

Advergames: How players of different game modes experience the game and advertisements

Master Thesis

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Abstract

Theoretical Background

With new technologies, marketers can explore many new forms of advertisements. One of them is advergames, which are games that are produced with the objective to deliver an advertising message. When developing an advergame, one of the first things a marketer has to choose is a game mode. Over the last years, marketers mostly choose to produce singleplayer advergames, although multiplayer games are much more popular among gamers and research claims that multiplayer games are enjoyed more than singleplayer games. However, there was no research on how the game mode can influence an advergame. Therefore, this research aimed to answer how the game mode influences the game experience, game enjoyment and brand attitude.

Method

The participants of this research were separated into five groups: singleplayer, competitive online, competitive co-located, cooperative online and cooperative co-located. The participants played an advergame called “Red Bull Dungeon Escape”. This game was made for this research with the help of a modified version of the game Minecraft and offers all five game modes. After completing the game, the participants were interviewed in pairs and answered questions about their game experience, attitudes towards the game and brand, the advertisements in the game and advergames.

Results

Overall, the participants enjoyed the multiplayer game modes more than the singleplayer game mode, but which game mode they preferred depends on personal preference. What the game mode also influenced was how many advertisements the player perceived in the game. In the competitive mode, the player had more time pressure and needed to beat the opponent to win, and was therefore more focused on the gameplay, which resulted in not paying attention to the surroundings and missing the advertisements. Furthermore, in this case the game mode did not seem to change the brand attitude, but the participants claimed that the way the advertisements are implemented into the game is more important and influences how they think about the brand and the game.

Discussion

Although there is more research needed on the effects of the game mode in the game experience and players, the results of this research can help marketers to better estimate the consequences of a chosen game mode and give advice on how advertisements should be implemented into videogames to make the players enjoy the advertisements more. Advertisements should not be forced onto the player, not ruin the immersion and fit to the game and advertised brand. Still, opinions on advertisements in games are very critical and marketers should carefully consider and test how they implement advertisements into advergames.

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1. Introduction

With the growth of the gaming industry, marketers soon started to implement their advertisements into games. They explored possibilities like pop-up advertisements in small game applications that show up before, during or after a game, but also placed their advertisements inside big, popular games: Mercedes cars can be driven in Super Mario Kart, Louis Vuitton Outfits can be worn by League of Legends characters and Monster Energy Drinks can be consumed by players of Death Stranding. Marketers also started to make games themselves to promote their products and invented advergames. Advergames are “web or downloadable games where the primary objective of building is to deliver advertising messages, drive traffic to web sites and build brand awareness.” (Wallace and Robbins, 2006, as cited by Roettl et al., 2016, p. 1). Advergames started out as browser games, but today they are present on multiple platforms, including consoles and smartphones. Among marketers, advergames are increasingly popular, because research shows that consumers prefer advergames over other forms of advertising like commercials on TV or billboards (Morillas & Martín, 2016; Vanwesenbeeck et al., 2017) and advergames are also more effective than other types of advertisements (Morillas & Martín, 2016). Soon, researchers started to explore the field of advergames: how they can persuade the player (Van Reijmersdal et al., 2015; Roettl et al., 2016), the attitudes of players towards advergames and how this attitude affects a brand (Tina & Buckner, 2006), how advergames are made, future possibilities and also characteristics (Călin, 2010), how marketers can improve engagement of players to their games (Goh & Ping, 2014) and how advergames fit into the context of serious gaming (Blumberg et al, 2013).

Still, Vashisht et al. (2019) state that research on advergames is not sufficient. They conduct a literature review on existing research on advergames and identify two directions for future research: on the one hand, more research is needed on advergames themselves, like technologies that can help to make the game, game modes and game genres and how these factors influence the game experience. On the other hand, there is a lack of research on players of advergames, for example their attitudes towards brand and advergames, prior game knowledge and their in-game experience. Furthermore, one gap they identify is research on multiplayer game modes in advergames. The game mode has huge influence on both the advergame itself and the player: choosing one or more game modes is something every game developer has to do at the beginning of the game development process and it influences how the game will be played by the player. In a singleplayer game, the player plays the game alone, while in a multiplayer game, the game can be played together with one or multiple players. A

multiplayer game mode brings a social factor into gaming that influences the game experience for the player. Siu et al. (2017) explored how different game modes affect the game experience when playing a modified version of Super Mario bros. They claim that players of the multiplayer game have a better experience with the game than a player that played the singleplayer version of the game (Siu et al., 2017). It is not yet known whether these effects also apply to advergames.

In addition to that, there are many different multiplayer game modes. For example, players can choose to play against only one other person, or engage in Massive Multiplayer Online (MMO) games, where they have to play against or with multiple other players. Multiplayer game modes can also offer a competitive or cooperative experience, or even a combination of both. All these different game modes have a big influence on how the player experiences the game. Therefore, previous research on the effects of different game modes cannot be generalized on multiplayer games and research needs to take into account the different multiplayer game modes.

Multiplayer games are also increasingly popular among gamers, as in 2020 all 10 most played games where either a multiplayer game or had a multiplayer game mode (Gibson, 2020). In 2008, Lee & Youn (2008) claim that most advergames only offer a singleplayer game mode. When looking at advergames in the Google Play Store today, this does not seem to have changed: advergames like Red Bull Bike Unchained 2, Oreo: Twist, Lick, Dunk or Disney Magic Kingdoms only offer singleplayer game modes. Due to the popularity of multiplayer game modes and as existing research claims that multiplayer games can provide a better gaming experience, this research will focus on how the game mode, especially different multiplayer game modes, influence the experience of an advergame. Knowing how much influence the game mode has on the advergame experience is beneficial for marketers. Marketers that want to use advergames for their marketing strategies can better plan and develop these advergames. By knowing the effects of the player structure of an advergame and how these influence the player, marketers can adjust their advergame, for example by implementing a multiplayer mode if this leads to better results than a singleplayer game, and can better estimate the results of the advergame for their campaign.

Therefore, as there is not sufficient research on how the game mode of an advergame influences the behaviour and attitude of the player; this research aims to answer the research question: “Does the game mode (singleplayer or multiplayer) of an advergame affect players’ game experience, the perception of advertisements in the game and their brand attitude? “. This

question will be answered with the following sub-questions, which will be elaborated during the next chapter:

1. To what extent do players remember the advertisements of a brand after playing an advergame?
2. To what extent do players of different game modes notice the advertising message of an advergame?
3. How much do multiplayer game players communicate about the brand and advertising message while playing an advergame?
4. What do players of different game modes think of the brand after playing an advergame and to what extent do these opinions differ?
5. To what extent do players of different game modes enjoy playing an advergame and to what extent does this enjoyment differ?
6. What do players of competitive multiplayer advergames think about the advergame and the brand if they lost the game?

This report will continue with a summary of previous research on advergames, game modes and how advergames can influence players. Next, the research methodology is described, followed by the presentation of the results. After that, the results are discussed and implications of the results are described. Last, the limitations of this research are elaborated and future research directions are presented.

2. Theoretical Framework

2.1 *Advergames*

This research focuses on advergames, a subgroup of serious games (Blumberg et al., 2013). Advergames are created by brands (Morillas & Martín, 2016) and can be defined as “A web or downloadable game where the primary objective of building is to deliver advertising messages, drive traffic to web sites and build brand awareness.” (Wallace and Robbins, 2006, as cited by Roettl et al., 2016, p. 1). Advergames are used for many different product categories, high as well as low involvement products (Nelson, 2005), and are increasingly popular among marketers (Morillas & Martín, 2016). The reason for this is the general growth of the video game industry, as an increasing amount of people is playing video games. In contrast, the number of people watching television and engaging with traditional media is decreasing (Morillas & Martín, 2016). In addition to that, the possibilities of the internet, social networks and technologies like smartphones also influence the increasing importance of advergames, as they make advergames easily accessible for many people (Călin, 2010; Morillas & Martín, 2016).

There are a lot of different forms of advertising in video games. The most common one is in-game advertising, where marketers can show their ads on virtual billboards in the game. Marketers can also place their products in the game, which is called product placement (Morillas & Martín, 2016; Nelson, 2005). Examples for product placement are cars that are placed in racing games by their producers. The player of a racing game can choose a car and then drive the race with it. Games that have in-game advertising or product placement are still considered as regular games and not as advergames, because their main purpose is to entertain and not to persuade the consumer. So it is the purpose that determines whether a game is a serious game or a regular game (Blumberg et al., 2013).

In the past, advergames were accessible through the website of the brand or through gaming websites. With the invention of the smartphone, this has changed. Though advergames are still available on websites, most people prefer to play online games via apps on their smartphones and tablets (Aarnoutse, Peursum & Dalpiaz, 2014). Not only preferences of users influence this behavior, also the game developers themselves. It is much cheaper to develop an app for a smartphone or tablet than for example a console (Morillas & Martín, 2016), although some brands like Burger King or Monster Energy have developed advergames for consoles.

2.2 Advergame effectiveness

Advergames are an alternative for marketers to traditional advertising methods like billboards and TV-spots (Nelson, 2005; Salo & Karjaluo, 2007). Several studies have researched the effectiveness of advergames and claim that, under the right circumstances, they can work very well. A reason for that is that advergames actively engage the consumer with the advertisement (Morillas & Martín, 2016; Nelson, 2005; Salo & Karjaluo, 2007). By connecting a brand or product with interactive entertainment, the consumer can be more engaged in the persuasion process and can interact with the brand (Morillas & Martín, 2016; Nelson, 2005). Getting the consumer to interact with the brand like in an advergame is difficult to achieve for traditional advertisements like TV-spots or banner on websites, because the consumer is, if at all, only looking at these advertisements (Morillas & Martín, 2016; Wise et al., 2008). Morillas and Martín (2016) claim that “people remember 20% of what they hear, 30% of what they see and hear, and 60% of that with which they interact” (p.21). Therefore, the chance for an advertising message to be remembered is higher for an interactive medium, like an advergame, than for a traditional medium like TV where the recipient only sees or hears the message.

Another aspect why advergames work is the time the player spends with the game. When looking at a billboard or banner, the consumer is exposed to the ad for a few seconds and for a commercial on TV about 30 seconds. When playing an advergame, the consumer is exposed to the advertisement for many minutes to hours, depending on the type of game (Morillas & Martín, 2016). This positively influences brand recall. In addition to that, the mere exposure effect predicts that if someone is often and for a long time exposed to something, in the case of advergames to a brand or product, the more positively the person perceives this brand or product (Nelson, 2005).

Furthermore, the consumer chooses to play an advergame and therefore to engage with a brand and is not involuntarily confronted with an advertisement like a billboard (Călin, 2010; Morillas & Martín, 2016). People perceive advergames as a non-intrusive advertising method and are therefore more positive towards this advertising method than towards other methods (Morillas & Martín, 2016; Vanwesenbeeck et al., 2017). So making an active choice to play an advergame and therefore making the active choice to engage with a brand, product or message has a strong positive influence on the goal of the advergame (Nelson, 2005). Although people choose to get advertised when they choose to play an advergame, the game must be free to play; otherwise players might still get annoyed by advertisements (Nelson, 2005). This is especially important for in-game advertising, where it is not directly clear that the game contains advertisements when downloading it. In contrast, when downloading an advergame, the player

often knows which brand produced the game prior to downloading it, and therefore can expect that the game will contain advertisements or elements of the brand. Morillas & Martín (2016) also claim that an advertisement in a game is perceived as more positive when a game is free to play, even if someone buys a game for 2€ the person expects to not get spammed with advertisements.

