the main experiment and includes a summary of the hypotheses.

## *4.1 Pretest survey*

### *4.1.1 Procedure*

The questionnaire for this research was distributed to Dutch participants only. Participants compromised 17 gamers, yet three surveys did not complete the whole survey. Therefore, the pretest sample consisted of 14 respondents. Although this is a small number, Ruel, Wagner, and Gillespie (2015) claim that a pretest that has between 12 and 50 respondents is considered respectable. Furthermore, since not pretesting can cause serious issues to the questionnaire, doing a pretest on even one person is better than not doing it (Ruel et al., 2015).

The main aims of this pretest were to identify whether the English design of the questionnaire was suitable for Dutch respondents and to test the survey items brand familiarity, attitude towards the target brands and purchase intention. According to earlier research by Van Teijlingen and Hundley (2001) and a more recent writing by Ruel et al. (2015), the importance of a pretest can serve as an examination before the main test to show problems in the questionnaire. In this study, the pretest is included to see whether the English design of the questionnaire is suitable. Moreover, individual items are tested to see if the preconceived expectations on brand familiarity, brand attitude, and purchase intention are confirmed by a small, pretest sample and can be used in the main experiment. In both the pretest and the main experiment, all respondents are between the ages of 18 and 35-years old. Therefore, under aged respondents were not part of this study and, thus, no form of consent had to be signed by the participants. Since the pretest questionnaire only showed one video to

the respondents, the effect of repetition was not measured in the pretest. The pretest questionnaire was open for ten days and was closed after the tenth day ended.

### *4.1.2 Testing design questionnaire*

One of the main aims for this pretest is to test whether the English vocabulary used in the questions was understandable for the Dutch respondents. This research includes mostly students but is also distributed to high school students and/or people who did not finish a higher education after high school. The English design for this questionnaire was chosen for two reasons in particular. Firstly, the segments within the survey are taken from earlier research on this subject (e.g. Yoo & Pena, 2011; Hwang et al., 2017; Marti-Parreno et al., 2017; Vanwesenbeeck et al., 2017). One important aspect of pretesting is to make sure that the respondents are not directed to a value while answering the questions (Ruel et al., 2015). Furthermore, Hwang et al. (2017) and Marti-Parreno et al. (2017) conducted their research on university graduate and undergraduate students. This research will also contain students that are enrolled in either College (MBO and HBO) or University.

Secondly, the increase of English language based studies in the Netherlands and the high level of understanding the English language make it reasonable to distribute an English questionnaire. A research conducted by Studyportals claimed the Netherlands is ranked second in bachelor studies taught in English (317), while a similar study by an education selection website called studiekeuze123.nl addressed a total of 371 English bachelor studies (Hoger Onderwijs Persbureau, 2017; Koolhof, 2017). Furthermore, the Netherlands received a top ranking in the *Education First* English Proficiency Index with a 71.45 score out of 100 on a Standard English Test (Education First, 2017). So even though this questionnaire is only directed at Dutch participants, it is designed in English because Dutch respondents can complete the questionnaire in English and this research can build upon earlier studies on product placement in SVGs.

One important finding involved the phrasing of the manipulation check. At first, participants answered the question “How many types of visual media (video gameplay, video, picture/tweet) have you seen in this questionnaire?” However, some of the respondents did not understand the question and, subsequently, did not understand the manipulation check. Moreover, since the questionnaire includes either one or two videos, respondents were confused why the word ‘visual media’ was chosen in this question. Therefore, the manipulation check question has been altered to “How many videos have you seen in this

questionnaire?" The other items in the questionnaire did not yield any problems concerning the English translation and were thus incorporated in the main questionnaire as well.

### *4.1.3 Results survey items*

For the pretest, the participants were asked to rate their brand familiarity. The brand familiarity item was tested for Adidas, Chevrolet, Reebok, and BMW. In addition to the target brands Adidas and Chevrolet, Reebok and BWM were included as brands in the same product categories to move focus away from the target brands in the questionnaire, as done earlier by Hwang et al. (2017) and Marti-Parreno et al. (2017). Furthermore, the inclusion of target and dummy brands shows if Adidas and BMW can be considered as more familiar brands, while Reebok and Chevrolet are seen as less familiar brands in this research. The participant will rate the brand familiarity of the four included brands (e.g., "Adidas is a brand I'm familiar with") on a five-point Likert scale. On this five-point Likert scale, a "1" will be categorized as strongly disagreeing with the statement, while a "5" will be considered as strongly agreeing with the statement. Brand familiarity is measured to see if sport related brands are more familiar to sport video gamers in comparison with, in this case, a car brand. A Paired Samples T-test showed that Adidas ($M$=4.71, $SD$=.47) was the most familiar brand, while Chevrolet was the least familiar brand ($M$=3.79, $SD$=1.12, $t$(13)=3.789, $p$=.002. This is shown in table 1. Also, the results showed that dummy brand Reebok ($M$=3.86, $SD$=1.02) was seen as less familiar in comparison with Adidas and BMW ($M$=4.21, $SD$=1.05) is considered more familiar as a car brand compared to Chevrolet. The pretest, thus, confirmed the preconceived assumptions on brand familiarity.

For the pretest survey, the item on attitude toward the brand of the two target brands, Adidas and Chevrolet, was also tested. Earlier research on brand attitude in video games has concluded that more realistic brands stimulate the game experience and, eventually, can be linked to purchase intention. Since *FIFA 18* is a SVG, the brand attitude toward Adidas should be more positive than the brand attitude toward Chevrolet. Therefore, the survey items on attitude toward the brand will test whether it is useful to include a sport brand (Adidas) and a car brand (Chevrolet) in a sport-related video game. Participants were asked to rate their brand attitude for Adidas and Chevrolet. Since Adidas and Chevrolet are the target brands in this research, the attitude toward the brands Reebok and BMW was not included, whilst their brand familiarity was measured. The attitude toward the brand was measured for the two target brands using Yoo & Pena (2011) and Hwang et al. (2017) four-item, five-point

semantic differential scale with the items ranging from *very appealing* to *very unappealing*, *very valuable* to *very worthless*, *very pleasant* to *very unpleasant*, *and very likable* to *very unlikable*. The internal consistency for target brands Adidas ($\alpha$=.767) and Chevrolet ($\alpha$=.693) was measured as well. On this scale, a "1" is considered "very appealing", while a "5" is categorized as "very unappealing" for example. Brand attitude is included to measure the perception of the target brands by sport video gamers and to see if there is a difference between a sport brand and a car brand. A Paired Samples T-test showed a much more positive BrandAttAdidas (*M*=1.61, *SD*=.48) in comparison with BrandAttChevrolet (*M*=3.16, *SD*=.55, *t*(13)=8.129, *p*<.002, as shown in table 2. The pretest confirmed the difference between brand attitude toward a sport brand and a car brand in a sport-related video game.

The last item tested in the survey was purchase intention. Participants were asked to rate their purchase intention for Adidas and Chevrolet. As mentioned earlier, brand attitude and purchase intention are connected but not much research has been done on both subjects in video game research. Since this study expected a more positive attitude toward Adidas in comparison with Chevrolet, the thought is that purchase intention for the sport brand will be higher as well. However, since purchase intention is an underdeveloped subject of study in this field, this item will be tested first. This research used adjusted measurements from a study conducted by Vanwesenbeeck et al. (2017). On this five-point Likert scale, a "1" will be categorized as strongly disagreeing with the statement, while a "5" will be considered as strongly agreeing with the statement. The two-item scale used by Vanwesenbeeck et al. (2017) will be adjusted accordingly to the brands (e.g. I am willing to buy clothing of Adidas). A Paired Samples T-test showed more interest in PurchIntAdidas (*M*=4.11, *SD*=.84) compared to PurchIntChevrolet (*M*=2.18, *SD*=.64, *t*(13)=7.100, *p*<.001. This is shown in table 3. Therefore, the pretest also confirmed the expectations on purchase intention of the sport brand and the car brand.

### *4.1.4 Conclusion pretest*

The main aims of this pretest were to identify whether the English design of the questionnaire was suitable for Dutch respondents and to test the survey items brand familiarity, attitude towards the target brands and purchase intention. With exception of the manipulation check question, which is adjusted to clear translation issues for the participants, the English design of the questionnaire was comprehensible for the respondents. Regarding

the results of the pretest survey items, all the expectations were met. The results show that Adidas is the more familiar brand and Chevrolet is the less familiar brand. Furthermore, the internal consistency for the items on attitude toward the brand Adidas and attitude toward the brand Chevrolet was proven and the results saw a more positive attitude toward the brand Adidas compared to the brand Chevrolet. Lastly, the results on purchase intention show the participants were far more likely to purchase the brand Adidas in comparison with the brand Chevrolet.

## *4.2 Main test survey*

### *4.2.1 Introduction*

This section elaborates on the findings gathered in the main experiment. First, the demographics of the main experiment will be presented. Second, the manipulation check will be discussed. Third, the control variables of this research will be tested. Fourth, and lastly, the hypotheses of this study will be analyzed and the results will be presented.

### *4.2.2 Demographics*

A total of 122 Dutch respondents participated in the study. The average age of the participants is 24.7 years old and the standard deviation is 4.03 years. Regarding gender, 88% of the respondents in this research are male. When looking at race/ethnicity, 82% are White (non-Hispanic), while 13% of the participants were Black (non-Hispanic). The highest level of education shows more diversity: 46% of the participants attended, or still attend, College (MBO/HBO), while University was the highest level attained for 42% of the respondents.

### *4.2.3 Manipulation check*

The control group had 42 participants, while experimental group one and experimental group two both had 40 participants. A manipulation check was performed to assess whether the respondents perceived the difference in brand repetition. The control group only saw the gameplay video, while experimental group 1 saw another ten-second video and experimental group 2 watched another video with a length of forty seconds. For the control group, 40 out of the 42 respondents (95%) answered they had seen one video in the questionnaire and, therefore, the manipulation was successful. For experimental group one, 39 out of the 40

respondents (98%) answered they had seen two videos in the survey and the manipulation was also successful. For experimental group two, 39 out of 40 (98%) participants answered they had seen two videos in the questionnaire and, therefore, the manipulation was again successful.

### *4.2.4 Control variables*

In order to make sure that, besides the manipulation, there are no group differences for processing the information of the videos between the three conditions (two experimental and one control), three control variables were measured. These three control variables were the perceived easiness to follow video gameplay, the ability to understand video gameplay and the gaming experience. It is important to make sure that the three conditions do not differ between the control group and the experimental groups because it will not be certain whether the manipulation had an effect on the experimental groups when the control variables do not have similar outcomes (Marti-Parreno et al., 2017). Three ANOVA tests showed no significant differences for EasyGameplayFollowControl, $F(2, 115) = 1.21$, $p > .05$, AbilityUnderstandGameplay, $F(2, 115) = 1.24$, $p > .05$ and GamingExperience, $F(2, 115) = 1.31$, $p > .05$ among the two experimental groups and the control groups. The results of the ANOVA tests on EasyGameplayFollowControl, AbilityUnderstandGameplay and GamingExperience are presented in table 4.2.4.

