

Influence of Advergaming on Brand Outcomes and Cross-Cultural Consumer Behaviour

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Abstract

People of different cultures have different ideas, values and morals, and the activities in which they engage reflect their backgrounds. The present study followed a quantitative cross-sectional design. It compared two aspects of advergaming player's behaviours in the UK and Saudi Arabia: cross-cultural consumer behaviour and brand outcomes. A questionnaire was completed by 482 participants selected by convenience sampling, and Pearson correlation coefficients were calculated. The results show that advergaming generates brand exposure and awareness when the user experience is positive, which creates a positive association between the game, player and brand. Brand performance also depends on the gamer's attitude, purchases and level of experience, and gamers from different cultures have different perceptions of the advertising messages delivered during an advergaming.

Keywords: Advergaming, brand outcomes, consumer behaviour, cross-culture, attitudes, purchase intention, actual behaviour, purchase, Saudi Arabia, United Kingdom

1. Introduction

According to DFC Intelligence, by the middle of 2020, there were approximately 3.1 billion video game users worldwide—nearly 40% of the world's population of almost 8 billion. In that year, USD 23.8 billion was earned from 200,374,000 players in North America; USD 20.5 billion was earned from 606,442,000 players in Europe, the Middle East and Africa; USD 4.0 billion was earned from 191,731,000 players in Latin America; and USD 43.1 billion in revenues was earned from video and computer game consumers in the Asia-Pacific region with 1,620,000,000 players by the end of 2021. Companies have long used in-game advertising to communicate brand messages to consumers, and in some cases, marketing messages are inserted directly into games, benefiting both game developers and advertisers (Smith and Sun, 2016). The Japanese game industry started bringing innovative gaming ideas to the global market in 1977 (De la Hera, 2019), including games like Mario and Donkey Kong, and the first advergaming was not intended for publicity, but nevertheless featured brand products and characters. The earliest example of such digital advergaming was *Datsun 280 Zzzap*, which was a racing car arcade game in which the only company name referenced was that of the sponsor (Mago, 2018; De la Hera, 2019).

McDonald's reinvented the advergaming landscape by collaborating with Atari, which had launched a spacecraft arcade game called *Lunar Lander*. McDonald's was added to the game as a safe landing spot, and their products were included as in-game rewards (De la Hera, 2019; Mago, 2018). Subsequently, brands started developing digital games with the explicit intention of promoting their products. These early advergaming were sent to users upon request, with the most prominent early example being the *Tooth Protectors* game (launched by Johnson and Johnson in 1983), which was designed to promote oral hygiene products (Mago, 2018; De la Hera, 2019). *Tooth Protectors* was one of the first advergaming—sometimes called *promogaming*—with an overt tie-in to retail products and was one of several released on the Atari 2600 platform that year (Mago, 2018). Others included Purina's *Chase the Chuck Wagon* and the M Network's *Kool-Aid Man*, which was one of the earliest and most prominent examples of commercially sponsored food placement in a video game. The goal of the game was to

satisfy “thirsties” using a Kool-Aid pitcher. The game was initially accessible for free through mail-order but was eventually made available in shops (Mago, 2018). The trend in advergaming came to a halt with the “video game crash” of 1983, when the market collapsed due to an abundance of poor-quality games.

Nevertheless, the effectiveness of advergaming has grown over time. Initially, companies simply placed their product or logo in the virtual context of the video game, but this proved ineffective because the players focused solely on the game and ignored the background product or logo (Ismail and Nasidi, 2018). Over time, companies started to develop games specifically to promote their brands, making the games freely accessible and enhancing both publicity and entertainment value (Ismail and Nasidi, 2018; De la Hera, 2019). These advergaming provided information about a particular product or service, such as a game that incorporates a car allowing players to learn about the car’s features (Ismail and Nasidi, 2018). Certainly, advergaming have been a component of the digital gaming business almost since its inception and are now part of both game culture and history. When an advergaming’s design aligns with digital gaming iconography (popularity, archetype, playability, preservation) and the promotional elements feature star brands with high recall, recognition and likeability, they can become timeless (Mago 2018). To improve players’ motivation to play, simple, accessible gameplay can also be supported by appropriate difficulty levels (De la Hera, 2019, Aktan and Koçak, 2020).