There are several reasons why someone plays an advergame. People play advergames to have fun, relax, to isolate from other people as well as to interact with others (Călin, 2010; Nelson, 2005). Especially social interaction can be important for advergames, as Nelson (2005) and Morillas & Martín (2016) state that the chance of an advergame to go viral increases through social interaction, for example if people share the game with friends or if the game has a competitive function in which friends can see each other's scores. Furthermore, when someone socializes with other people who are playing the same game, the game is often perceived as more entertaining. Advertisements in an advergame are also perceived as less intrusive if the player engages in social interactions while playing an advergame. The game connects the player with other people because everyone plays the same game, and therefore it generates a positive feeling (Nelsen, 2005; Morillas & Martín, 2016).

Nevertheless, there are some requirements an advergame needs to fulfill in order to get the desired effects. First, the effects of advergames decrease when the player is too involved into the game. For example when the levels are too hard or the player needs to concentrate too much on the gameplay, it is more difficult to process the advertising message. The cognitive load is too high and no attention is paid to the advertisements (Nelson, 2005; Terlutter & Capella, 2013; Tina & Buckner, 2009). Second, the positive effects of an advergame increase when the brand or product fits the game. For example, advertising a car works better in a racing game than in a puzzle game as the player can for example drive the car himself at not just puzzle a picture of it (Ing & Azizi, 2009; Terlutter & Capella, 2013; Wise et al., 2008). Last, it can be expected that advergames reach a smaller audience than for example billboards and TV-spots. Therefore it is necessary to target the right audience and produce an advergame that can persuade this audience (Salo & Karjaluo, 2007).

2.3 Multiplayer and Singleplayer

Each computer or mobile game has a player structure that defines how many people can play the game and how these people have to interact with each other, for example in a team or as opponents (Aarseth et al., 2003). There are many different categorizations for player structures, but the most common is singleplayer and multiplayer (Salo & Karjaluo, 2007), although

Aarseth et al., (2003) claim that these two categories are too superficial to categorize all the different player structures. Especially multiplayer games have many different player structures; players can play only against one other player or against many other players. Other games give the possibility to play in a team against one or more teams. A multiplayer game is not only defined by how many players can play it, but also how they play with each other. Players can either play cooperatively or competitively, sometimes games also offer a combination of both (Schmierbach et al., 2012). Furthermore, multiplayer games are defined by where the players play the game: most multiplayer games can either be played online or the players play the game together at one location, which is called co-located. Both how and where the players play an advergame can influence the game experience, as the game mode changes how the player needs to finish the level, the goal of the game, cognitive load while playing and how the player can socialize and communicate. Therefore, this research will focus on singleplayer and four different multiplayer game modes: online competitive multiplayer, online cooperative multiplayer, co-located competitive multiplayer and co-located cooperative multiplayer.

A singleplayer game can be defined as a game where only one player plays a game, although there is the possibility that there is a computer-generated opponent. Singleplayer games range from simple games like Tetris to huge open-world role-play games like The Witcher 3. A multiplayer game is played by two or more players. Most multiplayer games are online multiplayer games where the players do not see each other in person. In a lot of games, the players can communicate via an in-game chat or they use external services like Skype or Discord, but there are also games in which the players cannot communicate at all. In most mobile games, the players cannot communicate via the game. Famous multiplayer games are for example World of Warcraft or Minecraft. Some games also offer a co-located multiplayer game mode, where players sit in the same room and play a game together, for example via split-screen or they connect their smartphones. Famous examples for co-located multiplayer games are Halo and Super Mario Kart. It is important to make a distinction between co-located and online multiplayer because this influences the social aspect of gaming and how the players communicate, and therefore also the gaming experience (Trepte et al, 2012; Kaye & Bryce, 2012). When playing co-located, communication, especially non-verbal communication, is easier because the players can directly see each other. Players also perceive co-located gaming as more fun than online gaming, although players are often used to online gaming (Kaye & Bryce, 2012).

Competitive and cooperative game modes define how the players have to play with each other. In the competitive mode, two players or teams play against each other and in the end,

one player or team wins while the opponent loses (Waddel & Peng, 2014). When a game is played in a cooperative mode, the players play with each other and have to complete the game together, so either all players win or all players lose (Siu et al., 2017). Existing research on the effects of cooperative and competitive multiplayer claims that cooperative games offer more learning potential for the players. The player has to interact with others to win the game and the engagement with the game is higher, as the players start talking about the game and solve tasks together, instead of solving the tasks alone without exchanging and discussing possible solutions for the tasks with someone else (Reuter et al., 2012). For advergames, this could have the effect that the players explore the game more through the interactions and discussions with others, which might lead to an increased perception of the advertisements in the game. Furthermore, especially competitive multiplayer games are perceived as more challenging, fun and engaging than singleplayer or cooperative multiplayer games, as the challenge of the game increases when someone has to beat a real-live opponent (Siu et al., 2017). In contrast, players who play a competitive multiplayer game have higher levels of aggression compared to players from a cooperative game. In a competitive game, the goal is not only winning but winning against someone, which is a better objective than only winning the game. Losing while someone else wins can therefore lead to more aggressive behavior, which might negatively influence the game experience for both players (Waddel & Peng, 2014).

A challenging, competitive game could have both negative and positive influence on the effects of advergames. On the one hand, a challenging game is perceived as more fun and engaging, which can positively influence the perception of the brand and product, although an increased level of aggression can reduce this influence (Kaye & Bryce, 2012; Waddel & Peng, 2014). On the other hand, if the game is too engaging, the player could be distracted from the advertisements as the focus lies on not only winning, but winning against someone, which increases time pressure and cognitive load (Nelson, 2005). As stated earlier, Terlutter & Capella (2013) claim that the more immersed a player is into the game; the less the player will recognize the advertising message. Competitive games are more engaging than cooperative games (Siu et al., 2017); therefore competitive gamers might miss the advertising message and recognize less of it than cooperative gamers, although they might have more fun and enjoy the game more than cooperative players. As an advergame has more chance to be effective when the player notices and understands the advertising message, it is crucial to know if the game mode influences how much attention is paid to the brand while playing an advergame. This is not yet researched; therefore this research aims to answer how much the participants remember of a brand after playing an advergame as well as whether they notice the advertising message.

2.4 Communication in multiplayer games

As stated earlier, players of multiplayer games often have the possibility to communicate with the other players, online as well as co-located. Trepte et al. (2012) claim that for a lot of players, this communication is one of the biggest reasons to play games. It brings a social factor into gaming and makes gaming more enjoyable (Klimmt & Hartmann, 2008; Quandt & Kröger, 2013). While people who play co-located mostly play with friends, people who play online can connect with people from all over the world (Quandt & Kröger, 2013). The social connections they make while gaming often result in long-term friendships and go beyond only communicating about the game (Kaye & Bryce, 2012; Kowert et al., 2014; Trepte et al., 2012). Co-located gamers can communicate directly face-to-face, while online gamers mostly only hear the voices of the other players or only exchange texts, although they can choose to activate a camera. Therefore, online players have more control over how much they communicate to the other player and can easily hide their emotions, which heavily affects how the players communicate with each other (Klimmt & Hartmann, 2008). While playing a multiplayer game, the main topics of communication are the game itself and the game experience (Klimmt & Hartmann, 2008). Klimmt & Hartmann (2008) identify that gamers who play a strategy game, where they have to make a strategy with other players, communicate more intensively, especially about the gameplay, than players who do not necessarily have to communicate with others while playing. This strategy-building can be considered as cooperative playing. Therefore, it can be expected that players who play a cooperative game mode communicate more than players from a competitive game mode.

In the case of advergames, it is also possible that players start talking about the brand while playing, as the brand is usually incorporated into the game. As cooperative players are expected to communicate more, it can be expected that they will also be more likely to talk about the advertisements. According to the Elaboration Likelihood Model (ELM), someone is persuaded through the central, conscious route or the peripheral, sub-conscious route (Petty & Cacioppo, 1986). Research claims that advertisements and brand elements are usually processed through the peripheral route to persuasion (Steffen et al., 2013; Vanwesenbeeck et al., 2017), so the player is persuaded through cues like design and advertisements rather than the actual advertising message. When playing an advergame, a player would therefore be influenced through the peripheral route if the player only sometimes looks at the advertisements and is otherwise focused on the gameplay. If the players start talking about the advertisements, the message of these advertisements and the advertisements themselves might be more consciously processed and persuasion might shift from a peripheral route to a central route, but

as the players are still playing the game, they might not completely focus on the message. Still, they might process it more consciously than if they would only look at the advertisements. As the ELM predicts that the chance of persuasion is higher when the message is actively processed, communicating about the message might increase the likelihood that the player is persuaded by the advertisements. Depending on whether the communication about the brand is positive or negative, this could influence the player in both ways. Therefore, this research aims to answer how much multiplayer game players communicate about the brand and advertising message while playing an advergame.

2.5 Brand attitude

A brand attitude describes the mindset someone has towards a brand, which can be either positive or negative (Laroche et al., 1996). A brand attitude only exists in the minds of people, and everyone has a different attitude towards a brand (Park et al., 2010). An attitude towards a brand is formed over time and is influenced by different factors like advertisements, product attributes, previous experiences with products and social influence (Mitchell & Olsen, 1981; Gardner, 1985). These factors can influence a person both consciously and unconsciously (Park & Young, 1986). According to Park et al. (2010), brand attitude has influence on “brand consideration, intention to purchase, purchase behavior, and brand choice” (p.1).

As mentioned before, a brand attitude is influenced by advertisements and previous experiences, so if someone has a positive experience with an advergame of a brand, it is expected that this positively influences the brand attitude, which is why it is important to include brand attitude in this research. Furthermore, research has shown that brand attitude is an important measure for the effectiveness of an advertisement (Te’eni-Harari et al. 2009). Existing research on brand attitude in combination with advergames claims that advergames can positively influence brand attitude (Tuten & Ashley, 2016; Peters & Leshner, 2013; Tina & Buckner, 2006; Wise et al., 2008). Studies from Wise et al. (2008) and Ing & Azizi (2009) state that the positive influence of advergaming on brand attitude increases if the brand or product fits the game. But there is also a positive effect on brand attitude if there is no thematic fit between game and brand, especially if the attitude towards the game is also positive (Wise et al., 2008). Furthermore, a study from Vanwesenbeeck et al. (2017) on children’s brand attitude before and after playing an advergame reveals that if a child had a positive attitude towards the brand before playing the advergame, the amount of positive attitude change is higher in comparison to a child that had a neutral prior brand attitude.