*Table 4.2.4 Results of ANOVA Analysis for Control Variables Perceived Easiness to Follow Video Gameplay, Ability to Understand Video Gameplay and Gaming Experience*

| | Mean | Std. Deviation | *F* | *p* | $n^2$ |
|---|---|---|---|---|---|
| EasyGameplayFollowControl | | | 1.206 | .303 | .021 |
| Control Group (*N*=40) | 4.30 | .52 | | | |
| Experimental Group 1 (*N*=39) | 4.15 | .78 | | | |
| Experimental Group 2 (*N*=39) | 4.38 | .67 | | | |
| AbilityUnderstandGameplay | | | 1.242 | .293 | .021 |
| Control Group (*N*=40) | 4.03 | .53 | | | |
| Experimental Group1 (*N*=39) | 4.00 | .69 | | | |
| Experimental Group 2 (*N*=39) | 4.21 | .66 | | | |
| GamingExperience | | | 1.307 | .274 | .022 |
| Control Group (*N*=40) | 2.98 | 1.07 | | | |
| Experimental Group1 (*N*=39) | 2.59 | 1.16 | | | |
| Experimental Group 2 (*N*=39) | 2.69 | 1.06 | | | |

## *4.3 Results hypotheses*

### *4.3.1 Hypothesis 1*

Hypothesis 1 postulated that there is a difference between the attitude toward product placement in general and the attitude toward product placement in SVGs among the sport video gamers. However, this research expects to keep H0, which is formulated as follows: there is no difference between the attitude toward product placement in general and the attitude toward product placement in SVGs among the sport video gamers. To test hypothesis 1, a Paired Samples T-test was conducted with attitude toward product placement in general (AttProdPlacementGeneral) and attitude toward product placement in SVGs (AttProdPlacementSVG) as the test variables. The Paired Samples T-test revealed no significant difference among sport video gamers between AttProdPlacementGeneral (*M*=3.14,

*SD*=.40) and AttProdPlacementSVG (*M*=3.06, *SD*=.55), $t(113) = 1.78$, $p > 0.05$. This result suggests there is not an attitude difference among sport video gamers concerning attitude toward product placement in general and attitude toward product placement in SVGs. Therefore, as was expected, hypothesis 1 is rejected and this research will keep H0.

### *4.3.2 Hypotheses 2 & 3*

Hypothesis 2 and 3 in this research posited that brand repetition (BrandRepetition) will have a positive relationship with both brand recall and brand recognition for the target brands Adidas and Chevrolet. To test hypothesis 2, two One-way ANOVA's were conducted to compare the two experimental groups and the control group on BrandRepetition for the test variables BrandRecallAdidas and BrandRecallChevrolet. Although there was no significant difference for BrandRecallChevrolet, there was a significant difference found for BrandRecallAdidas between the experimental groups and the control group, $F(2, 111) = 4.55$, $p < .05$. A Tukey post hoc revealed that the BrandRecallAdidas had higher rates for experimental group 1 (*M*=.65, *SD*=.48 and experimental group 2 (*M*=.77 *SD*=.43) in comparison with the control group (*M*=.45, *SD*=.50). To test hypothesis 3, two One-way ANOVA's were conducted to compare the two experimental groups and the control group on brand repetition for the test variables BrandRecognitionAdidas and BrandRecognitionChevrolet. The results of both BrandRecognitionAdidas and BrandRecognitionChevrolet showed no significant difference for the control group and both the experimental groups. This means that H3, brand repetition has a positive relationship with brand recognition, cannot be confirmed. However, since brand repetition did have a positive effect on brand recall of target brand Adidas, H2 is partly confirmed and cannot be completely rejected. The results of the ANOVA tests of the effect of brand repetition on brand recall and brand recognition of the target brands Adidas and Chevrolet are presented in table 4.3.2.

*Table 4.3.2 Results of ANOVA tests for Effects of Brand Repetition on Brand Recall and Brand Recognition of Target Brands Adidas and Chevrolet*

| | Mean | Std. Deviation | Mean Square | Sum of Squares | *df* | *F* | *p* | $n^2$ |
|---|---|---|---|---|---|---|---|---|
| *Dependent Variable:* BrandRecallAdidas | | | | | | | | |
| *Independent Variable*: BrandRepetition | .62 | .487 | 1.015 | 2.030 | 2 | 4.553 | .013 | .076 |
| Control Group (*N*=38) | .45 | .504 | | | | | | |
| Experimental Group 1 (*N*=37) | .65 | .484 | | | | | | |
| Experimental Group 2 (*N*=39) | .77 | .427 | | | | | | |
| *Dependent Variable:* BrandRecallChevrolet | | | | | | | | |
| *Independent Variable* BrandRepetition | .41 | .494 | .074 | .149 | 2 | .301 | .741 | .005 |
| Control Group (*N*=38) | .39 | .495 | | | | | | |
| Experimental Group 1 (*N*=37) | .38 | .492 | | | | | | |
| Experimental Group 2 (*N*=39) | .46 | .505 | | | | | | |
| *Dependent Variable*: BrandRecognitionAdidas | | | | | | | | |
| *Independent Variable* BrandRepetition | 1.09 | .284 | .140 | .281 | 2 | 1.763 | .176 | .031 |
| Control Group (*N*=38) | 1.16 | .370 | | | | | | |
| Experimental Group 1 (*N*=37) | 1.05 | .229 | | | | | | |
| Experimental Group 2 (*N*=39) | 1.05 | .223 | | | | | | |
| *Dependent Variable*: BrandRecognitionChevrolet | | | | | | | | |
| *Independent Variable* BrandRepetition | 1.24 | .428 | .082 | .165 | 2 | .445 | .642 | .008 |
| Control Group (*N*=38) | 1.24 | .435 | | | | | | |
| Experimental Group 1 (*N*=37) | 1.19 | .397 | | | | | | |
| Experimental Group 2 (*N*=39) | 1.28 | .456 | | | | | | |

Notes: Tukey post-hoc test shows that for brand recall of the brand Adidas experimental group 1 and experimental group 2 differ significantly from the control group.

### *4.3.3 Hypotheses 4 & 5*

Before hypotheses 4 & 5 were tested, the variable brand familiarity had to be studied. Hypotheses 4 and 5 postulated that brand repetition would increase both brand recall (H4) and brand recognition (H5) for the more familiar target brand (Adidas) compared to the less familiar target brand (Chevrolet). To make sure Adidas is the more familiar brand (BrandFamiliarityAdidas) and Chevrolet is the less familiar brand (BrandFamiliarityChevrolet), this study conducted a Paired Samples T-test. The Paired Samples T-test showed that BrandFamiliarityAdidas was relatively more familiar ($M$=4.58, $SD$=.65) and BrandFamiliarityChevrolet was relatively less familiar in this research, ($M$=3.39 $SD$=.99), $t(113)=11.37$, $p < 0.01$. Therefore, Adidas can be considered the more familiar brand and Chevrolet can be considered the less familiar brand.

After brand familiarity was tested, this study continued with hypotheses 4 and 5. As mentioned above, hypotheses 4 and 5 posited that brand repetition would increase both brand recall (H4) and brand recognition (H5) for the more familiar target brand (Adidas) compared to the less familiar target brand (Chevrolet). For hypothesis 4, two ANOVA's were conducted on the test variables BrandRecallAdidas and BrandRecallChevrolet. Both BrandRepetition and BrandFamiliarity were fixed factors in this test. For brand recall of more familiar brand Adidas and brand recall of less familiar brand Chevrolet, the ANOVA tests revealed no significant difference for brand familiarity and brand repetition between the control group and the two experimental groups. Therefore, H4, a direct effect of brand repetition and brand familiarity on the brand recall of Adidas and Chevrolet, cannot be confirmed.

To test hypothesis 5, two ANOVA's were conducted on the test variables BrandRecognitionAdidas and BrandRecognitionChevrolet. Both BrandRepetition and BrandFamiliarity were fixed factors in this test. Just like H4, the ANOVA tests showed no significant differences between the control group and experimental groups 1 and 2 for brand repetition and brand familiarity on brand recognition of more familiar brand Adidas and brand recognition of less familiar brand Chevrolet. Therefore, H5, a direct effect of brand repetition and brand familiarity on the brand recognition of Adidas and Chevrolet, cannot be confirmed. The results of the ANOVA tests on the effects of brand repetition and brand familiarity on the brand recall and the brand recognition of the brands Adidas and Chevrolet are presented in Table 4.3.3.

*Table 4.3.3 Results of ANOVA tests on Effects of Brand Repetition and Brand Familiarity for Test Variables Brand Recall and Brand Recognition of Target Brands Adidas and Chevrolet*

| | BrandRecallAdidas | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | *df* | Mean Square | *F* | *p* |
| Testing Groups (*N*=114) | 1.332 | 2 | .666 | 2.968 | 0.56 |
| BrandFamiliarityAdidas | .808 | 4 | .202 | .900 | .467 |
| Testing Groups * BrandFamiliarityAdidas | .403 | 2 | .201 | .897 | .411 |
| Error | 23.570 | 105 | .244 | | |
| | BrandRecallChevrolet | | | | |
| | Sum of Squares | *df* | Mean Square | *F* | *p* |
| Testing Groups (*N*=114) | .007 | 2 | .004 | .017 | .983 |
| BrandFamiliarityChevrolet | 4.597 | 4 | 1.149 | 5.247 | .001 |
| Testing Groups * BrandFamiliarityChevrolet | .900 | 7 | .129 | .587 | .765 |
| Error | 21.900 | 100 | .219 | | |
| | BrandRecognitionAdidas | | | | |
| | Sum of Squares | *df* | Mean Square | *F* | *p* |
| Testing Groups (*N*=114) | .302 | 2 | .151 | 2.113 | .126 |
| BrandFamiliarityAdidas | 1.118 | 4 | .279 | 3.914 | .005 |
| Testing Groups * BrandFamiliarityAdidas | .232 | 2 | .116 | 1.628 | .201 |
| Error | 7.495 | 105 | .071 | | |

*Continued.*

| | BrandRecognitionChevrolet | | | | | |
|---|---|---|---|---|---|---|
| | Sum of Squares | *df* | Mean Square | *F* | *p* | |
| Testing Groups (*N*=114) | .541 | 2 | .271 | 1.439 | .242 | |
| BrandFamiliarityChevrolet | 1.317 | 4 | .329 | 1.750 | .145 | |
| Testing Groups * BrandFamiliarityChevrolet | 1.160 | 7 | .166 | .881 | .525 | |
| Error | 18.811 | 100 | .188 | | | |

### *4.3.4 Hypotheses 6a & 6b*

With regard to hypothesis 6a, it was posited that sport video gamers with favorable attitudes toward product placement in SVGs would lead to more favorable attitudes toward the brands in the SVGs. To test hypothesis 6a, two linear regressions were conducted with attitude toward product placement in SVGs as the independent variable and attitude toward the brand Adidas and attitude toward the brand Chevrolet as the dependent variables. The linear regressions were calculated to predict BrandAttAdidas and BrandAttChevrolet based on the AttProductPlacementSVG. For the BrandAttAdidas, a non-significant equation was found $F(1, 111) = 2.30$, $p > .05$. It was found that BrandAttAdidas was not a significant predictor for AttProductPlacementSVG. For the BrandAttChevrolet, the results of the linear regression also did not indicate a significant effect for AttProductPlacementSVG, $F(1, 111) = 1.34$, $p > .05$. Therefore, the results do not confirm H6a, a positive relationship between the attitude toward product placement in SVGs and the brand attitude of Adidas and Chevrolet.

