

THE EFFECTIVENESS OF ADVERTISING IN SPORT VIDEO GAMES: A COMPARISON BETWEEN SVG ADVERTISING AND TELEVISED SPORTS ADVERTISING

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Abstract: In today's competitive business, marketers are trying to find the most effective way to promote their products and services, and reach a greater audience. Since the introduction of the internet, marketing professionals have been using digital advertisements more and more. It is easy, cheap and they can reach a huge population which would be impossible to reach by other means. Another way to advertise digitally is the gaming industry. This paper focuses on finding how effective this type of advertising really is. In the first part of the paper, a brief introduction and an overview of previous research on this topic will be presented. The following part focused on investigating if participants who played a sports video game had a higher recall rate and purchase intention of advertised products than participants watching a televised football game. Evidence from the gathered data suggests that advertising via video games is indeed more effective than televised gaming. Furthermore, different variables like satisfaction level and gaming experience were tested in order to see if they had an effect on increasing recall rate of gamers. Again, the evidence was sufficient to conclude that these variables did increase the recall rate of advertisements in sports video games. As such, this paper provides some justification to companies willing to invest into marketing their products in video games, and are reassuring the companies that already do.

Keywords: sports video game (SVG), gamers, in-game advertising, buying intent (purchase intent), recall.

Introduction

Since the advancements in technology, people have been spending their time more and more with television, computers and consoles. When it comes to advertising however, one big market people don't talk about very much is the gaming industry. The International video game revenue is estimated to be \$81.5B in 2014 (*newzoo.com*). This is more than double the revenue of the international film industry in 2013 (*UNESCO Institute for Statistics. Retrieved 1 November 2013*). In 2015 it was estimated at US\$91.5 billion (*newzoo.com*).

In the U.S. an astonishing 155 million people play video games, of which whom are 44% female and 56% male gamers. It is also interesting to note that the average gamer is 35 years old. This comes as a surprise, since people usually connect video games with kids and teenagers. The same study found that 47% of the gamers felt that video games

provide more value for their money, compared to DVDs (28%) going to movies (14%) and music (12%).

Many companies have realized that the gaming industry is a market that has huge potential, so they started advertising their products within this industry. Many advertise their products via streaming websites, where people can watch popular gamers play video games, others however decided to market their products within the games itself. This is especially true for sports video games, like Formula 1, Soccer, Basketball and other sports games. The reason companies choose sports games for advertising over other kinds of games is that advertising in these games comes natural. This is due to the fact that real-life sport games have billboards all around the place, so we are used to them being there in video games too. They don't present a distraction from the game, because it feels natural having them there. On the other hand such advertisements would be a nuisance in first person shooter games, because they would distract players from enjoying the game as much.

Another thing important to note is that advertising via video games can reach an audience that other means of advertising probably can't. As mentioned before, the gaming community has less intentions of watching TV or going to the movies since they believe video games give them more value for money. Consequently, advertising in video games is an easy way of reaching this specific audience. Many organizations know about this and that's why they started to promote products in video games that would suite such an audience. For example, Kingston and Asus are visible at almost every gaming event, knowing that they will reach a higher audience there, rather than on television or at a sport stadium.

However, even though this industry is rapidly increasing, there is very few studies investigating the effectiveness of in game advertising, and even less has been done in comparing the effectiveness of in game advertising to advertising of televised games. Therefore, the aim of this study is to investigate if the recall rate of advertisements in video games is higher than the recall rate from TV broadcasted games. In addition to this, this study will also investigate if the level of video game consumption has an effect on the recall rate of advertised products. Therefore, the three hypotheses this study will investigate are:

1. There is a significant difference in the recall rate of advertisements in a sports video game compared to a TV broadcasted game.
2. There is a significant difference in the buying intent of products advertised in a sports video games compared to a TV broadcasted game.
3. There is a positive correlation between the experience level in video games and the recall rate of advertised products.
4. There is a positive correlation between the satisfaction level in video games and the recall rate of advertised products.

The purpose of this paper is to find if in-game advertising is a good alternative to traditional TV advertising. In addition, this paper investigates different determinants affecting the recall rate of gamers.

Literature review

Review of past research

Recent research of in-game advertising has been focusing on its effectiveness. For example, Walsh, Zimmerman, Clavio, and Williams (2014b), investigated if there is a difference in the type of advertisement (visual signage or verbal in-game announcements) on the brand awareness in a sports video game. Similarly, Cianfrone and Zhang (2013) investigated the effectiveness of in-game advertising and came to the conclusion that the recall rate of advertisements was positive. They also suggested that in-game advertising could be a cheaper alternative for smaller companies to advertise their products effectively.