Modern advergaming are designed explicitly to promote an organisation’s product, brand or service; they can be played directly from the internet or digitally downloaded to any device (Smith and Sun, 2016). Companies (or brands) also use advergaming to obtain demographic and geographical data about their target customers and possible economic revenue streams (Smith and Sun, 2016). Lee and Faber (2007) explained that limited cognitive ability during gameplay can obstruct the successful encoding of embedded promotional queues (such as brand logos and product placement). Advergaming are persuasive regarding their commercial content in order to engage consumers and encourage a desire to purchase (van Berlo, van Reijmersdal and Eisend, 2021). Advertisers and businesses were among the first to adopt gamification, utilising it as a tool to improve the effectiveness of advertising campaigns, and despite global economic concerns, TechNavio (2020) recently predicted that the gamified advertising business would increase at a rate of roughly 20% annually over the next five years, reaching nearly USD 11 billion.

Previous research papers on the cross-cultural aspects of advertising and consumer behaviour have paid considerable attention to comparisons of Eastern and Western cultures (Cauberghe and De Pelsmacker, 2013), which have offered the opportunity to discover the Middle East market which is explored very less as compared to other regions . Video game revenues in the Middle East will reach USD 647 million in 2022 and are projected to grow at a rate of 7.42% annually by 2026 (Statista, 2021b). However, the gaming market in the Middle East is still growing compared to developed countries in the European market, like the United Kingdom. In the UK, the video game industry is worth about 7 billion in the 2020 while in Saudi Arabia the gaming market is worth 1 billion. The present study therefore focuses on the effect of advergaming on consumers from the Middle East and Northern Europe and explores the behaviours and attitudes of consumers from both regions.

1.1. Research Questions

Based on the aim of the study, the following research questions have been formulated:

Q1. How do advergaming impact brand outcomes?

Q2. Why do cross-cultural aspects need to be considered in the design of advergaming?

2. Literature Review

2.1 The Aim of Advergaming

Advergaming are developed to increase brand exposure and awareness through a positive user experience, ultimately creating a positive link between the game, the player and the brand (Aktan and Koçak, 2020; Munaretto, 2021; Sung and Lee, 2020). Advergaming employ the concept of brand equity, which involves associating a brand with a positive value, which occurs when gameplay is associated with a player’s positive arousal (Munaretto, 2021). It also leads to the creation of an environment that facilitates in the promotion of the brand. Advergaming generally require that players register and sometimes insist that they share scores with their social networks, thereby allowing brands to collect data about potential and current customers. This data makes it possible to customise advertising options, resulting in satisfaction and brand loyalty.

2.2 The Impact of Advergaming on Brand Outcomes

The outcomes can include brand recall, attitudes, purchase, intention to purchase and actual behaviours, each of which is discussed below.

2.2.1 Brand or Product Recall

Factors that positively influence recall in general include congruence (high product–advergame congruence), flow (higher concentration levels and arousal) and placement (in-game advertising) (Akcan, 2019; Çadırcı and Gungor, 2019). Discussing brand recall in particular, Vashisht and Sreejesh (2015) found that only inexperienced gamers who play games with prominent brand placements experience high brand recall. Vashisht (2019) and Vashisht and Pillai (2017) added another condition to ensure high recall: involvement. To guarantee high game involvement and thus high recall, gamers must possess high persuasive knowledge (Vashisht and Pillai, 2017). The type of message also enhances brand recall—Advergames offer opportunities for customers to interact with a brand, impacting their attention to and recall of it (Catalán, Martínez and Wallace, 2019; Sreejesh and Anusree, 2017)

According to Roettl, Waiguny and Terlutter (2016), advergames intensely arouse players, limiting their cognitive capacities in tasks unrelated to the game. Van Berlo, van Reijmersdal and Eisend (2021) explained that most examinations of the impact of advergames on brand recall have found that consumers are less likely to recall commercial information embedded in advergames, such as banners and the billboards within the game, than in other formats.