Tina & Buckner (2006) claim that the increase of the brand attitude is higher after someone plays an advergame of a known brand than after playing a game of an unknown brand. Therefore, advergames should be used to improve an existing brand attitude and not to raise awareness and build an attitude for a new brand (Tina & Buckner, 2006). Furthermore, the brand needs to be placed in the right spots in order to increase the desired effects. For example, if the brand is centrally placed in the game, it gets more attention and therefore is able to increase brand attitude (Peters & Leshner, 2013; Ing & Azizi, 2009). Overall, existing research agrees that advergames can positively influence brand attitude. But as mentioned before, there are many different types of games that offer different experiences, so these findings cannot be generalized and this research will focus on how different games modes can affect brand attitude. A study from Tuten & Ashley (2016) reveals that social features like ranking lists or sharing scores with friends positively influence the brand attitude of the advergame brand. A multiplayer game is a stronger social feature than a ranking list. This could influence a brand attitude more strongly than a singleplayer game with some social features. Furthermore, the multiplayer game modes online, co-located, competitive and cooperative influence the social experience of the players, which is why the game mode could influence what the players think about the brand of the advergame after playing. Therefore, this research aims to answer what players of different game modes think of the brand after playing an advergame and to what extent these opinions differ.

2.6 Game enjoyment

As stated earlier, research has shown that the enjoyment of a game influences brand attitude. Game enjoyment can be described as the hedonic experience someone has when playing a game and is usually, but not necessarily, linked to having fun and pleasure while playing a game (Jacobs, 2017; Hamari, 2015). Hamari (2015) claims that enjoyment is a dominant reason for playing games.

Existing research on the effects of multiplayer and singleplayer games states that players of multiplayer games have more fun with the game than singleplayer gamers, even if it is the same game (Siu et al., 2017). Kaye & Bryce (2012) identify that playing a game with others enhances emotions towards the game and gameplay. Furthermore, they argue that game enjoyment is positively influenced by social interactions during gameplay, especially if these interactions happen with friends rather than strangers. In addition to that, Vanwesenbeeck et al. (2017) also claim that enjoyment is an important variable that influences brand attitude and that enjoyment has impact on the effectiveness of a game, which is very important for the desired effects an

advergame should have. Still, the level of enjoyment could be varying between the different game modes. Schmierbach et al. (2012) argue that a competitive game mode can create more enjoyment, because humans are competitive in nature and winning against someone else is a stronger motivation than just winning a game. They still claim that cooperative games can create enjoyment, but not as much as competitive games because the goal of winning against someone is not present. Schmierbach et al. (2012) also argue that co-located gaming might be more enjoyable than online gaming, because the other player is present. This makes gaming a social event and can increase enjoyment, but there is no confirmation for this effect yet. During a focus group interview from Kaye & Bryce (2012), participants claim that they enjoy playing multiplayer games online because they can easily interact with others and everyone can play on their own device. The device does seem to play a major role in whether a game can be better enjoyed online or co-located in a multiplayer setting. For example, a Wii console is only perceived as fun in a co-located multiplayer setting, as games on this console are played by moving the whole controller, which often results in whole body movements and is perceived as fun when playing with others, and many games encourage the player to play in a multiplayer setting. Playing on a Wii console is less enjoyable in an online setting, whereas other games are also perceived as fun if they are played in an online multiplayer setting. Still, the participants claim that it is always enjoyable when videogames can be played with friends co-located. (Kaye & Bryce, 2012). Although previous research agrees that different game modes cause different levels of enjoyment, the studies only focus on two or three different game modes, like online and co-located or competitive or collaborative, but there is no comparison between all of them. Furthermore, there is no evidence that this enjoyment is also present when playing an advergame. Therefore, this research aims to answer to what extent players of different game modes enjoy playing an advergame and to what extent this enjoyment differs.

2.7 The impact of winning or losing a game

In the case of competitive multiplayer games, there is always one player who wins and one player who loses the game. Winning a game is defined as a positive event, whereas losing a game is considered as a negative event (Ward, Hill & Gardner, 1988). Existing research claims that winning a game generates a positive feeling in the player and the perception of the game is positively influenced (Steffen et al., 2013). Furthermore, a study from Tuten & Ashley (2016) reveals that positive effects of advergames increase when someone wins the game. As advergames can positively influence brand attitude, winning an advergame could positively influence how people think about a brand. During a focus group interview conducted by Kaye

and Bryce (2012), participants claim that they feel more frustrated when they fail against a real opponent than if they fail against a computer-generated opponent. In the case of competitive multiplayer advergames, this frustration could lead to a decreased liking of the game, which could negatively influence brand attitude as game attitude is a mediator of brand attitude (Vanwesenbeeck et al., 2017). In contrast, Steffen et al. (2013) claim that losing an advergame does not influence the brand attitude negatively, but that the attitude of the winner of the game is positively influenced. Therefore, when a player wins an advergame, the positive feeling of winning the game is transferred to game attitude and brand attitude and positively influences these attitudes. Participants of the research who lost the advergame did not rate the game significantly worse after playing, so there were no negative feelings transferred from losing to game attitude or brand attitude. So not the loser, but the winner is influenced by the game outcome. But as Kaye & Bryce (2012) claim that losing in a multiplayer game could lead to more frustration, the effect of Steffen et al. (2013) that was identified on a singleplayer game might not be valid for multiplayer games. Therefore, the last question this research wants to answer is what players of competitive multiplayer advergames think about the advergame and the brand if they lost the game.

3. Methodology

The research questions were answered with a qualitative research design. Participants were observed while playing an advergame to answer research question 3 and interviews were conducted to answer research questions 1, 2, 4, 5 and 6. In the following sections, the research design will be explained, starting with a description of the design of the stimuli and a description of the advergame the participants played. Next, the research procedure is explained, followed by a description of the sample. This chapter ends with a description of the analysis process.

3.1 Stimuli

In order to be able to compare the different multiplayer groups and the singleplayer group, one advergame that supports all four multiplayer games modes and a singleplayer game mode was needed. As there was no advergame available that supported all different game modes, while still offering the same game to the players, the researcher decided to create a game that supports all the game modes. The researcher chose to design the game within the game Minecraft, which was developed by Mojang and first published in 2009. It is now owned by Microsoft and gets updates on a regular basis. Minecraft can be played on a computer, different consoles and smartphones. Furthermore, it is an open-world game where the player can explore the world and construct things with the help of different, mostly cubic blocks that can be collected and harvested. The player can also craft things out of blocks, like tools or furniture. During the game, the player has to defend himself against different monsters. Minecraft is a suitable game because it can be easily modified and it offers both singleplayer and multiplayer game modes. Therefore, every group of participants in this research could play the same game, which was necessary to compare them. Furthermore, Nebel, Schneider & Rey (2016) claim that Minecraft is suitable for experimental research, because it can be easily modified and adjusted for many research purposes, a feature that most other games do not have. In addition to that, Nebel, Schneider & Rey (2016) also used Minecraft to create a game in which they tested if completing a task in a competitive game mode increases cognitive load compared to a task that was done in a singleplayer game mode. They reported that Minecraft was a suitable tool to create a game with different game modes.

Before designing the game, a game genre and brand needed to be chosen. The genre needed to support different multiplayer game modes as well as a singleplayer game mode, while still offering the same experience. As the genre also needed to be suitable to make in Minecraft, the researcher decided to build a dungeon escape game with riddles and jump 'n' run

elements. In every game mode, the players could experience the same dungeon and a dungeon could be easily made with the existing building blocks in Minecraft. Next, a brand needed to be chosen. As Tina & Buckner (2006) claim that advergames can work better if the player already knows the game, the brand should be known world-wide. Therefore, Red Bull was chosen for the brand of the adverggame. Red Bull is a producer for energy drinks and has already published adverggames, for example Red Bull Bike Unchained 2. The brands' main advertising message is that their drinks give the consumer more energy, which can be implemented into an escape game by providing Red Bull cans that give the player advantages like increased speed.

To implement Red Bull into the game, a mod was created that implements different Red Bull elements into Minecraft. A mod is a modification of an existing game that is usually made by a player. A mod can change textures, the gameplay or add new elements to a game. With the mod, existing textures in Minecraft were changed with Adobe Photoshop to a Red Bull themed look. Four of the building blocks in Minecraft were colored in the Red Bull colors red, blue, yellow and silver. These blocks were then used to build a giant Red Bull can in the game and the obstacles were built with these blocks. Furthermore, there are paintings in Minecraft that can be hung upon walls. The paintings were redesigned and show three different Red Bull advertisements, the logo of Red Bull and a self-made logo for the game Red Bull Dungeon Escape. The Red Bull themed paintings were hung on the walls in the game, in total there were 20 paintings included. Minecraft also has different items, for example potions that give advantages to the player. These potions were redesigned to look like Red Bull cans, which the player could then collect while playing to get an advantage like jump, speed or strength boosts for a short time. The cans were placed in chests along the way and the player could collect and use four different cans. The Red Bull cans were the main element that delivered the advertising message "drinking Red Bull gives you more energy" by giving the player a boost when drinking the can. Another element that conveys the advertising message was a quiz question, where the player had to answer "What is the slogan of Red Bull?" and got three different options. The final design of the game can be seen in figures 1 and 2.

The researcher used iterations to create the game. First, a basic game was designed. This game got tested by participants who had never played Minecraft before to ensure that the difficulty of the game was suitable for non-experienced players. Goal of the pre-test was to examine if the players could complete the game, how long they needed to complete, if the players had difficulties while playing, identify bugs and faults in the game and to examine if the game was enjoyed by the players. During each pre-test, 2-3 participants played the game. While playing, their screens were recorded for later analysis and to identify problems they had

during the game. After they finished the game, they were asked some questions about their game experience and especially whether they had problems while playing. On the basis of the test, the game was then improved and tested again by other participants. In total, the game was created during five iterations.

The first design of the game was a simple singleplayer jump 'n' run track without Red Bull elements, where the players had to jump over different obstacles to reach the end of the level. During the first pre-test, the participants reported that the game was too boring as they only had to jump and reach the end, although the difficulty was ok. Therefore, different tasks were implemented into the game to create a more challenging and fun experience. The tasks were inspired by dungeons of other Minecraft players, which are available for free on the internet. The tasks included a maze, riddles and fighting enemies. The participants of the second pre-test reported that they liked the different tasks, but that the tasks were too difficult to complete for non-experienced players and lead to frustration if the player fails over and over again. They also reported to have a lot of difficulties with the controls, as the controls got more complex with the different tasks. As the players might get too focused on the gameplay and miss the advertisements or might get so annoyed that the game is stopped if the tasks are too difficult (Nelson, 2005; Terlutter & Capella, 2013; Tina & Buckner, 2009), the difficulty of the tasks was adjusted and participants got a piece of paper with instructions on how to play the game. During the third pre-test, the participants were all able to complete the game, but still reported to have difficulties with the controls of the game, as these were still complex and the participants did not want to read the instructions they got while being in the middle of the game. Therefore, an entrance hall was created where players could try out different controls and also had the option to play a tutorial that covered the controls that were needed during the game and prepared the player for the different tasks. The actual game started when they walk through a door onto the track. Additionally to the tutorial, the players still got instructions on a paper in order to make sure they did not fail because they forgot how to play. Between the third and fourth pre-test, the competitive and cooperative dungeons were created. The singleplayer track was duplicated for both the competitive and cooperative dungeons to create another track with exactly the same obstacles for a second player. Next, the obstacles were slightly altered for the cooperative dungeon to enable the players to work together to overcome them. Furthermore, the drinks with the boosts were added into the same places in every dungeon. The participants of the fourth pre-test played all three kinds of dungeons and reported that they liked the different game modes and were also able to complete the obstacles in a cooperative setting. The tutorial was suitable to learn the necessary controls to play the game. After the fourth pre-test, the

dungeon was modified in order to prevent the players from escaping the track. During the pre-tests, players sometimes fell or jumped into places of the dungeons where they were not able to get back onto the track, so the dungeon was designed in a way that the players cannot escape the track. In addition to that, the Red Bull theme with the colors, cans and posters was added to the different dungeons. Again, the different Red Bull elements were placed in the same spot in every dungeon. The participants from the fifth pre-test claimed that they got enough instructions of the controls to play the game, they enjoyed the game and it had a good difficulty.