For hypothesis 6b, it was postulated that brand repetition in a sport video game would lead to more favorable attitudes toward the (target) brands in the SVG. To test hypothesis 6b, two linear regressions were conducted with brand repetition as the independent variable and attitude toward the brand Adidas and attitude toward the brand Chevrolet as the dependent variables. The linear regressions were calculated to predict BrandAttAdidas and BrandAttChevrolet based on BrandRepetition. For the BrandAttAdidas, the results of the linear regression did not indicate a significant effect for BrandRepetition, $F(1, 111) = .91$, $p >$

.05. It was found that BrandAttAdidas was not a significant predictor for BrandRepetition. For the BrandAttChevrolet, a non-significant equation was found as well, $F(1, 111) = .50$, $p > .05$. As for BrandAttChevrolet, this also proved not to be a significant predictor for BrandRepetition. Therefore, the results do not confirm H6b, a positive relationship between brand repetition and the brand attitude of Adidas and Chevrolet. The results of the linear regressions for hypotheses 6a and 6b are presented in table 4.5.4.

*Table 4.3.4 Results of Linear Regression on Effects of Brand Repetition and Attitude toward Product Placement in SVGs for Attitude toward the Brands Adidas and Chevrolet*

| | BrandAttAdidas | BrandAttChevrolet |
|---|---|---|
| Constant | 1.211** | 2.552*** |
| AttProductPlacementSVG | .196* | .144* |
| $R^2$ | .020 | .012 |
| $F$ | 2.302* | 1.342* |
| $\Delta R^2$ | .011 | .003 |
| | BrandAttAdidas | BrandAttChevrolet |
| Constant | 1.972*** | 2.874*** |
| BrandRepetition | -.082* | .059* |
| $R^2$ | .008 | .005 |
| $F$ | .909* | .502* |
| $\Delta R^2$ | -.001 | -.004 |

Note. Significance levels: * $p > .05$ ** $p = .000$ *** $p = .000$.

### *4.3.5 Hypotheses 7a & 7b*

With regard to hypothesis 7a, it was postulated that sport video gamers with favorable attitudes toward product placement in SVGs would also be more likely to purchase a product they could see in a SVG. To test hypothesis 7a, two linear regressions were conducted with attitude toward product placement in SVGs as the independent variable and purchase intention for the brand Adidas and purchase intention for the brand Chevrolet as the dependent variables. The linear regression was calculated to predict PurchIntAdidas and PurchIntChevrolet based on the AttProductPlacementSVG. For the PurchIntAdidas, a non-significant equation was found $F(1, 111) = .15$, $p > .05$. It was found that PurchIntAdidas was not a significant predictor for AttProductPlacementSVG. For the PurchIntChevrolet, there was also a non-significant equation found, $F(1, 111) = .57$, $p > .05$. The PurchIntChevrolet was also not a significant predictor for AttProductPlacementSVG. Therefore, the results do not confirm H7a, a positive relationship between the attitude toward product placement in SVGs and the purchase intention of Adidas and Chevrolet.

With regard to hypothesis 7b, it was posited that brand repetition in a sport video game would lead to more purchase intention among the sport video gamer. To test hypothesis 7b, two linear regressions were conducted with brand repetition as the independent variable and purchase intention for the brand Adidas and purchase intention for the brand Chevrolet as the dependent variables. The linear regressions were calculated to predict PurchIntAdidas and PurchIntChevrolet based on 'brand repetition.' For the PurchIntAdidas, the results of the regression did not indicate a significant effect for BrandRepetition, $F(1, 111) = .00$, $p > .05$. It was found that PurchIntAdidas was not a significant predictor for BrandRepetition. For the PurchIntChevrolet, the results of the linear regression also did not indicate a significant effect for BrandRepetition, $F(1, 111) = .48$, $p > .05$. The PurchIntChevrolet was also not a significant predictor for BrandRepetition. Therefore, the results do not confirm H7b, a positive relationship between brand repetition and the purchase intention of Adidas and Chevrolet. The results of the Linear Regression analysis of hypotheses 6a and 6b are presented in table 4.3.5.

*Table 4.3.5 Results of Linear Regression on Effects of Brand Repetition and Attitude toward Product Placement in SVGs for Purchase Intention for the Brands Adidas and Chevrolet*

| | PurchIntAdidas | PurchIntChevrolet |
|---|---|---|
| Constant | 4.138** | 2.501** |
| AttProductPlacementSVG | -.050* | -.090* |
| $R^2$ | .001 | .005 |
| $F$ | .146* | .574* |
| $\Delta R^2$ | -.008 | -.004 |
| | PurchIntAdidas | PurchIntChevrolet |
| Constant | 3.986** | 2.336** |
| BrandRepetition | .000* | -.055* |
| $R^2$ | .000 | .004 |
| $F$ | .000* | .483* |
| $\Delta R^2$ | -.009 | -.005 |

Note. Significance levels: * $p > .05$ ** $p = .000$.

This chapter gave an overview of the results of the pretest and the main experiment of this research. Firstly, the testing of the questionnaire and the results of the survey items of the pretest were discussed. The outcomes proved the applicability of the questionnaire design and confirmed the expectations that were set up front. Second, the sample size, demographics, manipulation check and control variables of the main experiment were discussed. Thereafter, the results of the earlier proposed hypotheses were provided and presented in the associated tables. The results section of this chapter provides statistical data that contributes to the existing literature discussed in chapter two and showed how the research design of chapter 3 has been operationalized. The results and information will feed the debate in the next section of this research in which the discussion and conclusion will be presented.

# 5. Conclusion

## *5.1 Discussion*

Based on The Limited Capacity Model of Mediated Messages and other existing literature on the effect of product placement on the sport video gamer, this study attempted to further investigate the effects of brand repetition on brand recall & recognition, brand familiarity, attitudes toward the brand(s) and purchase intention. The research question for this study was formulated as follows: To what extent does brand repetition in SVGs influence brand familiarity, brand recall and brand recognition of the sports video gamer and to what extent does brand repetition in SVGs influence the purchase intention of the sport video gamer? The following chapter gives a summary of the findings of this research; discusses the academic relevance and the societal relevance of this study, acknowledges the limitations of this research and provides suggestions for further research and, finally, give an answer on the above-mentioned research question.

One of the strengths of this research is that the items used in the questionnaire have been used in multiple studies before and gathered the right information from the participant. This study has built upon both earlier and recent research in expanding the literature on brand repetition (e.g. Marti-Parreno et al., 2017), product placement in SVGs (e.g. Kim & McClung, 2010), brand recall & recognition (e.g. Walsh et al., 2008; Hwang et al., 2017; Marti-Parreno et al., 2017), brand familiarity (e.g. Marti-Parreno et al., 2017) and brand attitude and purchase intention (e.g. Te'eni-Harari, 2014; Vanwesenbeeck et al., 2017). With the use of these survey items, this research contributed to the existing literature on product placement in SVGs regarding brand recall & recognition, brand familiarity, and brand repetition. The results suggest that there is no significant difference between attitude toward product placement in general and the attitude toward product placement in SVGs among the sport video gamers. One of the findings of this study was that brand repetition only had a significant effect on the brand recall of the brand Adidas. Brand repetition was not significantly different for brand recognition of the brand Adidas, while there was also no significant difference for both brand recall and brand recognition for the brand Chevrolet.

Furthermore, another strength regarding the reliability and validity of this research is that most of the results of this research are in line with the previous studies on product placement in SVGs and the effect on the sport video gamer. The results of the pretest were similar to other research on brand familiarity, brand attitude, and purchase intention and confirmed the expectations of earlier studies. Moreover, both the pretest and the main

experiment saw comparable, and thus reliable, results for the more familiar and less familiar brands. This also This research also examined whether brand repetition for more familiar and less familiar brands had a significant impact on brand recall and brand recognition in the main experiment. Yet, sport video gamers who were exposed to more brand repetition in the experiment showed no significant difference with the control group that only saw the video gameplay with the target brands Adidas and Chevrolet. One area in which more research is needed is the effect of brand repetition and product placement in SVGs on brand attitude and purchase intention. No significant effect was found between sport video gamers with positive attitudes toward product placement in SVGs and brand attitude and purchase intention. Furthermore, brand repetition effects on brand attitude and purchase intention were also not significantly different for the control group and the experimental groups.

Although the reliability and validity of the measurements and results of this research have their strengths, there are also weaknesses that limit the generalizability of the results. The population of this research concerned Dutch males and females between 18 and 35 years old that played SVGs for at least one hour per week. Excluding people that don't play SVGs at least weekly might have affected brand recall, brand recognition and brand familiarity rates of the sport brand Adidas since these sport video gamers have seen the inclusion of this brand much more often than a car brand like Chevrolet. Moreover, the subjects were only tested on a western European population. European and North American people, statistically, play more (sport) video games than their Eastern European and Southern American counterparts. It would be interesting to see if those regions have similar habits concerning attitudes toward brands, brand recall and recognition, brand familiarity and, finally, purchase intention.

There are also a few weaknesses within the design of this experiment concerning the generalizability. This study is partly based on earlier studies by Yaveroglu & Donthu (2008), who used an online experiment with to test the participants, and Marti-Parreno et al. (2017), who studied the effects of brand repetition an brand familiarity on brand recall and recognition. However, this study adjusted the online experiment by showing videos instead of web pages to the respondents. Furthermore, the brand repetition was measured through the amount and length of the repetition instead of altering gaming experience while the participants played the video game. Even though the design and survey items are reliable and valid on its own through previous studies, the outcomes are not completely comparable due to the setup of the experiment. Since most research on brand repetition has used people playing the game instead of only watching the gameplay, the results of this research are not fully generalizable.

### *5.2 Academic relevance*

The contributions of this study on the effects of brand repetition and product placement in SVGs on the sport video gamer are threefold. Firstly, this study was in line with findings of previous research on the attitudes toward product placement in SVGs of the gamer, brand recall & recognition rates and brand familiarity among the sport video gamer. Earlier research by Kim & McClung (2010) argued that sport video gamers have positive attitudes toward product placement in SVGs due to the realism in those video games. Although this research does not see an extremely positive attitude toward either product placement in general (*M*=3.14, *SD*=.40) or product placement in SVGs (*M*=3.06, *SD*=.55), sport video gamers are not perceiving a difference regarding product placement in SVGs. Although this is only a small sample, it reconfirms the notion that product placement in SVGs is not negatively distracting the gamer. While films and TV series are still finding new ways to include advertising, this might also apply to the advertising in (sport) video games. Both static advertisements as visual billboards and product placement in interactive game modes within the SVGs are not distracting the gamer and the effects of these in-game advertisements should be studied in greater detail.

Moreover, the higher brand recognition numbers in comparison with brand recall rates again show the effect of foreground placement. The location of the ads in video games still plays an important role when it comes to brand recall and brand recognition. The theory on this particular subject has provided arguments in favor of foreground placement of advertisements (Dardis et al., 2015), yet one counterargument by recent research (Marti-Parreno et al., 2017) is that smaller, background ads also have proven to be effective for brand recall and brand recognition. In addition, the findings on the interaction between brand repetition and brand familiarity on brand awareness are in line with Marti-Parreno et al. (2017), who have argued that familiar and unfamiliar brands will benefit evenly from brand repetition. However, other recent research claims that familiar brands saw higher brand recall and recognition numbers (Hwang et al., 2017), which poses a counterargument regarding the effect of brand familiarity on brand awareness.

Secondly, this research focuses on an underdeveloped area within video game research, namely the effect of brand repetition on brand attitude and purchase intention. There has been some discussion on among scholars on product placement in SVGs and consumer behavior. Walsh et al. (2014) claimed the product placement in SVGs had limited effects on sport video gamers, while other research found more significant numbers for the influence of

in-game advertising on brand attitude and purchase intention (Te'eni-Harari, 2014; Vanwesenbeeck et al., 2017). However, the effect of brand repetition on brand attitude and purchase intention had not been studied yet. Marti-Parreno et al. (2017) acknowledged the importance of research on brand familiarity and brand repetition effects on purchase intention and there is still much ground to cover in the subject of product placement and consumer behavior of sport video gamers.