2.2.2 Attitude

Attitude is defined as a mind-set towards an object (such as a brand) and can be positive or negative (Wiemerslage, 2021). Attitudes are influenced by brand or product attributes, social influences, advertising and previous experience, and such influences can arise consciously or subconsciously and are felt over time (Wiemerslage, 2021).

Advergames blur the boundary between commercial and entertainment messages (Catalán, Martínez and Wallace, 2019), and the integration of products into the entertainment experience has been found to enable a transfer of positive effects from the game itself to the product or brand (Catalán, Martínez and Wallace, 2019), with any hedonic value experienced by players in advergames driving positive attitudes towards the brand (van Berlo, van Reijmersdal and Eisend, 2021). Paramitra, Aruan and Tumpal (2017) found that game–brand congruity informs players' brand attitudes, with consistency minimizing the effect while inconsistency maximizing it. while Chen (2017) found that players expressed more favourable attitudes towards advergames that they considered more attractive. Attractive as in games with competitive gameplays, reality based graphics and with a good storyline.

Players' attitudes are impacted by game–self congruity when the relationship is mediated by perceived enjoyment (flow) (Paramitra, Aruan and Tumpal, 2017), but flow impacts attitudes towards advergames rather than the brand directly (Hartini, 2020). Similarly, entertainment, telepresence and playfulness, which are features of flow, have all been found to be critical drivers of brand attitudes (Renard and Zhao, 2016; Catalán, Martínez and Wallace, 2019).

The type of message also influences attitude. According to Sung and Lee (2020), advergames with pro-social narratives are seen more favourably, and Tuten and Ashley (2016) also found that social advergames positively influence players' attitudes towards the game's sponsor. Competitive advergames have a more engaging effect (Chiu, 2019). Brand attitudes and willingness to buy are most favourable to non-profit brands (health foods) where profits are recognized, followed by commercial brands (health foods) and commercial brands with harmful effects (fewer health foods). (Ham, Yoon and Nelson 2016).

Friestad and Wright (1994) proposed a persuasion knowledge model which includes the consumer's understanding that the source of the advertising pattern is commercial but with a persuasive intention behind it. Vashisht et al (2015) stated that a slow-paced advergames where game products are less compatible, more persuasive subjects report higher brand recall and less positive attitude towards the brand than less convincing subjects. Vashisht and Pillai (2017) found that, when an advertised product was distinguished by the level of involvement required for a purchase (low- versus high-involvement products), prominent placement with low game involvement created a less favourable brand attitude than prominent placement with high brand involvement among subjects with high persuasion knowledge (awareness of the intent of the advergame). Attitudes towards advergames also influence the brand's image. (Wise Bolls, Kim, Venkataraman and Meyer, 2008; Vanwesenbeeck, Walrave and Ponnet, 2017; Hartini, 2020), brand image and aspects of flow, including customer engagement and entertainment (Al-Meshal, 2020), and attitudes towards in-game advertising (product placement) have been connected with advergame acceptance (Martí-Parreño, Ruiz-Mafé and Scribner, 2015), with gamers less likely to prefer the advergames which contains video ads as it disturbs them. (Evans, Wojdyski and Hoy, 2019).

2.2.3 Purchase

Chen (2017) stated that interactive advergames (advergame design) increase impulse purchases. It is found that brand attitudes are affected by more than simply beliefs, and it is vital to understand how an advertising message is transmitted and evaluated to cultivate a positive brand attitude. Attitudes towards adverts may also mediate between advertising effectiveness and customers' feelings, brand attitudes and purchase intentions. However, advergames include in-game advertising, consumer opinions may inform consumer behaviour. Advergames are designed with a persuasive message at their core, implying that the entire game is tailored to the message, and most studies to date have found that advertisements impact specific aspects of customer behaviour, such as purchase intent. In the past years advertisement was only restricted to newspapers, television etc. Advergaming is a newly introduced medium for advertisement which is very engaging and it is not just restricted to just youngsters but people from every age group are attracted towards it. (Rathee and Rajain 2019)

2.2.4 Purchase Intention

Purchase intention has been found to emanate from brand attitude and persuasion, but some research has found that advergames relate more directly to purchase intention; Catalán, Martínez and Wallace (2019) found that flow affects positive attitudes and purchase intention but did not specify whether purchase intention is affected by improved attitude or flow alone. Adis (2020) also found that the level of self-brand congruity determines purchase intention.