Fig. 1: Red Bull Dungeon Escape Hall 1



Fig. 2: Red Bull Dungeon Escape Hall 2

In the final game, the player got trapped in a dungeon and needed to follow a path with different obstacles to escape. The participants only played the first level that contained five different tasks. The first task was jumping over gaps in the ground in order to get to the second task. The player could find a Red Bull can with a jump boost during this task. If the player failed to jump over one of the gaps, they fell into a pool of water and could climb up a ladder to the beginning of the task. Then the player could start again. During the second task, the player had to walk through a door into a room with two zombies that needed to be killed in order to get to the other door that led to the third task. To kill the zombies, the player got a sword which was inside a chest. In the chest, there was also a Red Bull can that gave the player a strength boost. If the players got killed by the zombies, they could respawn to the beginning of the game and start again. During the third task, the player faced three doors with A, B and C written above them. There was also a chest with a Red Bull can that increased speed. The player needed to solve a riddle and choose the right door. All doors led into a maze, but only the door with the right answer led to the right track to escape the maze. At the end of the maze, the player faced a door that only opened if the player pulled a lever that was located at another place in the maze. After passing this door, the player could find a chest with another Red Bull can that gave a speed boost. Next, the player was confronted with another obstacle where the player had to jump over gaps in the path. This time, there were blocks floating in the air and the player had to jump from block to block in order to get to the other side. If the player fell down, they ended up in a pool of water and could climb up a ladder to the beginning of the task. For the fifth and last task, the player got a bow and arrows and had to sit inside a Minecart, a cart that resembles old mine cars that move on railways. This cart rode along a track in a circle. Two buttons were located on this track and the player had to shoot arrows onto these buttons. Once the player hit both buttons, the rails on which the Minecart rides rearranged and led the player into the last room of the level. In this room, the player got a cake as a reward for completing the level.

As multiplayer and singleplayer games require different game elements, the game “Red Bull Dungeon Escape” had a few unique elements for every gameplay mode. In the singleplayer game, only one track was available for the player and the player could get the reward after finishing the level. During the competitive mode, two identical tracks were visible and the players were also able to see each other. The two players completed the track alone and only the player who reached the last room first would get a reward. When two players played the cooperative mode, there were also two tracks visible, but both players got a reward after completing the level. Furthermore, there were cooperative elements along the track that made it impossible to complete the track alone. For example, when one player pulled a lever, a door on

the track of the other player would open and when they had to solve the riddle to get into the maze, one player got the question and one player got the possible answers. The players had to communicate with each other to solve the riddle and find the right door into the maze.

3.2 Procedure

Data collection started with dividing the participants of the five groups into teams of two participants. Before, assigning them to a game mode, the participants were asked how much experience they had with playing Minecraft on a computer. If one participant had more experience than the other, the participants were assigned to the singleplayer or a cooperative condition. In a competitive condition, a player with more experience would have an unfair advantage because of already knowing the controls, which might affect the game experience of both players. In the singleplayer group, three participants went through data collection without another participant, as three times the other participant did not show up for the session.

The participants of the singleplayer teams were located in separate rooms. They played the game alone and were not able to communicate with each other. The teams for co-located multiplayer, both competitive and cooperative, were located in one room and were allowed to interact with each other. The teams of the online multiplayer groups (competitive and collaborative), were located in two different rooms and therefore could not see each other, but were able to talk to each other with a microphone and the software Discord, an online chat service specialized for gamers, in order to simulate an online gaming environment.

Each participant was seated in front of a computer. On this computer, a pre-test survey about demographic data and gaming experience was already opened in Qualtrics and the advergame was opened and ready to be played. The instructor told the participants to fill in the pre-test survey and then read the instructions on a paper that lied next to the computer. The paper contained information on gameplay and asked the participants to get comfortable with the controls and say when they were ready to play (Appendix C). After every participant told the instructor to be ready to start the game, the instructor gave them a “Go” to start the actual game and set a timer to monitor how much time the participants needed to complete the game. While playing, the participants’ conversations and the screens were recorded for later analysis after they gave their consent.

When the participants completed the game, they were asked to fill in the post-test survey that contained open questions on their game experience, game attitude and brand attitude (Appendix B). After finishing the survey, the participants of each team participated in an interview. The interviews started with an introduction of each participant and a short discussion

on previous gaming experience. Then, the participants discussed their views and opinions on the following topics: the advergame, Red Bull, gameplay, game outcome and communication while playing (Table 1). The interviews were semi-structured, with certain topics that were addressed in every interview, but there were also new topics that emerged during the first sessions. The instructor guided the discussion and led through the different topics. More specific questions were asked on topics that emerged during the discussion and the instructor also ensured that every participant actively participated in the discussion in order to get data from every participant. During the interviews, the conversations were recorded for later analysis. When the interview was done, the instructor debriefed the participants and told them about the purpose and goal of the study.

The data collection process started in March 2020. Due to the Covid-19 pandemic, data collection had to be stopped till September 2020 and was finished in October 2020. Four sessions took place before the break (2 singleplayer, 2 online groups) and 12 sessions took place during September and October. Data collection had to stop in October because Covid-19 infections increased again and therefore restrictions also increased, which made it impossible to safely continue data collection. This results in a sample of 29 participants that were evenly spread over the five game modes. Because of Covid-19 measures, participants needed to keep a distance during the sessions in September and October. As the participants of the singleplayer and online multiplayer groups were seated in different rooms, they were still able to have the same gaming experience as the participants from the sessions in March. Still, the instructions and interviews were slightly different as the participants were seated further apart. The measures also changed the procedure for the co-located groups, as the players had to be seated further apart during the whole sessions. Still, every team of the co-located groups was seated apart and they all had a similar gaming experience.

Table 1: Topic List Interviews

Topic	Detailed Topics
Red Bull Dungeon Escape	Gaming Experience while playing Game Liking Game outcome Effects of the game outcome
Gameplay	Experience of the game mode Game mode liking

	Discussion of the 5 game modes
	Game mode preference
Communication while playing	Did the players communicate?
	Topics they communicated about
Red Bull	Brand knowledge
	Liking of brand
	Liking of products
	Experience of Red Bull in the advergame
Advergames	Discussion about definition
	Previous advergame experience
	Attitude towards advergames
	Willingness to play advergames
Advertisements in games	Different types of advertisements
	Attitude towards Advertisements in games
	Advertisement preferences
	Advertisement preference of Red Bull Dungeon Escape

3.3 Sample

The sample consists of 29 participants (n=29). Five participants participated in the singleplayer condition; six participants participated in each multiplayer condition. Thirteen participants identified as female and sixteen participants identified as male. The participants were between 18-27 years old, with an average age of 20.93. Seven participants never played videogames, eight participants played 1-3 hours per week and five participants played 4-6 hours per week. Five participants played 7-9 hours per week and four participants played 10 hours or more per week. Thirteen participants considered themselves a gamer; thirteen participants would not consider themselves a gamer and three participants were not sure. Every participant knew the game Minecraft before playing the game Red Bull Dungeon Escape, and nineteen participants had played Minecraft before. Three participants were not sure if they have played Minecraft before and seven participants have never played Minecraft.

3.4 Analysis

After data collection, there were five different types of data: the pre-test survey, the post-test survey, recordings from the interviews, recordings from the participants while playing the game and recordings from the screens of the computers while the participants were playing. The analysis of the data started with transcribing the focus group interviews and the observational videos. For the interviews, the participants were anonymized in the form of P1, P2 etc. Everything the participants said and the questions from the instructor were transcribed in chronological order. After transcribing the interviews, the researcher compared the data from the interviews with the data from the post-test survey. The answers from the interview matched with the answers from the post-test survey and went more into depth regarding the different topics. As the post-test surveys did not add anything, they were not included in further analysis. The recordings while playing and the screen recordings were transcribed into one document. For each obstacle, the main researcher described how many tries the participant needed, whether the participants picked up and drank a Red Bull can, and if the participants communicated. If they communicated, the dialogue was also anonymized and transcribed.

After the transcription, the analysis started. The data from the pre-test was analyzed with the software SPSS to gain insights into the previous gaming experience and demographic data of the participants. The transcriptions of the interviews and the gaming sessions were coded with the software ATLAS.ti. The researcher used the inductive coding method, because the interviews were used to explore the opinions and attitude of the participants towards the different topics and themes emerges during the interviews that were not taken into account before data collection started. Analysis of the data was based on the method proposed by Rabiee (2004). First, the researcher got familiar with the data by reading it several times and watching the recorded interview and observation sessions. Next, the researcher started coding the interviews for the first time. During the first coding session, a second researcher coded the three cooperative co-located interviews. Codes that describe different attitudes towards the same theme were structured in the same way, for example the codes for the attitude towards the Red Bull products were coded with “drinks=good”, “drinks=neutral” and “drinks=bad”. After all interviews and the gaming sessions were coded for the first time, the codes were arranged into themes and concepts. Next, the main researcher started a second session of coding, where all interviews were coded again with the coding scheme that emerged from the first session. After the second round of coding, the codes and themes were re-arranged, and themes were arranged into main themes. With this list (Table 2 & Appendix D), the transcriptions were coded a third time. In the third round of coding, the second researcher coded the competitive online

interviews. To calculate inter-coder agreement, the main researcher also coded these interviews. The Cohen's Kappa for these interviews was 0.52, which indicated moderate agreement. After the third coding sessions, the main themes and sub-themes were matched to the research questions in order to identify the most important themes. Themes that did not match to any of the research questions were still taken into account during the next and last step, interpretation of data. Within the five different groups, codes as well as the quotes were analyzed in terms of consistency, wording and frequency, while taking into account the context of the quote. First, this was done on the basis of sub-themes, then on the basis of the main themes. Then, the five different game modes were compared to identify differences and similarities.

Table 2: Coding scheme with main themes and sub-themes

Main Theme	Sub-themes
advergames	Advergame attitude Previous experience with advergames Willingness to play an advergame
advertisements	Colors Number of ads seen Red Bull cans Billboards Attitude towards advertisements Preference of advertisement type
communication	Amount of communication Topics Communication & game mode
Friends/strangers	Influence on game mode Influence on game attitude
Game liking	Next level Rating Positive Negative
Game mode	Cooperative

	Competitive
	Co-located
	Online
	Singleplayer
Game outcome	Winning
	Losing
	Influence on game attitude
Previous Gaming experience	Does play games
	Does not play games
Red Bull	Brand Attitude
	Product attitude
	Red Bull & the advergame

4. Results

4.1 Game experience

From the 29 participants, 27 were able to finish the game. Two participants from the co-located cooperative group did not finish because one player was very familiar with Minecraft and decided to cheat, but this action resulted in not being able to finish anymore. As the participant told the other participant, both failed to finish. The participants needed about 8 minutes to finish the game, with 02:43 being the shortest time and 17:29 the longest.