Additionally, Michael Bode (2012) researched the effectiveness of in-game advertising compared to advertising via TV broadcasting. He used infrared eye-tracking tools on his participants in order to establish how much advertisements they could recall from playing a sports video game compared to watching a real TV broadcasted game. He came to the conclusion that in-game advertising was more effective, meaning that it needed less glances on average to recall an advertisement. However, in order to use the eye-tracking tool effectively, it had to be calibrated, which meant that the participant's freedom of movement was limited.

Recently, it has been hypothesized that advertising in games could be more effective than TV advertising. However, there is some issues with this that have to be addressed. Lang (2000) explained that gamers have limited capacity for processing information. Gamers have to use their cognitive resources for playing the game, and for processing information of advertised brands. Therefore, gamers who are more proficient in playing video games will use less of their cognitive ability for playing the game and will have a higher recall rate of advertisements than gamers who are less proficient at the video game (Leng, 2015).

Schneider & Cornwell 2005 discussed that while devoting attention to playing a game, the player will have less available attention capacity to process the additional stimuli of advertisements in a game. Yang, M. et al. (2006) and (Lee & Faber, 2007) also discussed this. Due to this fact, Kim, Walsh, & Ross (2008) concluded that in-game advertising is less effective than televised advertising.

On the other hand, some argue that the level of involvement can have a big impact on the recall rate of in-game advertising. For example, if the video game is exciting and fast paced, gamers will experience a higher level of involvement and may notice more in-game advertisements (Leng et al., 2010). Sport video games are interactive and create an environment where the gamer is stimulated to think, engage and be creative (Nelson, Keum, & Yaris, 2004). Furthermore, Cianfrone et al (2008) investigated the influence of sport video game consumption on brand awareness and found that it was significant. In addition to this, many argue that the placement of advertisement can be a big factor when it comes to recall rate in SVG's, due to the fact that our eyes are mostly focused on the main objective of the game (the ball, players, cars). Advertisements that appear at places that are located centrally will be recalled at a much higher rate than advertisements appearing at locations that are on the sides. (Schneider & Cornwell, 2005; Acar, 2007; Chaney, Lin, & Chaney, 2004).

The researches above suggest there is many variables that can influence positive or negative levels of brand awareness in SVG's. This topic definitely needs more careful

studies in order to determine how effective SVG advertising really is. This study will try to investigate and compare the recall rates of people watching a televised sports game and gamers playing a SVG. This study will also investigate the participant's attitudes towards the advertised brands and their buying intent.

Brand awareness

Brand awareness is mostly connected to recognition and recall of advertisements or sponsorship in different settings (Aaker, 1996; Walsh, et al. 2008). Brand awareness can be aided and unaided. Unaided recall is a type of brand awareness where the consumer remembers different advertisements without giving him any cues (visual or verbal). On the other hand, aided recall is when consumers are given verbal or visual cues in order to remember any advertisements or sponsorships. Aided recall should always be lower than unaided recall, but it doesn't mean it is more effective way of analyzing brand awareness. If people are not familiar with a brand they probably won't recall their name, which doesn't mean that haven't seen it.

Purchase intention

Purchase decision is described as a form of decision-making which studies why consumers buy a specific brand (Shah et al., 2012). Others explain purchase intention as a setting where consumers decide to buy a particular product or service in a particular condition (Morinez et al., 2007). Purchase intention is a variable that can directly determine the effectiveness of the advertisement. If the recall rate of an advertising or sponsorship is high but people are not likely to buy it, than it wasn't effective. Measuring only recall rate would result in a bad understanding of the advertising effectiveness.

Methodology

Data collection

For this study a total of 100 participants were recruited. The average age of the participants was 23.70, with the youngest being 16 and the oldest 55. Out of 100 participants, 91 were male and 9 female. Two separate studies have been conducted, each study consisting of 50 volunteers. One group were people who played Pro Evolution Soccer on a PlayStation 4 for 10 min, and were mostly recruited at a local internet café. They were selected randomly and paid a voucher for an hour of free playtime at the internet café. The second group of 50 participants had to watch a recorded televised game for 10 minutes. They too were recruited at the internet café and have gotten a voucher. The whole experiment had taken 10 days to finish, approximately interviewing and testing 10 participants a day. The purpose was to see which group would have a higher recall rate of advertisements, and to investigate their buying intent of the advertised products. In order to have more exact results, the advertisements on the console game and the recorded TV game had to be the same. For this reason a recorded game of Bayern Munich vs Atletico Madrid had been used, because the console game had the same advertisements as the Champions League match. 10 different products had been advertised during the game (Gazprom, Sony Xperia, Playstation 4, Lays, Heineken, Uni Credit, Nissan, Adidas, Pepsi and Mastercard).