2.2.5 Actual Behaviour

According to van Berlo, van Reijmersdal and Eisend (2021), the behaviour displayed in advergames often imitates real-world behaviours, such as looking for target brands or selecting products. Previous research has found that approximately half of advergames include collecting brand logos and product packages as part of the game, while a fifth have in-game bonuses of some kind (Lee et al., 2009). Players are often rewarded for commercial behaviour in advergames, which could reinforce intention to purchase (Catalán, Martínez and Wallace, 2019; van Berlo, van Reijmersdal and Eisend, 2021; Vanwesenbeeck, Walrave and Ponnet, 2017).

2.3 Advergame Persuasiveness Versus Brand Outcomes

Arousal and pleasurable experiences in advergames have also been associated with increased persuasion. Van Berlo, van Reijmersdal and Eisend (2021) explained this phenomenon with reference to a unique psychological mechanism; their study explained that pleasure influences psychological responses, such as brand attitudes, through direct transfer, which means that individuals consider the positive effects in relation to a stimulus (brand) embedded within a context (advergame). An alternative explanation is that arousal influences cognitive psychological responses, such as purchase intention arising from excitement, which implies that a player may attribute residual excitement from gameplay to the embedded product, making it appear exciting. Previous research suggests that an advergame's content valence could be associated with the embedded brand and that evaluative conditioning therefore explains the implicit outcomes of advergames (van Berlo, van Reijmersdal and Eisend, 2021).

2.4 Advergames and Cross-Cultural Consumer Behaviour

Culture outlines the way in which people behave, differentiating one group from another. In the game industry, culture takes the form of national localisation, including the translation of content to a different language. Game content adaptation and culturally appropriate game elements are also ways to incorporate culture within game design, which can be a challenge for advergame designers because they are built specifically to convey brand messages. People from different cultures may have different attitudes towards advergames, which are mediated by the incorporation of the brand in the game. Few studies have been conducted that focus on the role of advergames from a cultural perspective, let alone within a cross-cultural paradigm.

In the field of advertising and marketing generally, understanding culture is critical because people have different sets of values that mediate their behaviour. Consumer involvement also differs between cultures because perceptions and attitudes towards a brand can be socially constructed (Wanick, Dunn, Ranchhod and Wills, 2019). It is therefore clear that there is a need to evaluate the impact of advergames on brand outcomes and cross-cultural consumer behaviour to ensure that the perceptions and attitudes of consumers are considered when designing advergames. This study will therefore seek to fill the gap in the literature examining the importance of cross-cultural consumer behaviour in advergame design and how advertising and marketing companies can make use of advergames to market their products and services by looking at brand recall, purchases, intention to purchase, attitudes and actual consumer behaviours.

3. Material and Methods

3.1 Study Design, Sample and Setting

This study uses a quantitative cross-sectional design, and the participants were selected from Saudi Arabia and the United Kingdom. The total sample size was 482 people—312 from the UK and 170 from Saudi Arabia. According to the *Raosoft* online calculator, the recommended sample size is 278 for a 95% confidence level and 5% margin of error.

3.2 Sampling Technique, Instrument and Data Collection

Participants were recruited using convenience sampling of people aged over 18 years who play advergaming. A survey questionnaire was created consisting of three sections. Every section had 15 questions, first part surveyed demographic details which contained Gender, Age, Ethnicity, Location, Education and Marital status, the second asked closed-ended questions about brand outcomes and advergaming which included questions about their experiences with different games, their choices, how persuasive they find advergaming, what engages them more in the advergaming and the third asked closed-ended questions about cross-culture consumer behaviour which included questions about brand awareness, consideration, purchase, usage and feedback. Items in sections 2 and 3 were answered using a 5-point Likert scale in which 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree. A total of 700 questionnaires were distributed by e-mail of which precisely 500 were returned; 18 were excluded as incomplete or from people who did not play advergaming, leaving a final sample size of 482.