Even though the field research in this study will contribute to this relative infant area of video game research, there are some implications concerning the survey items on purchase intention. This study used the questionnaire item from Vanwesenbeeck et al. (2017), which was originally used for social network games. Furthermore, this research focused on the brand attitude and purchase intention of adults instead of young adolescents. There might be substantial differences between the two age groups because of their current stage in life. Thus, the results on purchase intention are not generalizable from this fieldwork and more research on purchase intention of the video gamer is needed to make valid statements on this subject.

Thirdly, this study found a significant effect on brand recall rates of a sport brand (Adidas) regarding brand repetition. In the study by Marti-Parreno et al. (2017), concluded that brand repetition has the same effects for more familiar and less familiar brands. However, the results of this research disagree with that statement and argue in favor of marketers making an effort to increase repetition for more familiar sport brands like Adidas and Nike in SVGs. In this research, the sport video gamer was not playing the game and only watching the video containing gameplay and the product placement videos with Adidas and Chevrolet. Thus, the processing of the in-game advertising was a secondary task and earlier research argued that this would lead to lower rates for brand recognition (Hang & Auty, 2011; Haiming, 2014). Yet, the brand repetition as manipulation for brand recall for Adidas was significant while the processing of product placement in this experiment was a secondary task. Although it can be argued that a sport brand in a SVG can have better brand recall rates due to the fact that most sport video gamers would recall a sport brand more easily than a car brand, it does open up opportunities for other sport brands to place their product in a SVG.

However, there are two managerial implications in place when it comes to brand recall and brand recognition rates, brand familiarity and brand repetition. The first is that less familiar sport brands, such as Reebok, will need more brand repetition in SVGs to achieve the same amount of brand recall and brand recognition numbers as the more familiar sport brands. Furthermore, these SVGs also include other more familiar brands in other product genres. The example used in this research was the more familiar car brand BMW and the less

familiar car brand Chevrolet. These non-sport brands will also need more brand repetition to see the same rates for brand recall and brand recognition. More research in this area is needed to determine when the influence of brand repetition on brand recall and brand recognition on familiar and unfamiliar brands is the most effective.

### *5.3 Social relevance*

There are some implications for video game industry and advertisers that can be established from the findings. It is important to note that research on gaming and the video game industry is still an area of research with lots of uncharted territories. Therefore, more understanding on how certain generations (e.g. Generation X, Millennials, Generation Z) react to product placement in video games is necessary (Hwang et al., 2017). Furthermore, video gamers, sometimes, grow up playing a video game and continue to play other versions of those games for more than one or two decades. More research on the different profiles of the video gamer will further develop video game research and, subsequently, create a better outlook on the societal implications of product placement in (sport) video games.

In addition, the video game industry has developed into a community with high entertainment values and keeps continuously growing in numbers. These are not only sales in genres as shooters-, car- and sport video games. In terms of growing content about the games (SVG-playing Youtubers that have over one million subscribers and post daily videos about these games), events (like Gamescom and Electronic Entertainment Expo) and award shows (the Game Awards), the SVG industry is rapidly expanding. Furthermore, another key factor in the growing amount of gamers in the SVG genre is the eSports business. Although it is still in an early stage, being an eSports gamer has become a dream job for lots of teenagers around the globe. This competitive environment allows sport video gamers to see more of the video game and, thus, leads to higher brand exposure and brand repetition when it comes to product placement in those SVGs. Therefore, the effects of brand repetition are of great importance because the video game industry is providing more options for brands to promote their products in the video gaming environment.

Another important practical implication for the sport marketers and advertisers is acknowledging the opportunities that are presented by the growth of the video gaming industry and the interactive nature of the SVGs. As discussed earlier, with gaming events gaining more attention and competitive gaming rapidly growing, advertisers are presented more ways in which a brand can be exposed to either the one gaming or the people attending

events and/or watching live streams on the Internet. Although the processing of product placement is not a primary task on these occasions, it can still have some effect on, for example, brand recall of sport brands like Adidas. Moreover, even though this research did not confirm the influence of brand repetition on brand attitude and purchase intention, this subject still in its infancy scientifically. Introducing new features in a video game to the audience can still create hype around a certain product, just like TV commercials, and the interactive nature of these video games will only benefit from the hype.

### *5.4 Limitations and further research*

Similar to other research, there are some limitations to this study. One of the limitations is the convenience sample used in this research. In comparison with recent research by Hwang et al. (2017) and Marti-Parreno et al. (2017), this study does succeed including participants with different education levels instead of only college or university students. However, one limitation regarding the convenience sample is the ratio males (88%) and females. Female gamers are continuously growing, more so than males, and this does harm the generalizability of the findings of this research. Further research should look at the female gamers in multiple genres since this group is continuously growing. Another limitation is that this study only focuses on SVGs and sport video gamers. To get a better understanding of the effects of brand repetition and product placement in video games, further research should examine other types of video gamers and video game genres. Since race and shooter video games will have other in-game dynamics available for product placement and brand repetition, it will be interesting to study the effects on those gamers.

Moreover, this research only included only Dutch participants between the ages of 18 and 35 years old. Since this concerns only a group of participants of one nation in Western Europe, it is unlikely that the findings are similar to sport video gamers in eastern European countries or other continents (besides North America) in the world. Although most gamers are in this age group, young adolescents are, just like female gamers, continuously growing as a video gaming audience. Further research on brand recall and brand recognition will be needed to gather more information on the differences between the younger (sport) video gamers and the adults above 18 years old. In addition, brand attitude and purchase intention of these young consumers are also an area that needs further investigation. Not only because attitude toward a brand can develop during their adolescent years, extra features within video games can be bought by using actual money. These services have some degree of security

concerning age restrictions, but it is not uncommon for young gamers to spent lots of money on video games.

The design of this experiment can also serve as a limitation. Although this experiment does provide another outlook on product placement features in sport video games by showing video gameplay and product placement advertising through advertisements by EA Sports, this study has focused on the effects while watching a video game instead of playing the game. This does harm the reliability and validity of the findings and, thus, has consequences for the generalizability of the results. However, the effects of brand repetition through playing these SVGs will provide other useful information regarding brand exposure and consumer behavior. Moreover, to gain more understanding on the effects of brand repetition on sport video gamers, further research should also focus on the impact of the several types of in-game advertising and how primary and secondary tasks influence the consumer's attitudes and behavior.

Another limitation within the construction of this experiment is that only sport video gamers who played at least one hour per week were included. There are also many football fans that only play the SVG when it is presented to them, with their friends for example. Other studies mostly focused on students in general and did not set specific limitations for participants before answering the questionnaire. Although this research does include new groups, like pro gamers in the Esports scene, the group of participants is most likely more familiar with the brands in the SVGs. This also limits the generalizability of the findings of this study. Further research could include the more casual gamer to see if brand repetition of the more familiar brands (e.g. sport brands as Adidas and Nike) influences their brand recall, brand recognition, brand attitude, and purchase intention.

Finally, as mentioned earlier, consumer behavior is still an underdeveloped area within video game research. Almost every video game, even free social network games, has in-game stores in which game-specific features can be bought. These also include brands or products designed to feature in the (sport) video game. More research on this subject is needed to understand consumer behavior, and especially purchase intention.

## *5.5 Conclusion*

The goal of this research was to investigate the effects of brand repetition on product placement in SVGs and to answer the following question: To what extent does brand repetition in SVGs influence brand familiarity, brand recall and brand recognition of the sports video gamer and to what extent does brand repetition in SVGs influence the purchase intention of the sport video gamer? The proposed hypotheses tested the effects of brand repetition on brand recall and recognition, brand familiarity, attitude toward product placement in SVG, and brand attitude and purchase intention. Overall, brand repetition only had a positive significant effect on the brand recall of the more familiar brand Adidas. The results show that brand repetition has not been effective for the brand recall of less familiar brand Chevrolet and brand recognition for the both the more familiar brand Adidas and the less familiar brand Chevrolet. Furthermore, attitude toward both the target brands and purchase intention of the sport video gamer also saw no significant differences with the brand repetition manipulation.

Even though some of the findings of the field research (pretest and main experiment) and earlier desk research match with each other, the results of this field research seem not valid and reliable enough to accept them as trustworthy. The sample population, with a ratio of almost nine out of ten males, and the manipulation, with video gameplay and advertisement video are being watched instead of allowing the video gamer to play the game itself, are some examples of where the findings lack some reliability and validity. More research on brand repetition effects of watching gameplay and advertisements could lead to similar findings, but the repetition effects while playing the game itself as field research seem more valid and reliable in their results and findings.

Although these results don’t seem to support the influence of brand repetition in SVGS in general, this research will contribute to the existing literature on brand recall and brand familiarity in SVGs. The higher brand recall rates for Adidas can be an example for other sport brands to increase their brand exposure in SVGs to see the same effects. Even though the sample size consists of mostly male participants and sport video gamers who play the game on a weekly basis, this study has shown that brand recall rates can be influenced by brand familiarity and brand repetition. Moreover, this result can stimulate research of more familiar and less familiar sport brands in SVGs to further add to the existing literature.

Even though these results don’t suggest a relationship between brand repetition and purchase intention of the consumer, more research on this subject will help to better

understand the specifics of this subject. It is certainly possible that brand repetition will not increase purchase intention for all the brands in the SVGs. Yet, the effectiveness of both foreground and background placement presented in the existing literature and the lack of knowledge on the effects of product placement and consumer behavior argues for more research before the influence of brand repetition of in-game advertising in SVGs can be dismissed.

## 6. References


Anderton, K. (2017, Apr. 25). The Business Of Video Games: How Much Is Being Spent And Why [Website]. Retrieved from https://www.forbes.com/sites/kevinanderton/2017/04/25/the-business-of-video-games-how-much-is-being-spent-and-why-infographic/#295d53eb6fe8.

Badenhausen, K. (2014, Jul. 13). EA Sports' FIFA video game helps fuel interest in the World Cup [Website]. Retrieved from https://www.forbes.com/sites/kurtbadenhausen/2014/07/13/ea-sports-fifa-video-game-helps-fuel-interest-in-the-world-cup/#4717f330724d.

Andrews, J.C. (1989). The Dimensionality of Beliefs Toward Advertising in General. *Journal of Advertising, 18*(l), 26-35.

Balasubramanian, S.K. (1994). Beyond Advertising and Publicity: Hybrid Messages and Public Policy Issues. *Journal of Advertising, 23*(4), 29-47.

Ballard, J. (2017, Sept. 9). Here's How Digital Revenue Has Benefited Electronic Arts [Website]. Retrieved from http://www.foxbusiness.com/markets/2017/09/09/heres-how-digital-revenue-has-benefited-electronic-arts.html.

Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization, 81*(1), 1-8.

Cianfrone, B. A., Zhang, J. J., Trail, G. T., & Lutz, R .J. (2008). Effectiveness on in-game advertisements in sport video games: An experimental inquiry on current gamers. *International Journal of Sport Communication, 1*(2), 195–218. doi:10.1123/ijsc.1.2.195.

Cook, T. D., Campbell, D. T., & Day, A. (1979). *Quasi-experimentation: Design & analysis issues for field settings* (Vol. 351). Boston: Houghton Mifflin.

Clavio, G., Kraft, P., & Pedersen, P.M. (2009). Communicating with consumers through video games: An analysis of brand development within the video gaming segment of

the sports industry. *International Journal of Sports Marketing and Sponsorship, 10*, 39–52. doi:10.1108/IJSMS-10-02-2009-B005.