Two surveys were formulated in order to investigate the hypotheses. In the first part of the survey, both contained question about age, sex and education. The second part was about recall of advertisements. For this study aided recall was tested. Participants had

to answer what advertisements they could remember from the video game/televised match. Participants had to mark advertisements they saw on list of 20 advertisements, of which only 10 were right. Only right answers were used for this study. The third part of the study investigated the buying intent of the participants. Participants were asked to answer how likely they would buy the advertised products and services. For this a Likert scale from 1-5 was chosen, not very likely/very likely. Furthermore, gamers were asked to describe their level of satisfaction while playing the game on a likert scale 1-5. Participants from the gamer group were also asked to answer how much time they spend playing video games on a weekly basis. For this another likert scale has been used.

In addition to this, both groups were asked if the advertisements present a distraction from watching/playing the game. The gamer group was also asked if they would prefer more advertisements in sports video games if that meant a lower initial price for the game.

Data analysis

In order to analyze the data gathered from the surveys, SPSS version 23 was used. For the first part of the survey descriptive statistics was used.

In the second part there was two samples from two different groups, so a two sample t-test was used to calculate if there is a difference in the recall rate of advertisements between the two groups. In addition, another independent t test was used to calculate if there is a difference in the buying intent of the advertised products between the two groups.

For the last part a Spearman correlation analysis was used to establish if increased levels of video game consumption would result in a higher recall rate of in game advertisements. Furthermore, another correlation was used to investigate if increased levels of involvement (enjoyment) would result in a higher recall rate of advertisements in video games.

Results

Results of part one – descriptive

In table 1. the group statistics for the number of recalled advertisements are presented. Gamers recalled on average 3.86 advertisements, whereas participants watching a televised game only recalled 2.82 advertisements on average. This means that gamers recalled 1 advertisement more on average than participants watching a televised football game.

Results of part two – recall rate and buying intent comparison

Table 1: Group statistics for recall rate

	Group	N	Mean	Std. Deviation	Std. Error Mean
Recall	1	50	3.86	2.450	.346
	2	50	2.82	1.722	.244

Table 2: Independent t test for recall rate

F		Levene's Test for Equality of Variances		t-test for Equality of Means				
		.Sig	†	Sig. (2-tailed)	Std. Error Difference	Confidence Interval 95% of the Difference		
						Lower	Upper	
Recall	Equal variances assumed	4.736	.032	2.456	.016	.423	.200	1.880
	Equal variances not assumed			2.456	.016	.423	.198	1.882

An independent t test was conducted to determine if there is a difference in the mean recall rate of advertisements between a sports video game and a televised game. This is shown on table 2. Looking at Levene's test for equality of variances the level of significance is 0.032 which is less than 0.05 and therefore equal variances are not assumed. From looking at the bottom row (equal variances not assumed), the level of significance is 0.016 which is less than 0.05 and therefore is highly significant. The 95% confidence interval was 0.198-1.882. Looking at these results the null hypothesis can be rejected, which means that there is a significant difference in the recall rate of advertisements in SVG's compared to televised advertisements.

Table 3: Group statistics for buying intent

	Group	N	Mean	Std. Deviation	Std. Error Mean
Buying_intent	1	50	3.5005	1.05577	.14931
	2	50	3.0375	1.11635	.15788

To test the difference in the mean buying intent between gamers and participants watching a televised football game an independent sample t test was used. Table 3. shows the group statistics for this test. On average the gamers purchase intent of advertised products was higher by 0.5 compared to participants watching a televised sports game. On the second table the independent t test is presented. Levene's test for equality in variances has a significance level of 0.993 which is higher than 0.05, thus equal variances are assumed. The upper row shows a t statistic of 2.131 with a significance level of 0.036 which is less than 0.05. The 95% confidence interval was 0.03179-0.89423. Looking at this it can be concluded that there is a positive significant difference in the mean buying intent of gamers compared to people watching a televised sports game.