3.3 Reliability of the Questionnaire

Cronbach's alpha coefficient was above 0.7, meaning that the questionnaire had good internal consistency.

3.4 Data Analysis

Data analysis was conducted using the Statistical Package of Social Sciences, version 23.0. Descriptive statistics—standard deviations, means and frequencies—were calculated for the items in the questionnaire. The relationships between advergaming and brand outcomes and between advergaming and cross-culture consumer behaviour were investigated using Pearson's correlation coefficient.

4. Results

4.1 Age of the Participants

Figure 1 shows the age profiles of the participants in Saudi Arabia and the UK. In both countries, respondents aged between 18 and 25 years dominated the sample, with 37.18% of the UK sample and 57.06% of the Saudi Arabia sample. The fewest respondents in both countries were from the 55+ age range—11.54% of the sample in the UK and 0% in Saudi Arabia. The Figure illustrates that the age distributions of the UK and Saudi Arabia respondents is quite different. The evaluation of the sampling points that the average age of the Saudi Arabia participants is around 28, and the average of the UK sample is around 34, with younger people dominating and the number of participants declining with increased age.

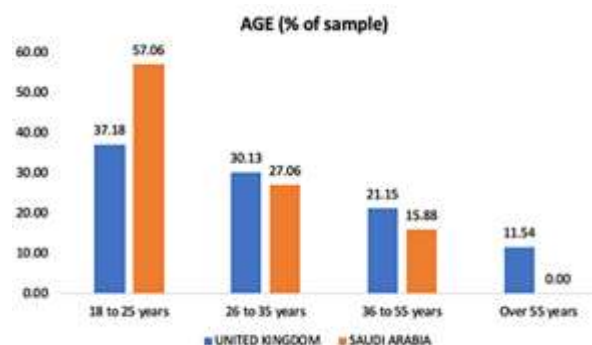


Figure 1. Age profile of respondents from Saudi Arabia and the UK

4.2 Brand Outcomes

These include brand recall behaviour, brand relationship, attitude and actual purchase. Table 1 shows the distribution and differences in characteristics of brand recall among the Saudi Arabia and UK participants.

Table 1. Brand recall description

Brand recall	SA	UK
Recalling	36.47%	52.56%
Ignoring	44.11%	20.51%
Engrossing	19.42%	26.93%

Most Saudi Arabia participants ignored ads displayed in games, with 44.11% stating that they do not care about brands in advergames. This is in contrast to UK respondents, 52.56% of whom reported recalling the ads displayed in games, with only 26.93% claiming ignorance of them. For UK players, 20.3% of the respondents enjoyed the game a lot and did not notice the ads (i.e., being engrossed/fully engaged), with only 19.42% of Saudi Arabia respondents reporting the same. This shows that SA players do not pay attention to advergames as attentively as UK customers do.

Table 2 shows the distribution of other brand outcomes across scales. Five-point Likert scales were used to measure the extent to which a participant agreed with the statement, with 1 denoting ‘strongly disagree’ and 5 indicating ‘strongly agree’.

Table 2. Brand outcome descriptive statistics

Variables	Country	Scale				
		1	2	3	4	5
Brand relationship	SA	25.88%	30.00%	29.41%	8.24%	6.47%
	UK	7.37%	10.89%	24.03%	36.85%	20.83%
Positive attitudes	SA	22.48%	31.95%	25.44%	12.42%	7.69%
	UK	4.80%	9.93%	25%	39.74%	20.51%
Actual purchase	SA	35.50%	23.07%	18.34%	11.83%	11.24%
	UK	7.37%	7.37%	22.43%	35.89%	26.92%

Table 3 shows the significant relationships between brand outcomes and cross-cultural consumer behaviour.