Some participants reported that the game was too easy. Those were participants who game a lot and were especially familiar with moving in a 3D world. Other participants claim that the game was very difficult; these participants were unfamiliar with gaming in a 3D world. Still, they were able to finish, but needed more time. The obstacle where the most players had difficulties was the Minecart obstacle. Some players also had problems with the two jump 'n' run obstacles. Most players easily got through the zombies and the maze, although some players got stuck in the maze and needed some time to find the correct way.

The average rating for the game from the singleplayer group is 2.8/5. The competitive co-located group would rate the game 3.41/5 and the online competitive group 3.5/5. The co-located cooperative group would rate the game with 3.9/5 and the online cooperative group would rate the game 2.91/5. All players from the singleplayer group said that they would prefer to play the game in a multiplayer game mode. Participants from the multiplayer game modes say that they would not like to play the game as a singleplayer game. In fact, only two of 24 participants from the multiplayer groups would prefer to play the game in a singleplayer game mode.

Participants from the singleplayer group described the game as fun, but also confusing as some participants did not notice whether they reached the end or not. They also described it as frustrating, as they sometimes got stuck for a long time. One participant of the singleplayer group said that the end felt like a relief because the game was finally over, as the last obstacle was difficult and the player needed multiple tries to overcome it. The participant had problems with the controls, which made the game less enjoyable.

Participants from the multiplayer groups also described the game as a fun experience. Participants from the multiplayer group especially stressed that it is fun to play with someone else and it also motivated the player to put effort into the game:

I really enjoyed it. I really like the inclusion of making the Red Bull cans the drinks with the speed and jump boost. I think that makes a lot of sense and I appreciate it. That gave me a chuckle. I also found it, of course, pretty fun. It's really nice. And also the fact that somebody next to you is also racing to you, also gives it like an extra edge of, like some factor. So you're not entirely alone going through an obstacle course, you have more of an incentive to go a bit faster or just compete, which is fun. I enjoy the obstacle course. (Male, 19, co-located competitive)

What multiplayer game mode the participants preferred depended on their personal preference, especially with competitive or cooperative game modes. Some participants like to compete, while others enjoy a cooperative game mode more because they can play with someone instead of against someone. One participant stated that competitive is better because you do not need to pay attention to someone else and for example wait while the other player is still finishing an obstacle. Other participants stated that they enjoy playing competitive for the challenge and competition. In contrast, this was also the reason why some players prefer cooperative, as they might get too competitive, which then reduces the fun:

Participants who preferred the cooperative game mode enjoy it because they like to solve tasks together and like to work together with other people. Furthermore, some participants did not like playing competitive because it can lead to conflicts:

I'm not a huge fan of competitive games because I don't really like the competitive nature. It just puts people against each other, which can sometimes lead to like more toxic gameplay than compared to like cooperative gameplay. And like in cooperative gameplay, you really just communicate, you play together instead of against one another. (Male, 25, co-located competitive)

Whether someone wants to play a cooperative game or a competitive game also depends on who they will play with. Some participants do not like to play with people who can get really competitive, as this can decrease the fun factor of the game.

Participants from the multiplayer groups preferred co-located gaming over online gaming, especially if they play with friends:

If everyone is in the same room it's probably better because you also have the live interaction, after the game you can actually talk about the game or, like help each other if something happens. (Female, 21, online competitive)

Another reason why participants preferred co-located is because it makes communication easier. One can see the other people and see their faces, which makes it easier to capture their emotions and see how they feel, even without talking. Co-located is preferred because it makes gaming a social event, while playing online feels less personal. Although the participants preferred co-located gaming, they were still fine with playing online, some people even prefer it. Reasons why people prefer online gaming is because they feel stressed when someone can watch them playing or when someone is staring at their screen. One participant does not play videogames with friends at all, so that participant only plays with online friends. Another participant likes to play online because one can meet people from all over the world and interact with them.

Overall, the advergame was enjoyed by the players. The participants of this research seemed to enjoy the multiplayer game modes more than the singleplayer game mode. What multiplayer game mode their preferred mainly depended on their personal preferences, but also with whom they play the game.

4.2 Perception of the advertisements in the game

As mentioned before, the brand Red Bull was present in the game in five different ways, and no participant recognized all five different elements. Still, every participant was able to mention at least three different types of elements. The colors of Red Bull were noticed by every participant, but not every participant could make the connection that the colors were the Red Bull colors while playing. They did see the colors, but only connected them to Red Bull when they actively talked about them during the interview. Some players also reported that they only recognized the colors because of the other Red Bull elements, as these also show the colors. Furthermore, the players did not notice all of the four colors that were implemented. The most recognized colors were blue and red, while fewer participants remembered the silver and yellow. However, some participants mentioned that they did not recognize the colors because the silver for example looked more like white and the red looked pink, which was caused by the lights in the game Minecraft. Across the different game modes, there was no difference in how many colors were recognized and whether the participants made the connection during or after the game.

Only one participant recognized the big Red Bull can in the entrance hall, and no participant noticed the big Red Bull can in the beginning of the track. The big cans probably were not recognized because in the entrance hall, the participant would need to go close to a balcony to see it and along the track, the player would need to turn around.

Every participant had noticed the billboards from Red Bull in the game, although no participant saw all of them. The billboards were noticed in the entrance hall and the final room, where the player has a lot of time to look around and was not under time pressure to finish against an opponent: “I only noticed them in the entrance room, but I think they are also along the track” (Female, 20, co-located competitive). “At the end there were two big ones, in the beginning it was the same and one in the middle” (Female, 24, singleplayer). Fewer billboards were seen along the track, where the participant played the actual game. The more the player was focused on the game, the fewer billboards were seen. Some players from the competitive groups reported to not have seen a single billboard along the track:

Researcher (R): How many posters did you see?

Participant 1 (P1): Posters?

R: Did you see any posters?

P1: Only a Red Bull logo at the beginning

R: There were different ads along the track, did you see any of them?

P1: What? No I didn't

Participant 2 (P2): I only barely noticed them, like I didn't consciously see them but I think there were some. (P1: male, 24; P2: male, 20; co-located competitive)

A lot of participants, regardless of which game mode, said to only have seen the billboards unconsciously. They thought that there were billboards as they have seen something on the walls that seemed like Red Bull posters, but they did not directly look at them because they were focused on the game. Again, more participants from competitive groups reported this than participants from the other groups. Some participants only made guesses on how many billboards they have seen, while others could name specific billboards they have seen while playing. Especially participants who took more time to finish were able to name specific billboards. They got stuck at an obstacle and had to try multiple tries to overcome it, which gave them more time to explore the world and possibilities to explore the billboards. Furthermore, some participants from the singleplayer group and cooperative groups purposely took more time

to explore the game. Their focus laid more in playing and experiencing the game as opposed to winning, and therefore they were able to view more Red Bull elements.

The Red Bull cans were remembered by every participant except one, as one player did not collect any of the cans. However, not every player directly recognized the cans as Red Bull cans, because the graphics in Minecraft are pixelated. Most players still recognized the cans when they saw the description of the cans or when they saw the other Red Bull elements: “Although it was kind of pixelated, but that’s due to Minecraft, you could directly see that it is an ad and it wants to tell you that you get more energy from Red Bull” (Male, 25, co-located cooperative). Players noticed the Red Bull cans, because they could use the cans and interact with them during the game. It was not a passive element that hung somewhere on the walls, but an item the participants could use while playing. Still, some participants choose to not use the cans because they thought they might need them later or did not know how to use them. Another interactive element that almost every player remembered is the quiz question. This was also an interactive element that represented Red Bull. Only one player of the competitive group ignored the quiz and just went directly through one of the doors, while every other player was in contact with the quiz. Still, some cooperative participants had problems with the quiz and did not encounter the whole quiz as they did not communicate much, while they had to read either the question or the possible answers to each other. Therefore, some participants missed half of the quiz, but were still able to remember it.

Some players connected Red Bull with elements that should not represent Red Bull. For example, there were waterfalls implemented as decorative elements in the game, and a player connected the waterfalls with Red Bull. The player thought that the waterfalls represent Red Bull energy drink that is flooding out of the walls, although the participant mentioned that when thinking about the Red Bull elements during the interview, and maybe did not think that when the game was played.

Although not every player directly recognized the cans as Red Bull cans, most players understood the advertising message:

It is just a product placement, like hey, you can jump really higher when you drink Red Bull. That’s kind of what the game was trying to push, especially because it was quite easy, so you were more focused on the extras. (Female, 19, Online cooperative)

Some participants claimed that the other Red Bull elements, like the quiz question, billboards or colors, helped to understand the message as they were all Red Bull themed and the player then

connected the cans with the boosts to Red Bull. Other participants only recognized the advertising message during the interview when talking about the Red Bull cans and the goal of the game, as it then became clear that the cans are Red Bull cans which make you faster. Furthermore, participants from the cooperative groups also talked about the Red Bull cans and their boosts during the game, for example one player found a can and asked the other player if he also got a can and what boosts it gave them. This direct communication about the cans got the participants in direct contact with the message and might have helped them to understand it. Still, there was a participant in the cooperative group who did not understand the message, but this person also did not talk about the cans or Red Bull while playing. Only one player has not been in contact with the Red Bull cans and has therefore not been in direct contact with the advertising message, but still a few other participants from every game mode also did not understand the advertising message, although they were in contact with the cans. While some participants did not understand the advertising message that Red Bull gives you more energy, they still understood that the game wanted to advertise them. What the players did not directly understand, is that the main goal of the game was to advertise and influence the player to buy Red Bull. While some participants across all game modes mentioned advertising as a goal because of the whole Red Bull theme, a lot of participants thought that the goal was to reach the end and finish the level. For the competitive players, the goal of winning was strongly present as they had to beat an opponent, while for cooperative players a goal was also to communicate and to solve the game together:

I think for example in this situation, to work together because I wasn't used to anything in the game and you already knew how to play and could help me, so it was cooperative gaming, but let's say if I had also known the game in general, then just to get to the end. (Male, 19, online cooperative)

To conclude, the more the players focus on overcoming the obstacles and winning the game, the less advertisements they remember. Especially participants from the competitive groups were really focused on winning before the opponent and therefore saw less advertisements, while players who took more time to finish and explore the game saw more advertisements. Still, interactive elements that can be used while playing are remembered more than the passive elements. Regarding the message the advertisements want to convey, most participants seemed to understand the message, although participants from the cooperative group might have understood it more clearly because they talked about the cans. There were

participants in every game mode who did not understand the message. Still, participants who did not understand the message know that the game was an advertisement, though they did not always think that it was also the main goal of the game to advertise.