Dardis, F.E., Schmierbach, M., Ahern, L., Fraustino, J., Bellur, S., Brooks, S., Johnson, J. (2015). Effects of in-game virtual direct experience (VDE) on reactions to real-world brands. *Journal of Promotion Management, 21*(3), 313–334. doi:10.1080/10496491.2015.1021503.

Drèze, X., & Hussherr, F.X. (2003). Internet Advertising: Is Anybody Watching? *Journal of Interactive Marketing*, *17*(4), 8–23.

EA Sports. (2013, May 8). *EA & FIFA - Licensing Agreement Extended Until 2022* [Press Release]. Retrieved from https://www.easports.com/fifa/news/2013/ea-sports-and-fifa-extend-licensing-agreement-until-2022.

Education First (2017). *EF EPI: English Proficiency Index 2017* (Research report 2017). Retrieved from Education First research on English proficiency website: https://www.ef.com/__/~/media/centralefcom/epi/downloads/full-reports/v7/ef-epi-2017-english.pdf?_sp=03ccdfbf-b7c8-4706-b4f3-739d09aa86b5.1523270877670.

Entertainment Software Association. (2015, April). *Essential Facts about the Computer and Video Game Industry* [Press Release]. Retrieved from http://www.theesa.com/facts/pdfs/ESA_EF_2009.pdf.

Entertainment Software Association. (2017, April). *2017 Sales, demographic and usage data: Essential facts about the computer and video game industry* [Press Release]. Retrieved from http://www.theesa.com/wp-content/uploads/2017/04/EF2017_FinalDigital.pdf.

Gentile, D. A. (2009). Pathological video game use among youth 8 to 18: A national study. *Psychological Science, 20(5),* 594−602.

Glass, Z. (2007). The Effectiveness of Product Placement in Video Games. *Journal of Interactive Advertising, 8*, 23–32. doi:10.1080/15252019.2007.10722134.

Graft, K. (2010, Sept. 14). Nielsen: EA Sports In-Game Ads Boosted Gatorade Sales [Website]. Retrieved from https://www.gamasutra.com/view/news/121171/Nielsen_EA_Sports_InGame_Ads_Boosted_Gatorade_Sales.php.

Gravetter, F.J., & Wallnau, L.B. (2013). Introduction to Statistics. In Gravetter, F.J. & Wallnau, L.B (Eds.), *Statistics for the Behavioral Sciences (9th edition)* (pp. 4-31). Boston, MA: Wadsworth Cengage Learning.

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, 5*(1), 22–36. doi:10.1080/15252019.2004.10722091.

Grubb. J. (2017, Jan. 31). EA: 'FIFA 17 was the best-selling console title in the world in 2016' [Website]. Retrieved from https://venturebeat.com/2017/01/31/ea-fifa-17-was-the-best-selling-console-title-in-the-world-in-2016/.

Gupta, P. B., & Gould, S. J. (1997). Consumer's perceptions of the ethics and acceptability of product placements in movies: Product category and individual differences. *Journal of Current Issues and Research in Advertising, 19*(1), 37–50.

Guzman, G. (2010, Sept. 14). Video game advertising playing to win … and sell [Website]. Retrieved from http://www.nielsen.com/us/en/insights/news/2010/video-game-advertising-playing-to-win-and-sell.html.

Haiming, H. (2014). Brand-placement effectiveness and competitive interference in entertainment media. *Journal of Advertising Research, 54*(2), 192–199. doi:10.2501/JAR-54-2-192-199.

Hang, H., & Auty, S. (2011). Children playing branded video games: The impact of interactivity on product placement effectiveness. *Journal of Consumer Psychology, 21*(1), 65–72. doi:10.1016/j.jcps.2010.09.004.

Herrewijn, L., & Poels, K. (2013). Putting brands into play: How game difficulty and player experiences influence the effectiveness of in-game advertising. *International Journal of Advertising, 32*(1), 17-44.

Hoger Onderwijs Persbureau (2017, Sept. 2017). Nederland bijna koploper met Engelstalige bachelors [Website]. Retrieved from https://punt.avans.nl/2017/09/nederland-bijna-koploper-met-engelstalige-bachelors/.

Homer, P. M. (2009). Product Placements: The Impact of Placement Type and Repetition on Attitude. *Journal of Advertising, 38*(3), 21–31.

Hong, S.I.L., & Magnusen M. (2017). From virtual reality to reality: Examining the relationship between sport video gaming and sport consumption behaviors. *Journal of Physical Education and Sport Management, 8*(4), 41–49. doi:10.5897/JPESM2016.0272.

Huang, C.Y., & Lin, C.S. (2006). Modeling the Audience's Banner Ad Exposure for Internet Advertising Planning. *Journal of Advertising Research, 35*(2), 123–36.

Hudson, S., & Hudson, D. (2006). Branded entertainment: a new advertising technique or product placement in disguise?. *Journal of Marketing Management, 22*(5-6), 489-504.

Hwang, Y., Ballouli, K., So, K., & Heere, B. (2017). Effects of Brand Congruity and Game Difficulty on Gamers' Response to Advertising in Sport Video Games. *Journal of Sport Management, 31,* 480–496. doi:10.1123/jsm.2017-0022.

Kaplan, D. (2011). NFL gives EA a break. *Sports Business Journal, 13*(41), 1.

Kim, M.S., & McClung, S.R. (2010). Acceptability and Ethics of Product Placement in Sport Video Games. *Journal of Promotion Management, 16(4),* 411–427. doi:10.1080/10496491003591386.

Kim, Y., & Ross, S. (2015). The Effect of Sport Video Gaming on Sport Brand Attitude, Attitude Strength, and the Attitude-Behavior Relationship. *Journal of Sport Management, 29*, 657–671. doi:10.1123/JSM.2013-0117.

Koolhof, K. (2017, November 9). Nederlanders het best in Engels: hoe goed is dat van jou? [Website]. Retrieved from https://www.ad.nl/binnenland/nederlanders-het-best-in-engels-hoe-goed-is-dat-van-jou~a26df6e2/.

Lee, M., Choi, Y., Quilliam, E. T., & Cole, R. T. (2009). Playing with food: Content analysis of food advergames. *The Journal of Consumer Affairs, 43*(1), 129–154.

Mackenzie, S.B. & Lutz, R.J. (1989). An Empirical Examination of the Structural Antecedents of Attitude Toward the Ad in an Advertising Pretesting Context. *Journal of Marketing, 53*(April), 48-65.

Markovits, A. S., & Green, A. I. (2017). FIFA, the video game: a major vehicle for soccer's popularization in the United States. *Sport in Society*, *20*(5-6), 716-734.

Martí-Parreño. J., Bermejo-Berros, J., & Aldás-Manzano, J. (2017). Product Placement in Video Games: The Effect of Brand Familiarity and Repetition on Consumers' Memory. *Journal of Interactive Marketing, 38,* 55–63. doi:10.1016/j.intmar.2016.12.001.

Molesworth, M. (2006). Real brands in imaginary worlds: Investigating players' experiences of brand placement in digital games. *Journal of Consumer Behaviour, 5*(4), 355–366.

Methodological Guidelines Thesis Research. (2016). Retrieved from Erasmus University Rotterdam website. https://bb-app01.ict.eur.nl/bbcswebdav/pid-243354-dt-content-rid-831334_1/courses/CM4500-17/2015-16_Methodological_Guidelines_Thesis_Research%281%29.pdf.

Morse, J. M. (1994). Designing qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative inquiry* (pp. 220-235). Thousand Oaks, CA: Sage.

Nelson, M.R. (2002). Recall of brand placements in computer/video games. *Journal of Advertising Research, 42*(2), 80–92. doi:10.2501/JAR-42-2-80-92.

Nelson, M.R., Keum, H., & Yaros, R.A. (2004). Advertainment or Adcreep? Game Players' Attitudes toward Advertising and Product Placements in Computer Games. *Journal of Interactive Advertising*, *5*(1), 3–30. doi:10.1080/15252019.2004.10722090.

Pedhazur, E. J., & Schmelkin, L. P. (2013). *Measurement, design, and analysis: An integrated approach*. London: Psychology Press.

Perdue, B. C., & Summers, J. O. (1986). Checking the success of manipulations in marketing experiments. *Journal of Marketing Research*, 317-326.

Peters, S. and Leshner, G. (2013). Get in the Game: The Effects of Game-product: Congruity and Product Placement Proximity on Game Players' Processing of Brands Embedded in Advergames. *Journal of Advertising*, *42*(2–3), 113–30.

Ruel, E., Wagner III, W. E., & Gillespie, B. J. (2015). Pretesting and Pilot Testing. In Ruel, E., Wagner III, W. E., & Gillespie, B. J. (Eds.), *The practice of survey research* (pp. 101-119). Retrieved from https://us.sagepub.com/sites/default/files/upm-binaries/68507_Ruel_Chapter_6.pdf.

Salkind, N.J. (2011). Just the Truth: An Introduction to Understanding Reliability and Validity. *Statistics for people who (think they) hate statistics (4th edition)* (pp. 189-202). London: Sage.

Sung, Y. and De Gregorio, F. (2008). New Brand Worlds: College Student Consumer Attitudes Toward Brand Placement in Films, Television Shows, Songs, and Video Games. *Journal of Promotion Management*, *14*(1–2), 85–101.

Te'eni-Harari, T. (2014). Clarifying the relationship between involvement variables and advertising effectiveness among young people. *Journal of Consumer Policy*, *37*, 183–203. doi:10.1007/s10603-013-9226-0.

Top-selling console games worldwide in 2016, by unit sales (in millions) [Website]. (2017, Jan.) Retrieved from. https://www.statista.com/statistics/273335/sales-of-the-worlds-most-popular-console-games-in-2011/.

Vanwesenbeeck, I., Ponnet, K., & Walrave, M. (2017). Young adolescents' advertising literacy and purchase intention in social network games: Influence of perspective taking and need for cognition. *Journal of Consumer Behaviour*, *16*(1), 23-33. doi:10.1002/cb.1596.

Van Reijmersdal, E.A., Jansz, J., Peters, O., & van Noort, G. (2010). The effects of interactive brand placements in online games on children's cognitive, affective, and conative brand responses. *Computers in Human Behavior, 26,* 1787–1794 doi:10.1016/j.chb.2010.07.006.

Van Teijlingen, E. R., & Hundley, V. (2001). The importance of pilot studies. *Social research update, 35*(4), 1-4.

Video games advertising revenue worldwide from 2009 to 2019 (in billions U.S. dollars) [Website]. (2016, Dec.). Retrieved from http://www.statista.com/statistics/238140/global- video-games-advertising-revenue/.

Walsh, P., Kim, Y., & Ross, S.D. (2008). Brand Recall and Recognition: A Comparison of Television and Sport Video Games as Presentation Modes. *Sport Marketing Quarterly, 17,* 201–208.

Walsh, P., Zimmerman, M. H., Clavio, G., & Williams, A.S. (2014). Comparing Brand Awareness Levels of In-Game Advertising in Sport Video Games Featuring Visual and Verbal Communication Cues. *Communication & Sport, 2*(4), 386–404. doi:10.1177/2167479513489120.

Wauters, R. (2009). Study: In-game video advertising trumps TV advertising in effectiveness. *TechCrunch*. Retrieved from http://www.techcrunch.com/2009/ 03/24/study-in-game-video-advertising-trumps-tv-advertising-in-effectiveness/.

Williams, D. (2005). Bridging the methodological divide in game research. *Simulation & Gaming*, *36*(4), 447-463.