Table 3. Pearson Correlation Test

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig	95.0% Confidence level for Beta	
	Beta	Std error				Lower Boundary	Upper Boundary
Brand outcomes	87.84	6.385	0.45	13.45	0.000	65.155	99.506
Cross-Cultural Consumer behaviour	0.164	0.632	0.32	0.577	0.000	0.301	0.542

5. Discussion

This study sought to examine the influence of advergames on brand outcomes and cross-cultural consumer behaviour. Two research questions were asked—how advergames impact brand outcomes and why cross-cultural aspects needs to be considered during advergame design—and the current results indicate that advergames enhance brand exposure and awareness when the user experience is positive, creating a positive association between the game, player and brand. This is consistent with Aktan and Koçak, (2020), Munaretto, (2021) and Sung and Lee (2020), who all stated that advergames help to develop exposure and awareness for brands among players. The findings also relate to brand outcomes, including brand recall, attitudes, purchase, intention to purchase and actual behaviour of the players, which, if considered when designing advergames, could be of great help to advertisers and marketers. Gamers high persuasive knowledge because this type of message increases brand recall. This is in line with Vashisht and Pillai (2017) and Chiu (2019), who stated that social advergames are associated with high brand recall and that advergames offer the opportunity to interact with a brand in a way that impacts attention to and recall of it. The current study also found that players’ attitudes are directly influenced by flow of the game rather than brand attitude, which is consistent with Hartini (2020). The attractiveness of advergames whether they are of any type or category, enhances impulsive purchasing, and the intention to purchase originates from brand attitude and persuasion. The behaviour of players in advergames also duplicates behaviour in the real world because the choices that they made while playing games are similar to

those that they would make in real life decisions. In context with cross-cultural consumer behaviour, the study found that consumer involvement varies from one culture to culture as in the case of Saudi Arabia and UK. The study participants differ in terms of perceptions and attitude towards brand which might have been socially constructed. Even after considering participants of same age group from both countries the perceptions and purchasing power still was different among both the countries.

6. Study Implications

The study has substantial implications for brand managers and advertising practitioners regarding the selection of media suitable for brand advertising and strategic plans to enhance brand awareness and create high recall rates. Advergaming is a powerful platform for advertising, keeping in mind prominent brand placement. If the main motive of an advertiser is to develop a favourable or positive attitude towards a brand, they should try to conceal consumer persuasion knowledge when designing advergaming because it leads to critical processing of advertising and deep thinking, allowing more influential and effective advergaming to be designed.

7. Theoretical Assertions

Brand promotion is one of the main factors influencing consumer purchases. A customer's buying decision depends on how well a promotional strategy accords with his or her culture. Advergaming is usually created to enhance awareness among a target audience by creating a positive user experience, which is very impactful in brand recall, individual attitudes, purchases and intention to purchase.

8. Study Limitation and Recommendations

This study was limited to 18+ players and it was region-restricted. Future studies should use a larger age range and include regions in which the market for advergaming is growing.

9. Conclusion

This paper examined advergaming in terms of cross-cultural consumer behaviour and brand outcomes, comparing and contrasting Saudi Arabia and the United Kingdom. The study concluded that brand outcomes rely on brand recall, attitudes, purchase, intention to purchase and the actual behaviour of advergaming players and that players from different cultures have different perceptions and attitudes towards advertising messages delivered by advergaming.