4.3 Attitude towards the brand and advertisements

The opinion about Red Bull was mainly formed by the participants' previous experiences with the brand, regardless of the game mode. Notable is that many participants like the brand, but do not like the drink, although a lot of participants claimed that they do not like energy drinks in general and disliking the drinks is not specifically related to Red Bull:

I think as a brand it is fine. They make fun commercials, but if I have to look at the drink, I don't think it's that great because it has a lot of sugar in it and is really bad for your teeth, so I'm definitely not a fan of the drink. (Male, 19, co-located cooperative)

In the case of the game Red Bull Dungeon Escape, the attitude towards the brand seemed to be formed by experiences with Red Bull prior to the game and the participants already have a strong opinion about Red Bull before playing the advergame. Still, they thought that the game fits to the rest of the advertisements of Red Bull and participants claimed that the way a brand advertises their products influences how they think about the brand. Participants who identify themselves as a gamer seemed to have stronger attitudes towards advertisements in games than participants who play little or no videogames, who often do not care about advergames or in-game advertisements. In general, participants did not like to see advertisements in games. Still, some participants claimed that they understand that game companies choose to place advertisements in their games to get money and finance the game. Other participants said that when they pay for a game, especially for famous videogames, they do not want to be advertised. However, every participant reported that advertisements are acceptable or even enjoyable under the following circumstances:

First, the advertisement should not be a pop-up advertisement. Participants claimed that pop-up advertisements in games, for example in gaming apps where advertisements pop up after every level, are annoying and can cause that the participant would not buy products from that brand anymore: "I hate pop-up ads. I would rather buy nothing from that brand if I see one." (Male, 24, online competitive). The participants think that pop-up advertisements ruin the immersion and destroy the game experience while playing, as they are forced onto the player.

However, these advertisements in apps were perceived as more positive when the player voluntarily chooses to view them and gets a reward for watching an ad:

For example with Hay Day there are usually no ads, but if you want to get some coins you can watch an ad, that is like a cool solution, like the app gets money, but if it is forced then it is not ok. (Female, 19, online competitive)

Although pop-up advertisements in app-games were perceived as annoying, one participant still claimed that they work very well because this participant had downloaded a lot of other games that were advertised with pop-up advertisements. The participant compared pop-up advertisements with traditional TV-Spots, as the viewer also gets involuntarily advertisement breaks and has to watch these in order to continue with the show.

Second, the advertisements should be nicely implemented into an advergaming and not ruin the immersion. Furthermore, most participants prefer advergaming over in-game advertising, but again only under some conditions:

I think it also depends on whether it ruins the immersion, because sometimes you're very immersed in the game and then suddenly, like a very obvious place, something like an ad totally brings you out of it. For example in the Red Bull dungeon run the whole game is the thing, so you're still kind of immersed, at least that's how I saw it, but if you're playing like Skyrim and suddenly I saw a Sprite bottle I would get unimmersed. I wouldn't like that. (Male, 25, co-located competitive)

If an advertisement ruins the immersion the player gets annoyed. This happens to both advergaming and in-game advertising, for example when a game contains a lot of posters from made-up brands and there is one real brand, that brand feels out of place and does not fit to the game. In the case of the game Red Bull Dungeon Escape, the Red Bull elements were everywhere and were a constant part of the game. So from the beginning, the participants noticed the Red Bull elements and were not distracted by sudden advertisements, so they stayed immersed although they constantly saw advertisements. Advertisements in games were also more accepted when they belong into the natural environment in the game. For example, in soccer games, advertisements like banners along the soccer field are perceived as normal because these banners are also present in real-life, and do not distort the player.

Third, the product or brand that is advertised should fit to the game. As mentioned above, a Sprite bottle in Skyrim would feel out of place, and in this game the cans fit because they gave the player a speed boost, which fits to the game as it gives a relevant advantage and fits to the brand Red Bull. If an item in the game does not bring a relevant advantage to the game or does not fit to the brand, the item is perceived as unnecessary and annoying, and participants would prefer a billboard over an item. Some participants also prefer in-game advertising like posters over advergames with mechanisms like the cans. They feel like they can just ignore a poster if they do not want to be advertised, while they cannot ignore advertising in an advergame.

Last, advertisements are more accepted if they are interactive. The cans were liked by many participants because the participants could interact with them. Some participants like to be able to use the advertised item in the game and think that the cans were nicely implemented, without pulling too much attention of the player. In contrast, other players think that the cans were too forced onto the player and they were annoyed that they needed to use an item that is an advertisement in order to get an advantage and win. Something that is perceived as even more negative than being advertised to win, is paying to be advertised to win:

If the line of pay to win is crossed, then it's not cool anymore, so if you pay to get like a Red Bull item in game and that item gives you better stats than anything else you can get in-game, then it's not good anymore, then you can just pay to win the game. (Male, 19, singleplayer)

While many participants have either positive or negative attitudes towards items that are advertisements, some participants did not even directly think that the cans want to advertise them, but rather thought that the cans were a bonus feature or funny item that was implemented into the game. In contrast, the participants directly thought of the posters in the game as an advertisement. Between the different game modes, there did not seem to be a difference in how much the participants like the different Red Bull advertisements.

From the results mentioned above, one can conclude that in this case the attitude towards Red Bull seemed to be mainly formed by the participants' previous encounters with the brand. In the case that the player already has a strong opinion about the brand, it is possible that the game could influence brand recall and brand recognition more than brand attitude: one participant went to a supermarket after participating in this research, saw Red Bull, thought of the game and bought a Red Bull can. The participants still claimed that advertisements,

especially the type of advertisement, influences their opinion about a brand. Advertisements in games are more accepted if they are not forced onto the player, do not ruin the immersion, if the brand and advertisements fit to the game and if the advertisements are interactive.

4.4 Attitude towards the game outcome

In the game Red Bull Dungeon Escape, the players could win by finishing before the opponent or finish by completing the level. Although almost every player finished the level, not everyone had a feeling of winning the game. Some participants were confused whether they were finished or not. Other participants did not have a feeling of winning by completing the game, because they did not want to win in the first place and their focus was just to enjoy and explore the game.

In the competitive game modes, there was always one winner and one loser. The winner had a strong feeling of winning, which made the participant feel good: "Good, it makes you feel good, and then you want to play on because you think you can also win the next levels." (Female, 24, co-located cooperative). The participants who lost the game were sometimes a bit disappointed and frustrated, but did not feel bad about it as it is just a game. Participants who lost said that they would like the game more if they had won the game: "Honestly losing it, I felt a little bit dumb, like I couldn't go through all the obstacles, but I guess it is fine. It's not that I'm sad or I can't sleep tonight because I lost the game." (Female, 19, online competitive). "Yeah I think if I won I would have liked it more, like because I got stuck I felt like, ok, this is shit." (Male, 27, online competitive).

Eleven participants reported that the game outcome did influence how much they like the game, while eight participants said it does not influence them. The rest of the participants were not sure. Especially people who won the game reported that the game outcome did influence how much they liked the game and that they liked it more because they won, while people who lost said that it did not influence them. No participant said that the game outcome influences how much they like Red Bull.

Whether the game outcome influenced how much a player liked the game, also depends on the player's personal preference:

It's a hard one for me, because for me personally, I don't really care that much if I win or lose. I'm not that invested in winning or losing, but I do see that winning or losing can influence somebody's reaction to playing a game, because I do know multiple people

that if they lose multiple times in a row, then they don't want to play anymore, or if they win, that they do want to play. So I do think that winning and losing influences somebody's enjoyment of a game, but for me personally, doesn't do that much. (Male, 19, co-located competitive)

Some participants reported that they did not care about winning or losing, or did not expect anything from the game outcome, while other players had a more competitive mindset and really wanted to win. In addition to that, participants reported that if they keep losing the game, they lose interest and would not continue playing. If the game is too hard and players get stuck, they might not play on. So a feeling of winning needs to be there to keep the player interested in the game.

Therefore, players who won the game think better of the game than people who lost the game. People who lose would not rate the game worse because of losing, but if someone keeps losing or gets stuck in the game, the player might lose interest in continuing playing. Whether the game outcome influences the liking of the game, also depends on how much the player desires to win.

4.5 Communication of cooperative players while playing the game

How much the players of the multiplayer game modes communicated with each other depended on the game mode and whether they played online or co-located. Players of the competitive groups almost did not communicate with each other, but they communicated more when they played co-located as opposed to online. The participants claimed that they did not feel the need to communicate, also because it would not benefit them while playing. Participants from the cooperative groups communicated the most, as they also had to communicate to overcome the obstacles. Still, they communicated more when they sat next to each other than when they played online, because they felt that it is easier to have a personal conversation than an online conversation. As communication occurred mainly in the cooperative groups, the following results will only apply to this game mode.

The participants only communicated about Red Bull when they encountered the interactive Red Bull elements, otherwise they only talked about the game in general or about the controls, for example when they were stuck at an obstacle they helped each other to overcome it. When they encountered one of the interactive Red Bull elements, like the Red Bull cans, they discussed what can be done with the cans, how they could use them and what advantages they got if they drink the cans:

And then we always communicated when we found items and stuff, that was good because especially before you said it I did not notice that the Red Bull drinks gave different kinds of boosts. I thought they would just all do the same. (Male, 20, online cooperative)

Another Red Bull element that the participants communicated about was the quiz question, as the participants also had to talk about it to finish the game. They shortly discussed the question and different answer possibilities, until they found the right answer and then just proceeded with the game. Although there was no direct communication about the advertising message during the game, the participants did communicate indirectly about the message when they talked about the cans and the quiz. As they talked about the boost the cans give to the players and about the Red Bull slogan "Gives you wings", they do talk about the advertising message, although there was no direct communication that this is what the game wanted to advertise and tell them.

To conclude, the participants of this research only communicate if they play the game in a cooperative game mode and if they encounter an interactive Red Bull element. They only indirectly talked about the advertising message if they talk about the boosts of the Red Bull cans.

5. Discussion

5.1 Discussion of results

The purpose of this research was to explore how the game mode affects the enjoyment, game experience and brand attitude of an advergame. In the case of the game Red Bull Dungeon Escape, participants claimed that on the one hand the game mode affected how much they enjoy the game, but on the other hand also how the advertisements were implemented. The participants enjoyed the multiplayer conditions more than the singleplayer game mode, because it brought a social aspect into gaming. This is in line with research from Siu et al. (2017) and Kaye & Bryce (2012), who also claim that multiplayer games are preferred over singleplayer games because of social interaction. In addition to that, Schmierbach et al. (2012) claim that more players prefer competitive games over cooperative games, because humans are competitive in nature. In contrast, this research revealed that which multiplayer game mode is preferred depends on the personal preference of the players. Some players even had aversions towards competitive gaming, so the competitive game mode is not always preferred over cooperative gaming. While Kaye & Bryce (2012) argue that participants like both online and co-located gaming, Schmierbach et al. (2012) claim that co-located is preferred over online gaming because the players can physically play together and see each other, although they could not confirm this effect. Most participants from this research preferred co-located over online gaming, especially if they played with friends, although they were fine with playing online. Therefore, this research adds to the research from Kaye & Bryce (2012) and Schmierbach et al. (2012) that players like to play both co-located and online games, but still prefer co-located over online.

The participants of this research claimed that the way an advertisement is implemented into the game influences how they think about the brand. An advertisement is perceived as more positive when the advertised product fits to the game, like cars in a racing game. This was also identified by Ing & Azizi (2009), Terlutter & Capella (2013) and Wise et al. (2008). In addition to that, the advertisements should not ruin the immersion and need to fit to the overall experience. When a participant is distracted by an advertisement, this advertisement is perceived more negative (Grigorovici & Constantin, 2004). Furthermore, the participants expect a game that contains advertisements to be free to play because they do not want to be advertised, which was also researched by Nelson (2005). However, some participants from this

research claimed that they do accept advertisements in games because they know that this helps the producers to finance the games, but this attitude does not apply to all participants.