Table 4: Results of the independent t test for buying intent

_Buying intent	Levene's Test for Equality of Vari- ances		t-test for Equality of Means					
	F	.Sig	t	df	Sig. (2-tailed)	Std. Error Dif- ference	Confidence Interval 95% of the Difference	
							Lower	Upper
Equal variances assumed	.000	.993	2.131	98	.036	.21730	.03179	.89423
Equal vari- ances not assumed			2.131	97.696	.036	.21730	.03177	.89424

Results of part three – Testing correlations

To test the third hypothesis a correlation was used. Since gaming experience satisfaction level are measured on an ordinal scale using a likert scale, the Pearson's Correlation couldn't be used in this research. A Spearman's correlation had to be used instead. Recall has a positive correlation with gaming experience. The correlation coefficient is 0.799 which presents high correlation, meaning that higher level of gaming experience will increase recall rate of advertisements. In addition, satisfaction level also has a high correlation, with a coefficient of 0.835 meaning that higher levels of satisfaction while playing a video game will result in increased recall rates of advertisements. The level of significance is 0.000 for both variables and is therefore highly significant.

Table 5: Results of the correlation analysis

Correlations					
			Recall	Consumption	Involvement
Spearman's correlation	Recall	Correlation Coefficient	1.000	.799**	.835**
		Sig. (2-tailed)	.	.000	.000
		N	50	50	50
	Consumption	Correlation Coefficient	.799**	1.000	.720**
		Sig. (2-tailed)	.000	.	.000
		N	50	50	50
	Involvement	Correlation Coefficient	.835**	.720**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	50	50	50
. (Correlation is significant at the 0.01 level (2-tailed) .**					

Furthermore, both groups were asked to answer if the advertisements presented a distraction in order to fully enjoy the game/match. 75% gamers answered that advertisements did not present any distraction to enjoying the game, whereas 63% participants watching a televised game said that they didn't mind the advertisements either. Gamers were also asked if they would rather have more advertisements in the game if that meant they could buy the game for a cheaper price. 84% of the gamers answered positive and would welcome more in-game advertisements if they could get the game for a lower price.

Conclusions and limitations

This study tried to provide insight on the effectiveness of in game advertising. The purpose was to identify an alternative strategy to advertise products compared to the mainstream advertisement techniques. Even though gamers recalled more advertisements than participants watching a televised football game, the recall rate was surprisingly high for both groups. The group playing Pro Evolution Soccer recalled 39% of the advertisements while the group watching a televised football game recalled 28%. The high recall rate could be due to the fact that the advertised products and services were among the more popular brands, and therefore participants recognized them easier. Only Lays had a low recall rate (18% and 8%), which is an unfamiliar brand in Bosnia and Herzegovina.

The purchase intent of people playing Pro Evolution Soccer was also significantly higher than the group watching a televised football game. Meaning that the average gamer would be more likely to buy a product that was advertised in the game, than someone watching a football game on television with the same advertisements.

This study also managed to find a positive correlation between the gamer's level of experience in video games and the recall rate of the advertised products. The results showed that increased playtime of video games leads to increased recall rate of advertisements. This is most likely due to the fact that gamers who are more experienced in playing video games will use less cognitive resources to actually play the game, and can therefore use more cognitive resources to process other peripheral information like advertisements. In addition to this, gamers who experienced a higher

satisfactory level while playing the game, also had increased recall rate. This means that gamers who enjoy the game more will have a higher level of involvement and therefore recall more advertisements from the game.

Furthermore, the study found that gamers don't mind in-game advertisements and would even welcome more if that meant a lower price for buying the game. This is something the gaming industry should be interested in, to encourage more sponsorship partners which would reduce their expenses for making the game, and ultimately give customers the game for a lower price.

Even though this study managed to find enough evidence to support its hypotheses, there is still some limitations to this study. Firstly, doing such a study on a bigger sample size would bring better results. Unfortunately, due to financial limitations the researcher couldn't create a bigger sample size. It would also be appropriate to test the effectiveness of in game advertising on different types of games too. Moreover, most of the participants were males, since female gamers are rare in Bosnia and Herzegovina. It would be interesting to see someone include female gamers to see if there would be a difference in the recall rate and purchase intent of in game advertisements. In addition, this study was mostly conducted on students and youngsters. A research including more mature and elderly people would bring more appropriate results too.

This study can be used by organizations to justify marketing their products in video games. This is especially true for smaller companies trying to find a less expensive but efficient way to market their products. In game advertising has been found to be lot less expensive than advertising on TV, but could be as if not even more effective.

In conclusion, this paper managed to provide enough evidence that in-game advertising can be more effective than televised advertising. There is still much work to be done in this field in order to fully understand how effective in-game advertising truly is, and to understand what really determines its effectiveness. However, the gaming industry is gaining more importance and relevance, which will also result in more studies to come. Future studies should investigate this further, to provide more evidence to organizations who are investing, or are willing to invest into marketing their products in video games.

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