Winkler, T. & Buckner, K. (2006). Receptiveness of Gamers to Embedded Brand Messages in Advergames. *Journal of Interactive Advertising, 7*(1), 3-32. Doi:10.1080/15252019.2006.10722123.

Yang, M., Roskos-Ewoldsen, D. R., Dinu, L., & Arpan, L. M. (2006). The effectiveness of" in-game" advertising: Comparing college students' explicit and implicit memory for brand names. *Journal of Advertising*, *35*(4), 143-152.

Yaveroglu, I., & Donthu, N. (2008). Advertising Repetition and Placement Issues in On-line Environments. *Journal of Advertising, 37*(2), 11–43.

Yoo, S. C., & Peña, J. (2011). Do violent video games impair the effectiveness of in-game advertisements? The impact of gaming environment on brand recall, brand attitude, and purchase intention. *Cyberpsychology, Behavior, and Social Networking, 14*(7-8), 439-446. doi:10.1089/cyber.2010.0031.

# Appendix A

**Introductory text with description of questionnaire for online participant on Qualtrics**

Dear participant,

Thank you very much for participating in this research. This research is conducted by a student of the master's program Media & Business of the Erasmus University Rotterdam.

For this study, you are going to watch a small fragment of video containing gameplay from the video game FIFA 18. After that you will be asked some questions. This questionnaire will ask questions about product placement in video games. Product placement is a sponsored message from a brand or product, through media such as TV, movies and video games, directed at the audience to influence them. These media companies receive payment for showing advertisements of the brand or product.

Please be aware that your participation is completely voluntary, meaning that you can quit at any time during your participation. Furthermore, your personal information will be kept strictly confidential and the findings of this survey will be used solely for research purposes. Hence, your anonymity is guaranteed at any time.

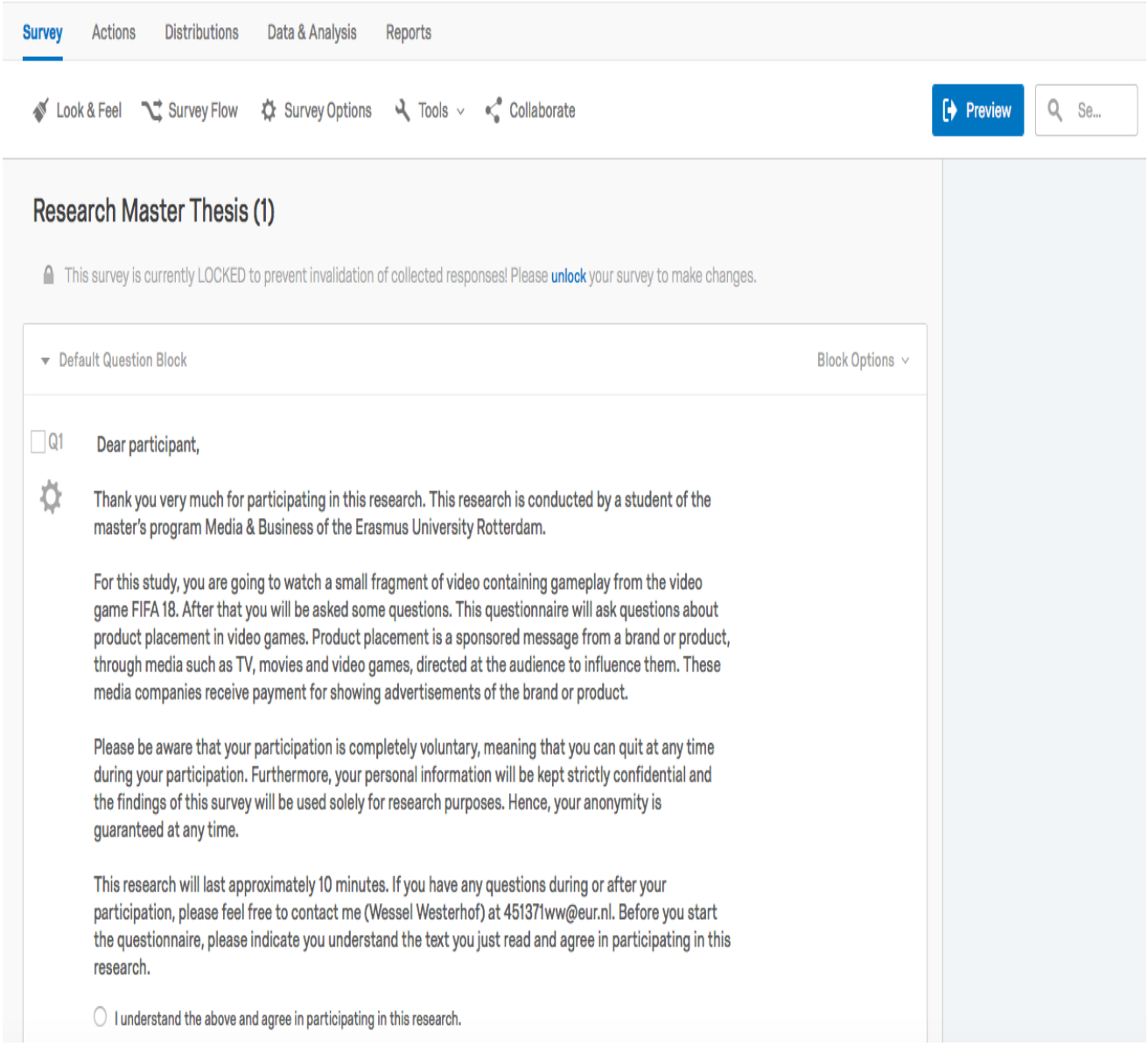
This research will last approximately 10 minutes. If you have any questions during or after your participation, please feel free to contact me (Wessel Westerhof) at 451371ww@eur.nl. Before you start this questionnaire, please indicate you understand the text you just read and agree in participating in this research.