Participants also said that how the advertisement is implemented into the game influences how much they enjoy a game. Pop-up advertisements are perceived as very annoying because the player is frequently and involuntarily confronted with them. Chatterjee (2008) also explored how pop-up advertisements influence brand attitude and claims that this form of advertisement is perceived as negative and can lead to a negative brand attitude. In general, whether an advertisement in a game is voluntarily or involuntarily seen does seem to play a big role in how much the player likes the advertisement, which fits to the research from Călin (2010) and Morillas & Martín (2016). The participants of this research claimed that they prefer if they can choose to view an advertisement, which is also in line with the research from Chatterjee (2008), as the voluntary advertisements were also perceived as more positive in that research. Moreover, the participants in general prefer interactive advertisements over passive advertisements. This was also researched by Nelson (2005) and Salo & Karjaluo (2007). However, in this research some participants still disliked the interactive elements like the cans because they felt that in order to get an advantage and win, they need to watch an advertisement. This interactive element then felt forced and was therefore also perceived as negative (Chatterjee, 2008).

Although the game mode does have an influence on whether the player can win or lose the game, the game outcome did not seem to have an effect on how much the participants enjoyed the game and liked the brand Red Bull. The participants who lost the game Red Bull Dungeon Escape did not think worse of the game than participants from the cooperative or singleplayer game mode. This was also observed by Steffen et al. (2013). The participants who lost did have a feeling of disappointment, but that feeling did not (yet) transfer to the game, but that might change if they play more levels and keep losing. The participants of the competitive game modes who won the game did think better of the game and had a desire to play more levels and win again. This is in line with research from Tuten & Ashley (2016) as well as Steffen et al. (2013), who also claim that losing does not negatively affect game attitude, but that winning a game does increase brand attitude. Still, the participants of this research claimed that the feeling of winning was more strongly present in a competitive mode than in a cooperative mode, so the positive effect of winning might only be present for competitive games. For advergames, the opportunity to win against an opponent and the actual win could lead to an improved game attitude, but one still needs to take into account that there is also always a loser who might develop a negative attitude towards the game if the player loses multiple times.

Depending on which game modes the players participated in, they remembered different amounts of Red Bull elements. In the game Red Bull Dungeon Escape, the participants were able to remember the interactive elements like the quiz and cans better than the passive elements like billboards or colors. This is in line with research from Morillas & Martín (2016) and Nelson (2005). They claim that advertising elements with which the player can interact work better because someone remembers more when something is interactive as opposed to only be able to look at something, which is the case for the billboards. Furthermore, elements that can only be looked at can easily be ignored, which was also observed when comparing how many billboards were remembered in the entrance hall and how many were remembered on the track: participants from all conditions remembered more billboards from the entrance hall than billboards while playing the actual game. The focus of the participants shifted from exploring and learning the controls while being in the entrance hall, to overcoming the obstacles and winning the game while being on the track. Research from Nelson (2005) and Terlutter & Capella (2013) support this observation, as they claim that engaging games can cause that players remember less advertisements because they are focused on playing the game. However, this research showed that although the interactive elements are part of the track and obstacles, participants still remembered these. The Elaboration Likelihood Model (ELM) can help to explain this effect: the billboards and colors are only perceived through the peripheral route and can easily be forgotten, while the cans are more likely to be perceived on the active route, as they are an active part of the gameplay, and have therefore a higher chance to be remembered. Still, the participants' attention might focus on playing the game and not the cans, so they do not devote their full attention to the cans and the advertising message, which might reduce the effectiveness of the central route to persuasion.

In addition to that, the game mode also influenced how much the participants remember about the brand in the game. Participants from the competitive game mode remembered fewer elements than participants from the cooperative or singleplayer game modes or claimed to only have seen them unconsciously; again the passive elements were less remembered. This is supported by Siu et al. (2017), who claim that competitive games are more engaging than cooperative games. The participants are more focused on the game and overcoming the obstacles, as they are playing against an opponent and need to perform better than the other. There is no time to look around or explore the world and the cooperative players were more immersed into the game, while participants from the cooperative or singleplayer conditions did not have a time limit and could take all the time they needed to finish the level. They could explore the world, look around and were therefore able to see more billboards.

Not every participant who interacted with the cans and the quiz, which were the main elements to convey the message, was able to understand the advertising message. Still, everyone did think that one of the purposes of the game is to advertise: they understood that it is an advergame from Red Bull, but did not understand the specific message the game wants to convey, that consuming Red Bull gives more energy. Again, the research from Siu et al. (2017) could explain this: the participants could be too engaged in the game and focus on overcoming the obstacles, and therefore they do not have time to further think about Red Bull. The participants do notice the advertisements, but do not understand the message these advertisements want to convey because their focus lies on the game.

Some participants were able to understand the advertising message without using the interactive elements. The reason for this might be that the participants already had a strong opinion about Red Bull before this research and already knew the advertising message "Drinking Red Bull increases your energy". Heckler et al. (2014) claim that brand knowledge builds up the more someone is exposed to an advertising message. The advertising message Red Bull is incorporated into the game Red Bull Dungeon Escape with the help of the slogan of Red Bull and the Red Bull cans, which are all elements the players were familiar with as the brand highly advertises this message in their campaigns. Furthermore, the Red Bull theme including the colors, logos and billboards could have supported this effect, as the participants might connected their knowledge about Red Bull with the game and the advertising message. The overall Red Bull theme could also have helped the participants who saw the cans and understood the advertising message, as the message was already known prior to the game. Especially as some participants did not directly recognize the Red Bull cans, did not use them while playing or did not notice the boost they got from the drink, so they did not consciously get in contact with the advertising message the game want to convey, but were still able to talk about the message afterwards during the interview.

Communicating about the interactive elements might have also helped the participants to understand the advertising message. As expected by Klimmt & Hartmann (2008), participants from the cooperative game mode talked about the Red Bull cans and their effects, and although they did not directly mention the advertising message while playing, they still indirectly talked about it. They processed the message actively and communicated about it instead of just using it, which might have helped them to understand the message (Steffen et al., 2013; Vanwesenbeeck et al., 2017). However, this was only observed during the game sessions and there is no evidence from the interviews that communicating about the advertisements helps the player to understand the message.

5.2 Practical Implications

Marketers can use the results of this research to develop their advergames. As the preference of a game mode depends on the personal preferences of the gamers, marketers should perform a target group analysis before choosing a game mode to identify what game mode the target group prefers. Still, the game mode does influence how much the participants enjoy a game and how many advertisements the players see. Multiplayer game modes are more enjoyed than singleplayer game modes. Marketers should choose a multiplayer game mode if they want to increase the enjoyment of their advergame. As multiplayer games are more complex to develop and as there is not always a second player present, marketers can also choose to develop a game that offers both a singleplayer and a simple multiplayer mode. This way, the players can choose what game mode they want to play. Still, marketers need to take into account that the multiplayer game mode does influence how many advertisements the players will see. In a competitive game mode, the players will be likely to remember less of the advertisements than players of a cooperative game mode, although interactive advertising elements can prevent this. So when a game contains a lot of passive advertising elements, a cooperative or singleplayer game mode is a better choice. However, in a competitive game mode there is always a winner, and a winner often has a more positive feeling towards the game, which could then positively influence brand attitude. As there are both positive and negative consequences for the game modes, marketers should carefully consider and test different game modes to choose the right one for their advergame. Furthermore, advertising elements should not only be present during the actual game, but through the whole game experience, including start screen, loading screen etc., as especially during these stages of playing the player is not yet completely immersed and focused on the game, and can pay more attention to the advertisements.

Marketers also need to take into account how they implement their advertisements into the game, as this seems to be more important for the brand attitude of the players than the game mode. The brand and product need to fit to the game and should also be thoughtfully implemented. While placing a car in a racing game fits to the gaming environment, placing a car in a medieval role play game would be too distracting. Furthermore, an advertisement of a brand is more accepted when the whole game is branded, instead of placing a single advertisement in an otherwise ad-free gaming environment, as a single advertisement might distract the player. Marketers also need to take into account that the advertisement should not ruin the immersion and game experience, as this is also perceived as negative by the players. Players also prefer advertisements they can choose to view, instead of being forced to view an

advertisement, so marketers should try to implement advertisements that can be voluntarily viewed. Last, marketers should try to implement interactive advertising elements into their games, but be careful whether these elements should give an advantage or not, as being advertised to win might also be perceived as negative. Therefore, marketers not only need to be careful when choosing a game mode, but also how they implement their advertisements into the games. They can use the advice from the results, but still need to test the game with their target group, as the opinions on how an advertisement should be implemented into a game differ per player.

5.3 Limitations & future research

This research has some limitations that are important to take into account for future research. First, due to the Covid-19 pandemic, the participants from the co-located groups had to be seated a few meters apart and were hardly able to see each other's screen, although they were sometimes able to see the other player in-game. This does not represent normal conditions of co-located playing, as players are usually seated close to each other and can look at each other's screens or play split-screen. This could have influenced the competitive groups and their gaming experience. Therefore, future research should further explore co-located gaming with conditions that represent co-located gaming in real-life.

Second, this research only focuses on the brand Red Bull. Red Bull is already a well-known brand that every participant knew prior to the research. A known brand was chosen because research stated that the effects of advergames are stronger if the brand is already known. Furthermore, the participants were already familiar with the brands' design and know how the advertisements and products look like, which might have helped them to identify the different advertisements in the game. For example, they were able to identify the Red Bull colors in the game because they were familiar with them, while it might have been more difficult to identify the main colors of an unknown brand. On the other hand, every participant already had a strong opinion about the brand, and the advergame might not have been effective enough to change this attitude. This opinion was especially critical about the products from Red Bull. Furthermore, the participants already knew the advertising message of the game prior to this research, as this is the main message that Red Bull focuses on in their advertisements. This could have especially influenced how many advertisements they have perceived and how well they understood the message. Future research should explore if the player understands the message of an unknown brand, or when the message is not known prior to the research.

Third, the game “Red Bull Dungeon Escape” was made in Minecraft. As everyone knew Minecraft and a lot of participants have already played it before this research, this could have influenced their perception of the game, as the game was not completely new to them. In addition to that, the graphics of Minecraft are pixelated, which made it more difficult for the participants to understand that the cans are Red Bull cans, and therefore they might not have understood the advertising message because of the graphics. In a game with proper graphics, the participants might be better able to recognize the advertised products and understand the advertising message.

Fourth, the participants of this research only played one game, a jump ‘n’ run game in a 3D world and the results of this research might not apply to every other advergame. There are many different other game genres that influence how much a game is enjoyed and also how many advertisements are seen. Every player has own preferences in what game genre they like and some also mentioned that they did not like the game genre of the game Red Bull Dungeon Escape, which could influence their enjoyment. In the 3D world, players could move around freely and this might have influenced how many advertisements they have seen, while the perception of advertisements might be different if they play in a 2D world. The same applies for different genres: if the player would have for example played a memory game with pictures of a brand, they might remember more advertisements. Therefore, the results of this research should be tested on other game genres.

Last, there are not only more game modes to explore, but also more types of multiplayer games. This research only focused on five different game modes, but there are many more, especially multiplayer game modes, that influence the game experience. For example, what happens if the player of a singleplayer game plays against a computer-generated opponent? It would be interesting to know if the positive effects of winning and competitive gaming are the same for a digital opponent. Furthermore, one could explore the effect of having a game mode that combines cooperative and competitive gaming and explore how players experience these game modes and especially the advertisements. This research already revealed that the game mode can influence game enjoyment as well as how many advertisements are seen by the player, therefore future research should continue to explore the effect of other game modes.

