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## **The Effect of Pop-up Advertisements, Focusing on Players' Intention to Download New Games**

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### **Abstract**

The advancement of online gaming is an extraordinary evolution that occurred during the past era. At present, most game developers and marketers promote their new games through different types of advertisements displayed in existing online gaming channels. This is still an upcoming trend, especially in freemium games. The main objective of this research is to assess the significance of ad-related attributes and the attitude of players regarding their intention to download new games promoted in advertisements. This study assists game developers and marketers to improve the promotion of new games by assessing the impact of characteristics of pop-up advertisements that would affect the player's intention to download a new game. Infotainment, personalization, and attitude toward the advertisement are taken into consideration to assess the download intention of players. The impact of ad-related characteristics has been identified through an experimental model followed by a survey targeting the age group 18 to 25, considering 386 undergraduates belonging to Generation Z of the Sri Lankan university population, and analyzed using Structural Equation Modeling (SEM). Research studies on pop-up advertising and the download intention of players have not been conducted in a comprehensive context in the past studies. According to the results, infotainment, attitude, and personalization, all have a significant impact on download intention. Furthermore, the findings suggest that infotainment is the most significant factor in predicting download intention.

**Keywords:** Download Intention, Freemium Games, In-game Advertising, Online Gaming, Pop-up Advertisements

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### **01. Introduction**

Today, the Internet has become a very significant and fundamental part of our routine lives (Vashisht, 2017). For thousands of internet users, video games have assimilated into their daily lives, and summarized facts and figures illustrate that online gaming platforms have

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become one of the most popular types of entertainment (Computer & Game, 2015). Nowadays, most mobile applications ranging from news and knowledge to entertainment mobile gaming applications such as Temple Run or Candy Crush Saga are free of charge for users (Mattke et al., 2021). These freemium games are created by game developers, who have developed cost techniques whereby a game is offered to the player for free, but they may be charged for exclusive or functional features, and these games display commercials that encourage users to purchase more games. (Brackett & Carr, 2001). Since application developers need to monetize the fundamental app-development costs and the utilizing costs for maintenance, advertisements within apps, have become one of the key pillars in generating profit (Mattke et al., 2021). The majority of advertisers are using this strategy because of the direct influence on the user for appearing the right in their eyes (Hanbazazh & Reeve, 2021). Even though pop-up ads may be a distraction and an irritation to many users and can cause negative player attitudes because of their invasiveness, some users tend to click on the pop-up ads and go through the content of those advertisements. When more clicks are generated on in-app advertisements, it will definitely generate more revenue (AppsFlyer, 2019). Marketers and advertisers are utilizing in-game pop-up advertisements to advertise new games since it is a significant revenue stream for game creators (Mehrtens et al., 2018). In many houses, while playing and interacting with online video gaming sites, most users are experiencing pop-up ads very frequently. Constant exposure to these pop-up ads can grab consumers' attention, especially if there is a major impact on the advertising value, which can have a big impact on players' attitudes (Abbasi et al., 2021). Therefore, advertisers should focus more on factors such as the choice of the advertisement format, where and how the ad is displayed on the screen, and how to maximize the chances that individuals click on it (Mattke et al., 2021). Pop-up ads are still highly effective and perform admirably, but the problem with pop-up advertising is that most marketers are lacking the skills which are needed to use them successfully. This study focuses on selected characteristics of pop-up advertisements and attitudes towards ads and how those could impact the intention to download new games. This paper is divided into six sections, beginning with the introduction followed by the research problem. The second section consists of the critical literature review, conceptual model, and hypothesis. The Research methodology is discussed in the third section and the data analysis and the results are expressed in the fourth and fifth sections respectively. The Final section includes the conclusion of the study.

### **1.1. Research Problem**

Several research papers have been published about using pop-up advertisements effectively for promotion processes. The study done by Hussain et al., (2022) investigated how pop-up advertisements can influence gamers' perception of advertising value and their intent to download the promoted videogame. Another study was conducted analyzing the effects of multitasking and persuasion knowledge on evaluations of in-game advertising (IGA) (Korea et al., 2018). But studies related to using advertisements displayed in existing online games to promote new games among players seem to be limited. Hence, from this study, several characteristics of pop-up ads and their impact is examined considering the intention of a player to download new games. Based on the authors' understanding and the past research findings, a lack of research investigations on the download intentions of gamers can be seen among past studies, and this is an area unexplored by researchers in Sri Lanka. Furthermore, to the best of the authors' knowledge, previous research studies have not examined how the player's attitude can impact downloading new games. In other nations, a few publications

analyzing the intention to install new games have been published, but player attitudes have not been taken into consideration. Through this study, the following sub-topics will be addressed; the significance of the infotainment of a pop-up ad on the download intention, the significance of the personalization of a pop-up ad on the download intention, and the significance of the attitude of a player on the download intention.