0 I understand the above and agree in participating in this research.

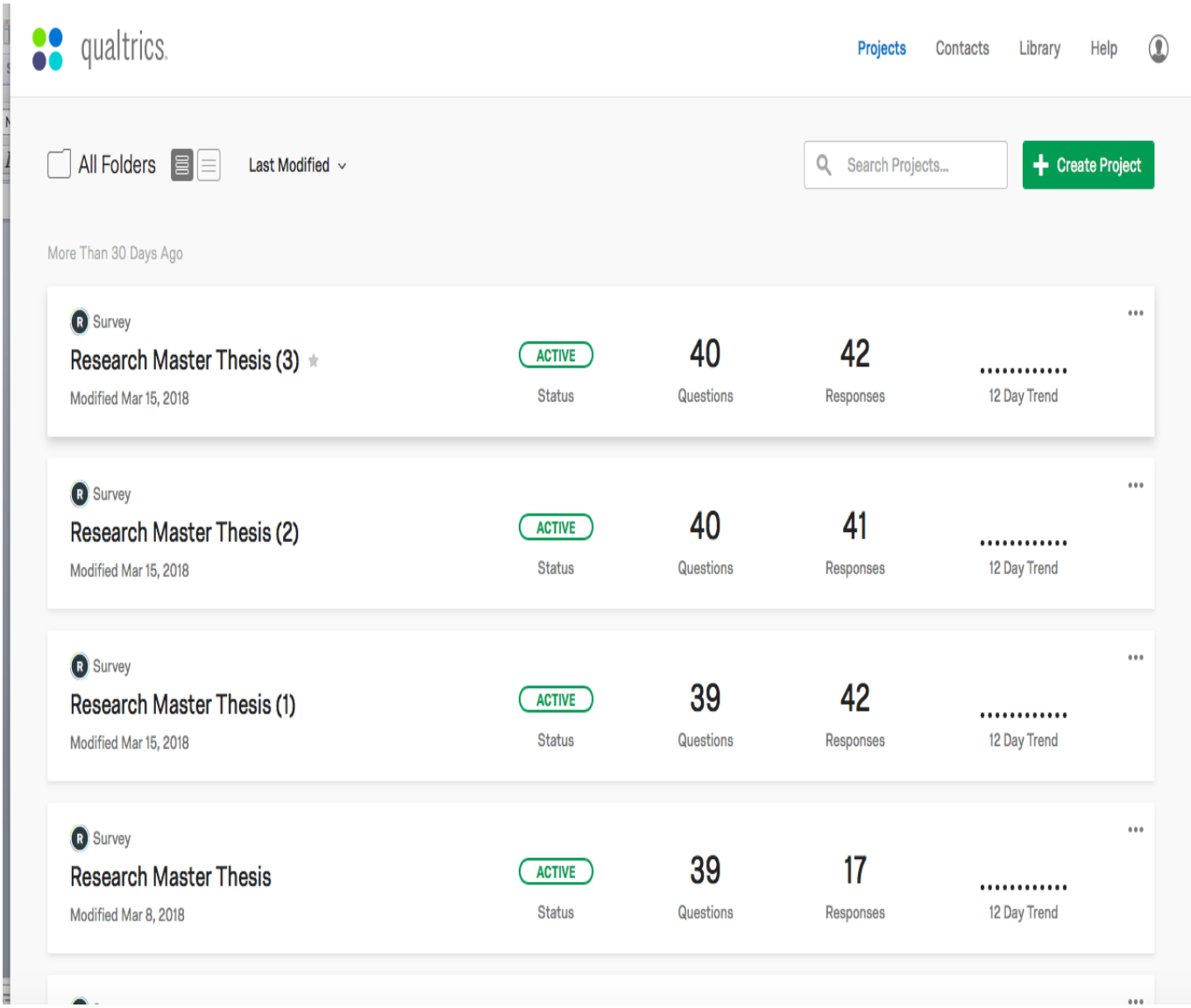
# Appendix B

## Screenshots of the website Qualtrics (used for data collection)

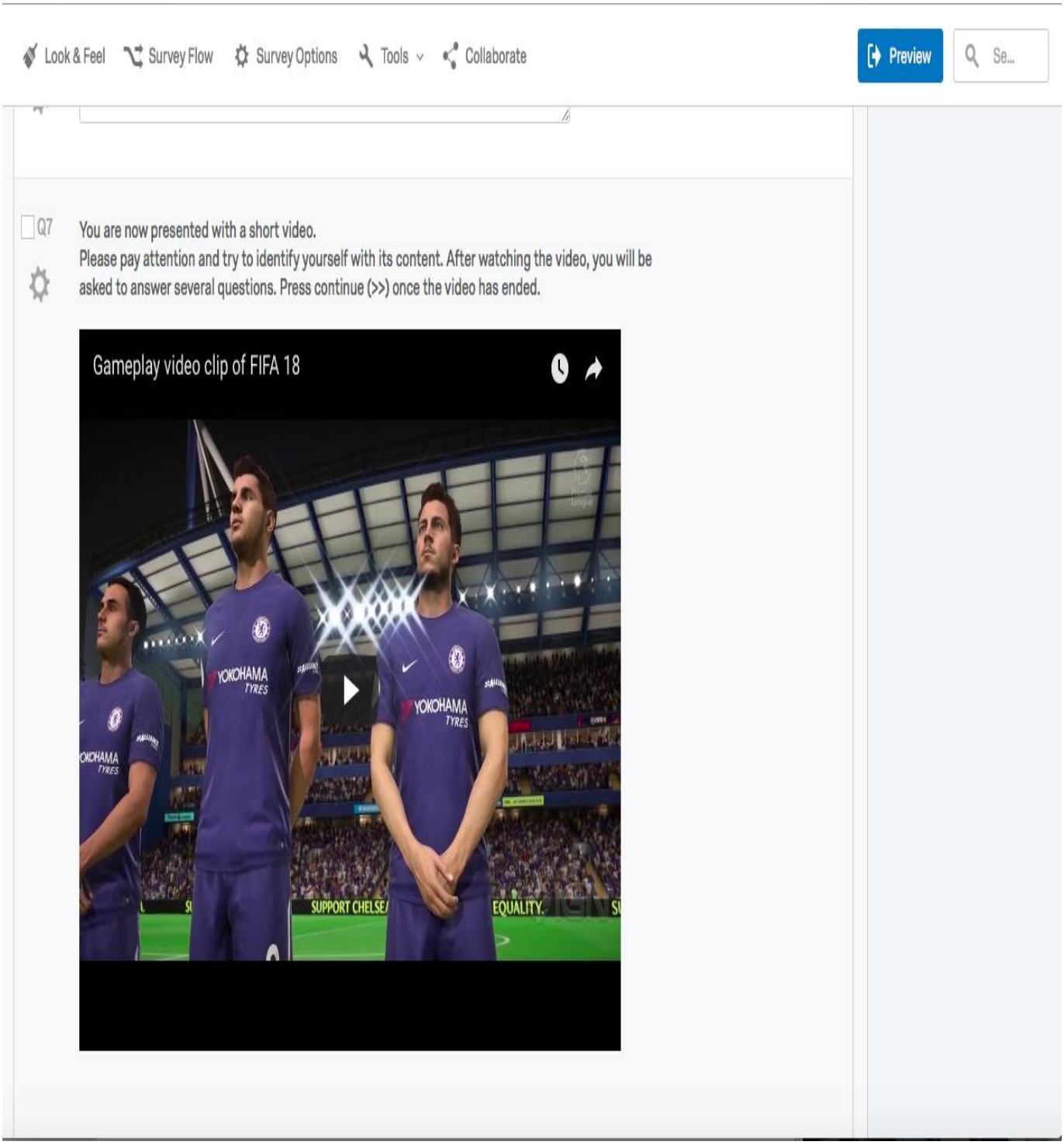
### 1. Screen shot of the introductory text for the participants of this research on Qualtrics



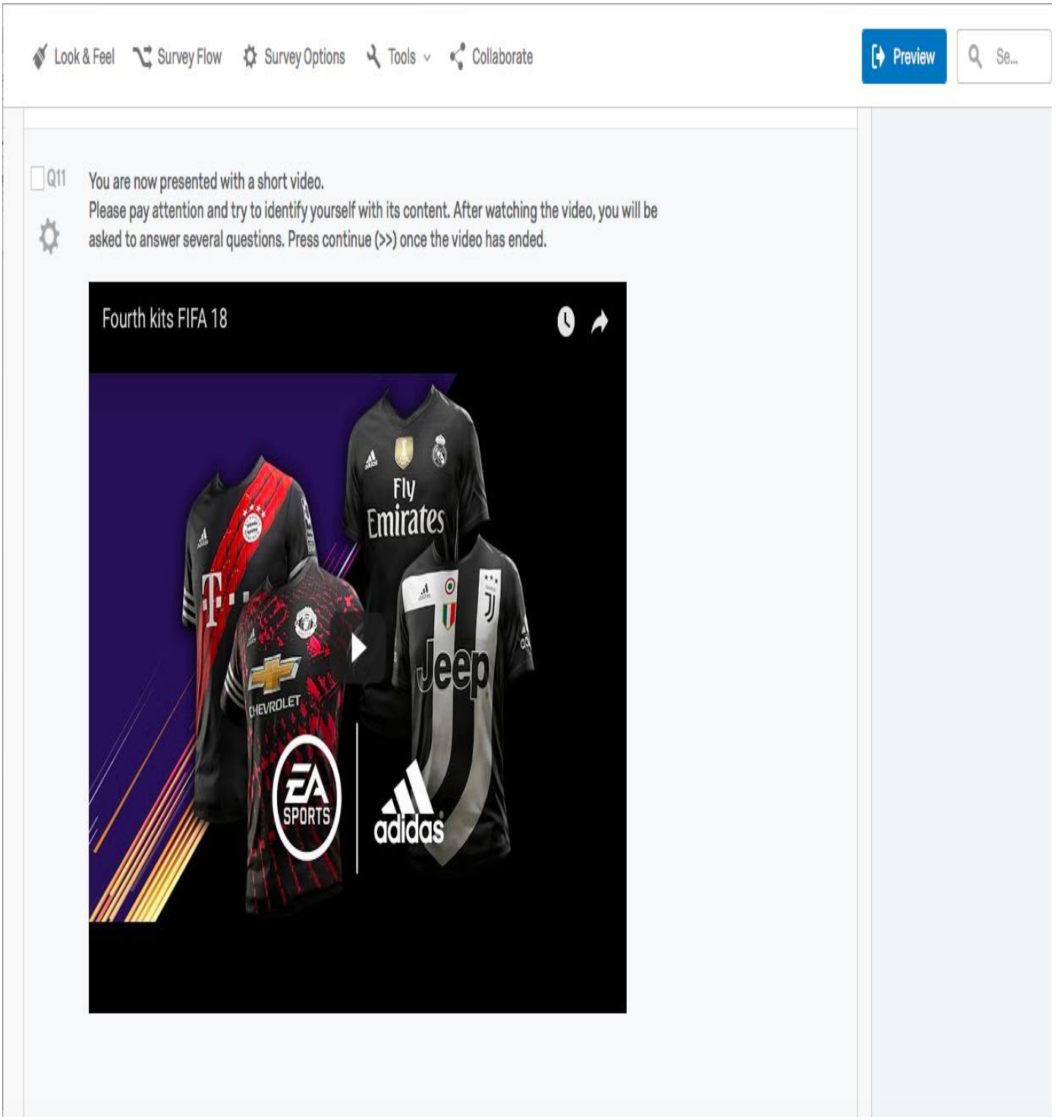
**2. Screen shot of the main page with the three different main test questionnaires and the pretest questionnaire on Qualtrics**



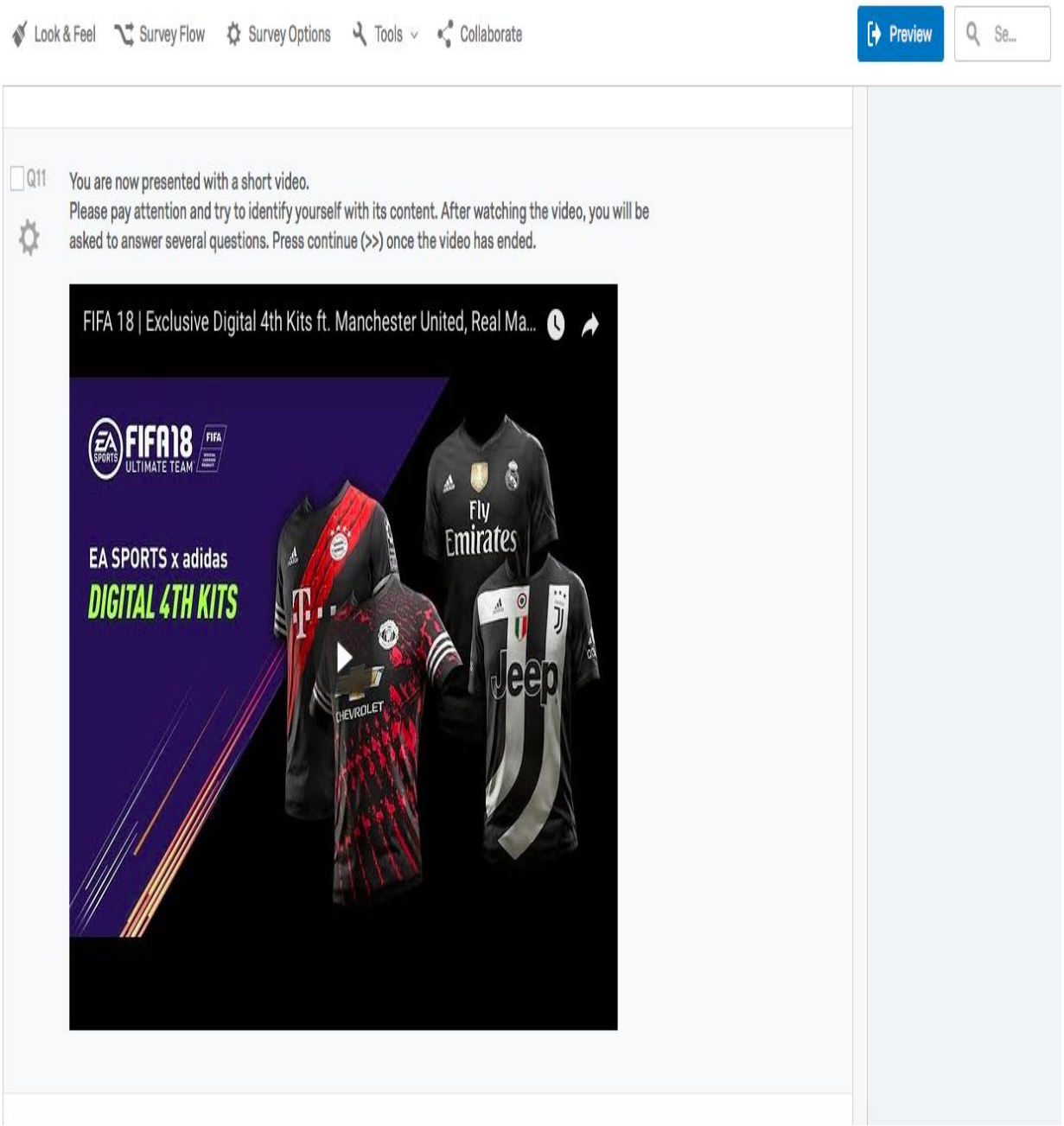
**3. Screen shot of the question on the video showing gameplay of the FIFA 18 video game on Qualtrics**