References

- Adis, A. A. A. (2020). Use of Mobile Advergaming as Brand Communication Tool. *Journal of Social Transformation and Regional Development*, 2(1), 27-41. <https://doi.org/10.30880/jstard.2020.02.01.004>
- Akcan, D. (2019). *Flow experience and achievement of advergaming on software developers: An eye-tracking analysis* (Master's thesis).
- AKTAN, M., & KOÇAK, A. (2020). What is advergaming and what it is not? Recapping behavioural theories to understand advergaming. *Bingöl Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20, 229-248. <https://doi.org/10.29029/busbed.738050>
- Aldás Manzano, J., Martí Parreño, J., Ruiz Mafé, C., & Scribner, L. L. (2015). *The Role of Attitudes and Ethicality on Branded Video Games (Advergaming) Acceptance*. <https://doi.org/10.4018/978-1-4666-7357-1.ch038>
- Al-Meshal, S. A. (2020). Attitude towards Online Advergaming: An Empirical Study among Saudi Consumers. *International Journal of Business and Social Science*, 11(3). <https://doi.org/10.30845/ijbss.v11n3a11>
- Çadırcı, T. O., & Gungor, A. S. (2019). Gap between mobile and online advergaming: the possible effects of the optimal gaming experience-flow. In *Application of Gaming in New Media Marketing* (pp. 125-150). IGI Global. <https://doi.org/10.4018/978-1-5225-6064-7.ch008>
- Catalán, S., Martínez, E., & Wallace, E. (2019). Analysing mobile advergaming effectiveness: the role of flow, game repetition and brand familiarity. *Journal of Product & Brand Management*. <https://doi.org/10.1108/JPBM-07-2018-1929>
- Cauberghe, V. (2010). *De Pelsmacker, P. Opportunities and Thresholds for Advertising*.
- Chen, M. J. (2017). How Design Factors for Advergaming Impact Consumers' Attitudes and Behaviors: The Perspective of Engagement Theory. In *Proceedings of the 2017 International Conference on E-Business and Internet* (pp. 27-32). <https://doi.org/10.1145/3092027.3092037>
- Chiu, Y. P. (2019). Do social and competitive advergaming affect brand attitude in Asia? *International Journal of*

- Electronic Commerce Studies*, 10(1), 23-41. <https://doi.org/10.7903/ijecs.1722>
- de la Hera, T. (2019). *Digital gaming and the advertising landscape* (pp. 209). Amsterdam University Press. <https://doi.org/10.2307/j.ctvnp0j4g>
- Evans, N. J., Wojdowski, B. W., & Grubbs Hoy, M. (2019). How sponsorship transparency mitigates negative effects of advertising recognition. *International Journal of Advertising*, 38(3), 364-382. <https://doi.org/10.1080/02650487.2018.1474998>
- Ham, C. D., Yoon, G., & Nelson, M. R. (2016). The interplay of persuasion inference and flow experience in an entertaining food advergame. *Journal of Consumer Behaviour*, 15(3), 239-250. <https://doi.org/10.1002/cb.1564>
- Hartini, S. (2020). Mobile advergame: analysis of flow, attitudes and competitor trait as the moderating variable. *International Journal of Mobile Learning and Organisation*, 14(3), 322-337. <https://doi.org/10.1504/IJMLO.2020.108193>
- Ismail, H., & Nasidi, Q. Y. (2018). Adver-games and consumers: measuring the impact of advertising on online games. *International Journal*, 3(12), 35-40.
- Lee & Faber (2007). explained that limited cognitive ability during gameplay can obstruct the successful encoding of embedded promotional queues (such as brand logos and product placement).
- Lee, J., Park, H., & Wise, K. (2014). Brand interactivity and its effects on the outcomes of advergame play. *New Media & Society*, 16(8), 1268-1286. <https://doi.org/10.1177/1461444813504267>
- Lee, M., & Faber, R. J. (2007). Effects of product placement in on-line games on brand memory: A perspective of the limited-capacity model of attention. *Journal of advertising*, 36(4), 75-90. <https://doi.org/10.2753/JOA0091-3367360406>
- Mago, Z. (2018). The Concept of Timelessness Applied to Advergames. *Acta Ludologica*, 1(2), 18-33.
- Munaretto, A. (2021). *Looking into the mechanisms used in advergames to influence players* (Master's thesis, University of Twente).
- Paramitra, Y., Aruan, H., & Tumpal, D. (2017). Let's Playing Game: the Effects of Brand-game-self Congruities on Player's Attitude towards Brands in Advergames. *MIX: Jurnal Ilmiah Manajemen*, 7(1), 152351.
- Rathee, R., & Rajain, P. (2019). *Advergames: Factors, Attitude and Purchase Intention*. <https://doi.org/10.33601/effulgence.rdias/v17/iSpl2/2019/47-57>
- Renard, D., & Zhao, Z. (2016). What Affects Consumers' Brand Perceptions and Behaviors through Viral Promotional Advergames? Intrinsic Playfulness or Extrinsic Value of Prizes. In *15ème journée de recherche sur le marketing digital*.
- Roetl, J., Waiguny, M., & Terlutter, R. (2016). The persuasive power of advergames: A content analysis focusing on persuasive mechanisms in advergames. *Australasian Marketing Journal (AMJ)*, 24(4), 275-287. <https://doi.org/10.1016/j.ausmj.2016.10.001>
- Smith, M. W., & Sun, W. (2016). Game Advertising: A Systematic Literature Review. In *Proceedings of the LCBR European Marketing Conference* (Vol. 7).
- Sreejesh, S., & Anusree, M. R. (2017). Effects of cognition demand, mode of interactivity and brand anthropomorphism on gamers' brand attention and memory in advergames. *Computers in Human Behavior*, 70, 575-588. <https://doi.org/10.1016/j.chb.2017.01.033>
- Statista (2021). *Digital Media Report - Video Games*. Retrieved from <https://www.statista.com/outlook/dmo/digital-media/video-games/saudi-arabia>
- Sung, Y. H., & Lee, W. N. (2020). Doing good while playing: The impact of prosocial advergames on consumer response. *Computers in Human Behavior*, 106, 106-244. <https://doi.org/10.1016/j.chb.2020.106244>
- TechNavio. (2020). *E-learning market by end-users and geography – Forecast and analysis 2020–2024*.
- Tuten, T. L., & Ashley, C. (2016). Do social advergames affect brand attitudes and advocacy? *Journal of Marketing Communications*, 22(3), 236-255. <https://doi.org/10.1080/13527266.2013.848821>
- van Berlo, Z. M., van Reijmersdal, E. A., & Eisend, M. (2021). The gamification of branded content: A meta-analysis of advergame effects. *Journal of Advertising*, 50(2), 179-196. <https://doi.org/10.1080/00913367.2020.1858462>