## **02. Literature Review**

After reviewing 94 articles related to online in-game advertising, and using the keywords attached to this study, 77 relevant articles were found. An important model was identified in several articles, which was used as the foundational framework of the study. The model was developed by Ducoffe, (1995) by examining the informational and entertainment value of pop-up advertisements, as well as the irrigational nature and how those impact the advertising value.

### **2.1. Ducoffe's Advertising Value Model**

Ducoffe's advertising value model, proposed in 1995, identifies a distinct conceptual model about the value of an advertisement that consumers perceive in Social Media Advertising (SMAV). Ducoffe's approach examined the informative and entertaining value of pop-up adverts, in addition to the trigger value that depends on the player's willingness to download the ad-supported game.

### **2.2. Infotainment**

Infotainment, a blend of useful and engaging substances, has been viewed as a powerful approach to catching the consideration of buyers, especially those of more youthful ages (Kim & McMillan, 2008). Infotainment depicts how informative an advertisement is while being entertaining. Informativeness can be explained as the potential of advertising to notify users of different products and services so that users are delighted (Nik Najib et al., 2016). A good advertisement should inform the relevant message to the target group of people in the best possible way. When it comes to advertisements related to online games, all the features of the game, price, type of the game, target group of players, special offers, and ease of downloading or installing have either a direct or an indirect impact on the download intention of the player (Hamari et al., 2017). Given that advertising is considered a significant part of the content in the media, it's believed that entertainment is a major factor that decides the value of advertisements for consumers. Adolescents are drawn to games because their structure and appealing components motivate them to engage with them for a long time period (Ducoffe, 1995). Features like game structure, price, type, target audience, and ease of downloading can influence download intention in online gaming (Hamari et al., 2017).

*H1: Infotainment of a pop-up advertisement has a significant impact on a player's intention to download new games.*

### **2.3. Personalization**

Personalization of pop-up advertisements is crucial due to numerous research findings that show consumers favor tailored, pertinent commercials and find them more attracting and appealing (Malheiros et al., 2012). Through personalization in online gaming, game developers and advertisers can reach users specifically and accordingly initiate and grow the connection between advertisers and users (Nik Najib et al., 2016). Pop-up advertisements for online video games that are specifically tailored to the user may offer details about upcoming games or other relevant features (Abbasi et al., 2021). Previously conducted studies on online gaming have provided an amount of data, indicating that the kind of games picked by players can be affected by their personality traits, gender, and point of view. So, personalized choices and preferences of game players will have an impact on their intention to download new games

*H2: Personalization of a pop-up advertisement has a significant impact on a player's intention to download new games.*

### **2.4. Player Attitude**

Dealing with player attitudes toward in-game advertising is a vital component, which game developers and advertisers should focus upon. People's attitudes toward advertising in general influence the way they react to a specific advertisement (June & Mehta, 2000). There was a positive attitude among players as well as a generally negative attitude toward in-game advertising and advertising (Nelson et al., 2004). So far, research has only looked at the direct effect of gamers' general attitudes toward advertising. The way the players' attitude impacts the intention to download new games is a novel area discussed in this study. Nelson asserts that there is a positive relationship between players' attitudes toward product placement and advertising in general. The process by which in-game advertising and interaction impact the players' attitudes is called In-game advertising (IGA). People's attitudes toward advertising in general influence the way they respond to a specific advertisement (Mehta & Purvis, 2006), for example, it discovered that those journal readers' general sentiments toward advertising increased purchasing interest in response to specific adverts.

*H3: Player attitude regarding a pop-up advertisement has a significant impact on the download intention.*

### **2.5. Download Intention**

In terms of download intention, this study focuses on users' intentions to download a promoted new game while playing online games. A previous study discovered that individuals' behavioral intentions might be considered a key predictor of their actual behavior (Seo et al., 2018). 'If someone needs to determine the likelihood that a particular person will engage in a particular act, the most straightforward and probably the most effective thing someone can do is to inquire about that person whether or not he desires to perform that behavior,' (Hill et al., 1977, pp. 368). As a result, this study may conclude that an individual's desire to download a new game has a clear relationship with what they actually download. When measuring a person's intention toward anything, there are two basic components to

consider: cognitive and emotional components (G. Lee et al., 2011). Cognitive elements associated with mental processes of knowing are security, perceived value, and perceived ease of use. Specific feelings and sensations such as joy, pleasure, enthusiasm, and playfulness are associated with affective components (Nikhashemi & Valaei, 2018). Furthermore, (Pappas et al., 2019) according to the video game literature, mobile application expenses, perceived worth, quality of content, and gameplay are the most significant indicators of a player's intention to download a game. Furthermore, (Chinomona, 2013) identified user-perceived trust/security as a significant precondition for users' game-related download intention.