Future research should also explore the role of communication in multiplayer gaming, especially in cooperative gaming. The participants of the cooperative groups of this research talked about the Red Bull cans and their effects. This communication might have helped them to understand the advertising message and future research should further explore this effect.

5.4 Conclusion

This research aimed to answer how the game mode (singleplayer or multiplayer) of an advergame affect players' game experience, the perception of advertisements in the game and their brand attitude. To answer this question, the participants of this research played different game modes of an advergame from the brand Red Bull and participated in an interview. First, the results show that the participants from the multiplayer game modes enjoy the game more than participants from the singleplayer game mode. What multiplayer game mode is enjoyed more depends on the players' personal preferences. Second, the more engaged a participant is with the game, the lesser advertisements are seen. Especially more engaging game modes like the competitive game modes have this effect. However, the effect only applies to passive advertising elements like billboards, while interactive advertisements are seen by every participant. Next, the participants of the game modes all show a similar attitude towards Red Bull, so the game mode does not seem to affect how much the participants like the brand. Last, the participants do claim that the way an advertisement is implemented into a game influences how much they like the brand. If the advertisements is well implemented and can be voluntarily seen, it is perceived as more positive than an advertisement that is distracting from the game and forced onto the player. Although this research has some limitations due to the brand Red Bull, the game Red Bull Dungeon Escape and the Covid-19 pandemic, the results of this research can still help marketers to choose a game mode and give advice on how to implement advertisements into advergames. To the field of advergame research, this research adds an exploration on how different game modes change the experience of an advergame and how advertisements in an advergame are perceived.

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Appendix

Appendix A – Pre-test survey

Dear participant,

Thank you for being part of this research. Participation is completely voluntary, anonymous and can be stopped at any time. Please answer the following questions. After finishing, please read the paper that was given to you by the instructor.

1. I agree to participate in this research.
 - a. Yes
 - b. no
2. Gender
 - a. Male
 - b. Female
 - c. Other, _____
3. Age
Text input
4. Nationality
Text input
5. How many hours per week do you play videogames on average?
 - a. I do not play games
 - b. 1-3 hours
 - c. 4-6 hours
 - d. 7-9 hours
 - e. 10 or more hours
6. Do you consider yourself a gamer?
 - a. Yes
 - b. No
 - c. I'm not sure
7. I know the game Minecraft
 - a. Yes
 - b. No
 - c. I am not sure
8. I have played Minecraft before
 - a. Yes
 - b. No
 - c. I am not sure

Appendix B – Post-test survey

Please fill out this survey after you completed the game.

What do you think of the game?

What did you feel while playing the game?

Would you like to play other levels of the game?

What do you think is the purpose of the game?

How did it feel to win/lose the game?

What is your attitude towards Red Bull?

What do you think of the presence of Red Bull in the game?

What do you think of the advertisements of the game?

Appendix C - Instruction Texts

Dear participant,

Before playing the game, please read this document carefully.

Instructions for Singleplayer:

You will play the first level of the game “Red Bull Dungeon Escape”, which was made in Minecraft. The goal of the game is to overcome obstacles and win the level to get a reward. During the game, you can get items that help you to win, so look around carefully! Furthermore, there are some books in the game. After you read them, you get the option to either click “Done” or “Take book”. Please click on “done” and DO NOT take the book with you.

Listed below you can find instructions on the controls. As the controls are a bit tricky, there is also an in-game tutorial you can play to learn how to navigate through the game. Please take your time to get comfortable with the controls; the game will start when you enter the doors. If you have trouble with the controls during the game, you can use this document or ask your instructor for help.

Instructions for Competitive Multiplayer:

You will play the first level of the game “Red Bull Dungeon Escape”, which was made in Minecraft. The goal of the game is to overcome obstacles and win the level to get a reward, but only the player who finishes first will get it. During the game, you can get items that help you to win, so look around carefully!

Note: There are some books in the game. After you read them, you get the option to either click “Done” or “Take book”. Please click on “done” and DO NOT take the book with you.

Listed below you can find instructions on the controls. As the controls are a bit tricky, there is also an in-game tutorial you can play to learn how to navigate through the game. Please take your time to get comfortable with the controls. If you have trouble with the controls during the game, you can use this document or ask your instructor for help.

When you feel comfortable with the controls, please tell the other player. When both of you are ready, select who is player 1 and who is player 2, then go to your player door (1 or 2). The game will start when you walk through the door.

Instructions for Cooperative Multiplayer:

You will play the first level of the game “Red Bull Dungeon Escape”, which was made in Minecraft. The goal of the game is to overcome obstacles and win the level to get a reward. You

have to play together to win the level. During the game, you can get items that help you to win, so look around carefully!

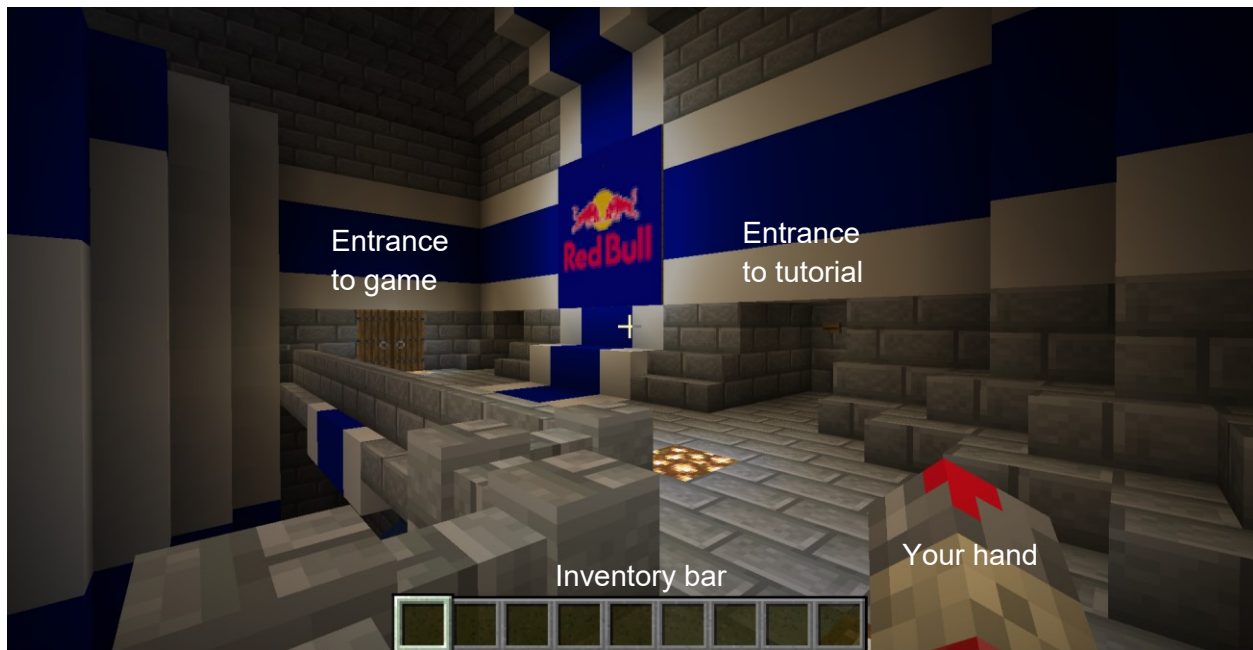
Note: There are some books in the game. After you read them, you get the option to either click “Done” or “Take book”. Please click on “done” and DO NOT take the book with you.

Listed below you can find instructions on the controls. As the controls are a bit tricky, there is also an in-game tutorial you can play to learn how to navigate through the game. Please take your time to get comfortable with the controls. If you have trouble with the controls during the game, you can use this document or ask your instructor for help.

When you feel comfortable with the controls, please tell the other player. When both of you are ready, select who is player 1 and who is player 2, then go to your player door (1 or 2). The game will start when you walk through the door.

Instructions for all:

The entrance hall:



At the bottom of the screen, there is an inventory bar with your current objects. The object you have selected will appear in your hand and is ready to use. You also have a larger inventory where you can store objects, which you can open and close by pressing E.

Controls:

Walk:	WASD
Sprint:	Double click and hold w
Jump:	Space
Move camera:	Mouse
Interact with objects:	Right click
Open/close inventory:	E
Select something in inventory bar:	Mouse wheel
Eating/Drinking:	select item in inventory bar and hold left click
Using swords:	aim and left click
Using bow:	hold left click, aim and let go left click
Enter minecart:	left click on it
Get out of minecart:	press shift

Appendix D - Full Coding Scheme

Main Theme	Sub-themes	Codes
Advergames	Advergame attitude	Like advergames Dislike advergames
	Previous experience with advergames	Has played an advergame Has not played an advergame Does not know if already played an advergame
	Willingness to play an advergame	Would play an advergame out of free will Would not play an advergame out of free will Playing an advergame depends on the fun of the game Willingness to play depends on brand
Advertisements	Colors	Amount of colors seen Type of color seen
	Billboards	Amount of billboards seen Placement of billboards Attitude towards billboards
	Red Bull cans	Amount of Red Bull cans found Amount of Red Bull cans consumed Attitude towards Red Bull cans
	Attitude towards advertisements	Positive Attitude Negative Attitude Neutral Attitude
	Preference of advertisement type	Passive advertisements

		Interactive advertisements
Communication	Amount of communication	No communication
		Little communication
		Only self-communication
		Does not want to communicate all the time
	Topics	Communication about controls
		Communication about Red Bull
		No communication about Red Bull
	Communication & game mode	Co-located = better communication
		Cooperative = more communication
	Friends/strangers	Influence on game mode
Friends = cooperative		
Strangers = Competitive		
Influence on game attitude		Would play more levels with friends
		Fun depends on the people you are playing with
		Playing with strangers = dislike
Game liking	Next level	Next level = no
		Next level = yes
		Next level = maybe
	Rating	Rate 2
		Rate 3
		Rate 3.5
		Rate 4
		Rate 5
	Positive	Easy

		Fun
Game mode	Negative	Confusing Frustration Minecart too difficult
	Game focus	Focus on game Focus on winning No focus on advertisements
	Cooperative	Like cooperative Dislike cooperative Prefer cooperative
	Competitive	Like competitive Dislike competitive Prefer competitive
	Co-located	Like co-located Dislike co-located Prefer co-located
	Online	Like online Dislike online Prefer online
	Singleplayer	Like singleplayer Dislike singleplayer Prefer singleplayer
	Winning	Winning = Good Winning = relief No feeling of winning
	Losing	Loosing = disappointing Loosing = neutral
Influence on game attitude		Game outcome did influence

		game liking
		Game outcome did not influence game liking
		Game outcome did not matter
		Game outcome might have an influence
Previous Gaming experience	Does play games	Casual gamer
		Gamer
		Sometimes plays games
	Does not play games	Former gamer
		Does not play games
Red Bull	Brand Attitude	Red Bull = dislike
		Red Bull = like
		Red Bull = don't care
	Product attitude	Drinks = Dislike
		Drinks = Like
		Drinks = Don't care
	Red Bull & the advergaming	Red Bull ads = like
		Red Bull ads = dislike
		Red Bull does have an influence on game liking
		Red Bull does not have an influence on game liking
		Red Bull made the game
		Red Bull cooperates with Minecraft