- Vanwesenbeeck, I., Walrave, M., & Ponnet, K. (2017). Children and advergaming: the role of product involvement, prior brand attitude, persuasion knowledge and game attitude in purchase intentions and changing attitudes. *International Journal of Advertising*, 36(4), 520-541. <https://doi.org/10.1080/02650487.2016.1176637>
- Vashisht, D. (2019). Effect of interactivity and congruence on brand advocacy and brand acceptance. *Arts and the Market*. <https://doi.org/10.1108/AAM-01-2019-0008>
- Vashisht, D., & Pillai, S. S. (2017). Are you able to recall the brand? The impact of brand prominence, game involvement and persuasion knowledge in online-advergaming. *Journal of Product & Brand Management*. <https://doi.org/10.1108/JPBM-02-2015-0811>
- Vashisht, D., & Sreejesh, S. (2015). Effects of brand placement strength, prior game playing experience and game involvement on brand recall in advergaming. *Journal of Indian Business Research*. <https://doi.org/10.1108/JIBR-11-2014-0082>
- Vashisht, D., & Sreejesh, S. (2015). Impact of nature of advergaming on brand recall and brand attitude among young Indian gamers: moderating roles of game-product congruence and persuasion knowledge. *Young Consumers*. <https://doi.org/10.1108/YC-03-2015-00512>
- Wanick, V., Dunn, R., Ranchhod, A., & Wills, G. (2019). Analysing cross-cultural design in advergaming: a comparison between the UK and Brazil. *EAI Endorsed Transactions on Game-Based Learning*, 5(17), e1. <https://doi.org/10.4108/eai.13-9-2018.156150>
- Wiemerslage, L. (2021). *Advergaming: How players of different game modes experience the game and advertisements* (Master's thesis, University of Twente).
- Wise, K., Bolls, P. D., Kim, H., Venkataraman, A., & Meyer, R. (2008). Enjoyment of advergaming and brand attitudes: The impact of thematic relevance. *Journal of Interactive Advertising*, 9(1), 27-36. <https://doi.org/10.1080/15252019.2008.10722145>
- Wright, P., Friestad, M., & Boush, D. M. (2005). The development of marketplace persuasion knowledge in children, adolescents, and young adults. *Journal of Public Policy & Marketing*, 24(2), 222-233. <https://doi.org/10.1509/jppm.2005.24.2.222>

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