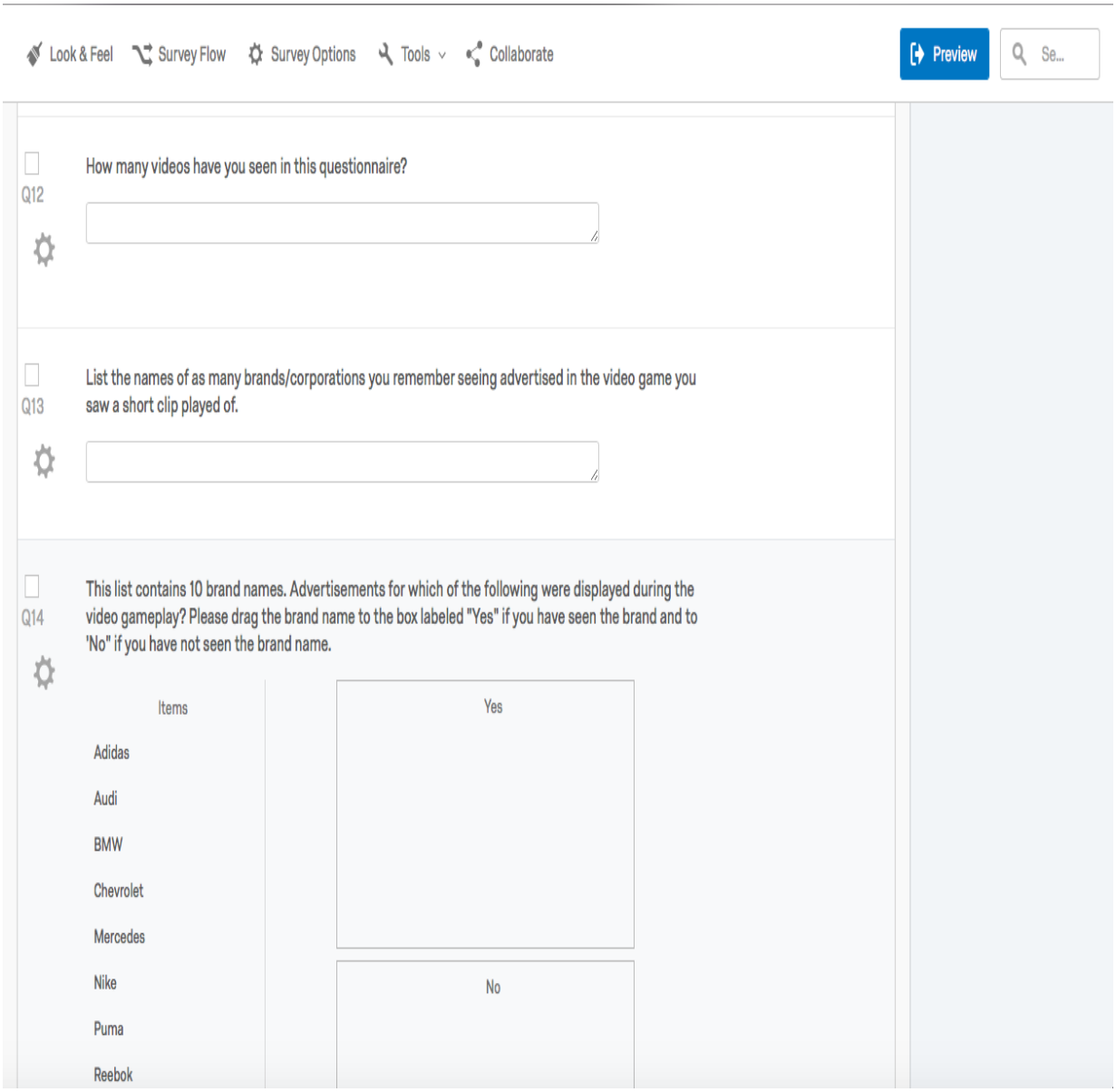
**4. Screen shot of the question on the manipulation video only presented to experimental group 1 on Qualtrics**



**5. Screen shot of the question on the manipulation video only presented to experimental group 2 on Qualtrics**



**6. Screen shot of the manipulation check and the questions on brand recall and brand recognition on Qualtrics**



# Appendix C

**Pretest Questionnaire Format**

**Introductory text**

**Demographics**

*What is your gender?*

| | |
|---|---|
| Male | O |
| Female | O |
| Other | O |

*What is your age?*

| |
|---|
| |

*What is your ethnicity?*

| | |
|---|---|
| White, non-Hispanic | O |
| Black, non-Hispanic | O |
| Hispanic | O |
| Asian | O |

*What is the highest level of education you have attained?*

| | |
|---|---|
| Less than High School | O |
| High School | O |
| College (MBO or HBO) | O |
| University | O |

*How many hours, on average, do you play FIFA per week?*

**VIDEO 1: Show video of gameplay to all participants**

**Control Variables (5-point Likert scale 1= Strongly Disagree to 5= Strongly Agree; 1=Not At All to 5=Extremely)**

*"I find this gameplay clip of FIFA 18 easy to follow."*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*"To what extent did you feel able to successfully understand the gameplay clip of FIFA 18?"*

Not At All – Very Poor – Neutral – Very Good – Extremely

O O O O O

*"Playing soccer video games is one of the things I do every day."*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

**Manipulation Check**

*How many types of visual media (video gameplay, video, picture/tweet) have you seen in this questionnaire?*

Zero O

One O

Two O

**Brand Recall**:

*List as many brands/corporations you remember seeing advertised in the video game you saw a short clip played of.*

| |
|---|
| |

**Brand Recognition**:

*This list contains 10 brand names. Advertisements for which of the following were displayed during the video gameplay?*

| Brand | Yes | No |
|---|---|---|
| Nike | | |
| Adidas | | |
| Puma | | |
| Reebok | | |
| Chevrolet | | |
| Mercedes | | |
| Under Armour | | |
| Yokohama Tyres | | |
| Audi | | |
| BMW | | |

**Brand Familiarity (5-point Likert scale 1= Strongly Disagree to 5= Strongly Agree)**

*Adidas is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*Reebok is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*Chevrolet is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*BMW is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

**Attitude toward product placement (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

Attitude toward product placement in general

1. *I would consider product placements as "commercials" in disguise.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

2. *It is highly unethical to influence the captive audience by using brand name products.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

3. *The government should regulate the use of brand name products.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

4. *I don't mind if brand name products appear in video games.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Attitude toward product placement in SVGs (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

1. *Manufacturers are misleading the audience by disguising brands as props in sport video games.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

2. *Brands placed in a sport video game for which the producers receive payment from brand manufacturers should be disclosed in the instruction manual of the sport video game.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

3. *Sport video games should not give too much importance to a particular brand (e.g., showing the same brand very frequently in the game).*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

4. *Sport video gamers are subconsciously influenced by the brands they see in the video game.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Perceived realism (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

1. *The presence of brand name products in a movie makes it more realistic.*
   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree
   O O O O O

2. *SVGs should contain only those brand name products that are essential to the program's realism.*
   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree
   O O O O O

3. *I don't mind seeing brand name products in movies as long as they are not unrealistically shown.*
   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree
   O O O O O

4. *I prefer to see real brands in movies rather than fake/fictitious brands.*
   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree
   O O O O O

**Restriction (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

1. *The placement of brands in movies should be completely banned.*
   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree
   O O O O O

2. *Use of brand name tobacco, beer and liquor products should be banned from sport video games because kids watch play such games.*
   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree
   O O O O O

3. *Brand name tobacco, beer and liquor products should only be used in Adults Only video games (18 years and older), as kids are not allowed to buy and play these video games.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

4. *Cigarette product placements in video games should be banned completely since cigarette ads are banned on TV.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Brand Attitude (5-point semantic differential scale)**

**Adidas:**

*To me, the brand Adidas is:*

| | Very | Somewhat | Neither | Somewhat | Very | |
|---|---|---|---|---|---|---|
| Appealing | | | | | | Unappealing |
| Likeable | | | | | | Unlikeable |
| Valuable | | | | | | Invaluable |
| Pleasant | | | | | | Unpleasant |

**Chevrolet:**

*To me, the brand Chevrolet is:*

| | Very | Somewhat | Neither | Somewhat | Very | |
|---|---|---|---|---|---|---|
| Appealing | | | | | | Unappealing |
| Likeable | | | | | | Unlikeable |
| Valuable | | | | | | Worthless |
| Pleasant | | | | | | Unpleasant |

**Purchase intention (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

**Adidas:**

*I would like to buy Adidas items.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*I am willing to buy clothing of Adidas.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

**Chevrolet:**

*I would like to buy Chevrolet items.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*I am willing to buy a Chevrolet car.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

# Appendix D

**Main Test Questionnaire Format**

**Introductory text**

**Demographics**

*What is your gender?*

| | |
|---|---|
| Male | O |
| Female | O |
| Other | O |

*What is your age?*

| |
|---|
| |

*What is your ethnicity?*

| | |
|---|---|
| White, non-Hispanic | O |
| Black, non-Hispanic | O |
| Hispanic | O |
| Asian | O |

*What is the highest level of education you have attained?*

| | |
|---|---|
| Less than High School | O |
| High School | O |
| College (MBO or HBO) | O |
| University | O |

*How many hours, on average, do you play FIFA per week?*

| |
|---|
| |

**VIDEO 1: Show video of gameplay to all participants**

**Control Variables (5-point Likert scale 1= Strongly Disagree to 5= Strongly Agree; 1=Not At All to 5=Extremely)**

*"I find this gameplay clip of FIFA 18 easy to follow."*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*"To what extent did you feel able to successfully understand the gameplay clip of FIFA 18?"*

Not At All – Very Poor – Neutral – Very Good – Extremely

O O O O O

*"Playing soccer video games is one of the things I do every day."*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

**VIDEO 2: Control group moves on to next section.**
**Experimental group 1 watches 10-seconds long video.**
**Experimental group 2 watches 40-seconds long video.**

**Brand Recall**:

*List as many brands/corporations you remember seeing advertised in the video game you saw a short clip played of.*

**Manipulation Check**

*"How many videos have you seen in this questionnaire?"*

**Brand Recognition**:

*This list contains 10 brand names. Advertisements for which of the following were displayed during the video gameplay?*

| Brand | Yes | No |
|---|---|---|
| Nike | | |
| Adidas | | |
| Puma | | |
| Reebok | | |
| Chevrolet | | |
| Mercedes | | |
| Under Armour | | |
| Yokohama Tyres | | |
| Audi | | |
| BMW | | |

**Brand Familiarity (5-point Likert scale 1= Strongly Disagree to 5= Strongly Agree)**

*Adidas is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*Reebok is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*Chevrolet is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*BMW is a brand I'm familiar with.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

**Attitude toward product placement (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

Attitude toward product placement in general

1. *I would consider product placements as "commercials" in disguise.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

2. *It is highly unethical to influence the captive audience by using brand name products.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

3. *The government should regulate the use of brand name products.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

4. *I don't mind if brand name products appear in video games.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Attitude toward product placement in SVGs (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

1. *Manufacturers are misleading the audience by disguising brands as props in sport video games.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

2. *Brands placed in a sport video game for which the producers receive payment from brand manufacturers should be disclosed in the instruction manual of the sport video game.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

3. *Sport video games should not give too much importance to a particular brand (e.g., showing the same brand very frequently in the game).*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

4. *Sport video gamers are subconsciously influenced by the brands they see in the video game.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Perceived realism (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

1. *The presence of brand name products in a movie makes it more realistic.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

2. *SVGs should contain only those brand name products that are essential to the program's realism.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

3. *I don't mind seeing brand name products in movies as long as they are not unrealistically shown.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

4. *I prefer to see real brands in movies rather than fake/fictitious brands.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Restriction (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

1. *The placement of brands in movies should be completely banned.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

2. *Use of brand name tobacco, beer and liquor products should be banned from sport video games because kids watch play such games.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

3. *Brand name tobacco, beer and liquor products should only be used in Adults Only video games (18 years and older), as kids are not allowed to buy and play these video games.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

4. *Cigarette product placements in video games should be banned completely since cigarette ads are banned on TV.*

   Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

   O O O O O

**Brand Attitude (5-point semantic differential scale)**

**Adidas:**

*To me, the brand Adidas is:*

| | Very | Somewhat | Neither | Somewhat | Very | |
|---|---|---|---|---|---|---|
| Appealing | | | | | | Unappealing |
| Likeable | | | | | | Unlikeable |
| Valuable | | | | | | Invaluable |
| Pleasant | | | | | | Unpleasant |

**Chevrolet:**

*To me, the brand Chevrolet is:*

| | Very | Somewhat | Neither | Somewhat | Very | |
|---|---|---|---|---|---|---|
| Appealing | | | | | | Unappealing |
| Likeable | | | | | | Unlikeable |
| Valuable | | | | | | Worthless |
| Pleasant | | | | | | Unpleasant |

**Purchase intention (5-point Likert scale 1= strongly disagree to 5= strongly agree)**

**Adidas:**

*I would like to buy Adidas items.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*I am willing to buy clothing of Adidas.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

**Chevrolet:**

*I would like to buy Chevrolet items.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O

*I am willing to buy a Chevrolet car.*

Strongly disagree – Disagree – Neutral – Agree – Strongly Agree

O O O O O