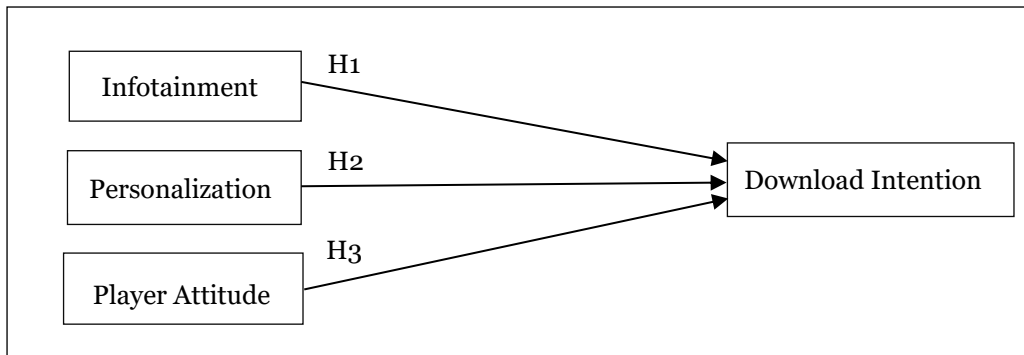


Figure 1: Conceptual Framework

### 03. Methodology

A self-administered survey using English, Sinhala, and Tamil languages was used to collect the responses of the participants. The implemented measures were created with the support of the previous literature backup, and each of them was evaluated on a Likert scale of one to five, with 1 being "strongly disagree" and 5 being "strongly agree." The questionnaire also gathered important demographic data (e.g. age category, gender, videogame-related preferences, etc.). One of the leading private universities was chosen to collect the data. According to Vashisht & Chauhan (2017), an average game player is 35 years of age, and 74% of the gamers are 18 or older, which supports the selection criteria of the sample (between ages 18 to 24 years). Before the data collection, several places and scenarios were picked randomly to collect the data from the students. Then, the randomly selected students were asked for their concerns regarding participating in the survey and then they were given a previously selected game (Temple Run) that has pop-up ads played after each round, to play. The experimental method was used along with a survey for data collection since it was the best way to remind players about the attributes of ads. After they have watched a pop-up advertisement, they were given a QR code to scan and that was directed to the self-administered survey. It was able to collect 420 responses and after filtering the data, 386 responses were remained for the analysis.

Table 1: Operationalization Table

Variable	Type of the Variable	Author
Infotainment	Independent	(Suki & Suki, 2007) (R. Wu et al., 2020) (Student et al., 2021)
Personalization	Independent	(Van den Broeck et al., 2020) (Noor et al., 2022) (E. B. Lee et al., 2017)
Player Attitude	Independent	(De Pelsmacker et al., 2019) (Catalán et al., 2019) (Mackay et al., 2009) (Nelson et al., 2004)
Download Intention	Dependent	(Amaro & Duarte, 2015) (Shaouf et al., 2016) (Wu & Boulevard, 2008)

### 3.1. Data Analysis

The obtained data set was cleaned and finalized for the analysis, excluding the responses of subjects who expressed that they do not play online games. After structuring the model, reliability and validity tests were conducted using both SPSS and AMOS. Then, the model fit was checked before the analysis.

Table 2: Respondent Profile

Measure	Item	Count	Column N %
Age	18 - 21	78	20.20%
	22 - 25	308	79.80%
Gender	Female	174	45.08%
	Male	212	54.92%
Do You Play Games?	Yes	386	100.00%
Game Playing Frequency	Everyday	72	18.70%
	Few Times a Month	122	31.60%
	Few Times a Week	141	36.50%
	Once a Week	51	13.20%
Pop-up Ad Preference	No	350	90.67%
	Yes	36	9.33%
Pop-up Ad Displaying	Never	14	3.60%

Frequency			
	Often	175	45.30%
	Rarely	26	6.70%
	Sometimes	171	44.30%

In this study, the total number of respondents recorded was 386, which consisted of 212 (54.9%) male participants and 174 (45.1%) female participants. According to the demographic table, the majority of the respondents fall under the age range of 22 - 25 years old which marked the count as 308 participants with a percentage of 79.8 % of the total response count which is a significant amount that is related to the research study.

#### 04. Results and Discussion

Factor loadings are the correlations between the constructs and each of their indicators. Factor loadings indicate that a certain factor represents a variable well. A factor loading which is greater than 0.7 is a good indicator (Hair et al., 2014) and a value above 0.5 is also acceptable. In this analysis, there are a few items that don't qualify as per the standardized criteria for factor loadings.

Table 3: Measurement Model Assessment

Construct	Composite Reliability	Cronbach's Alpha	AVE
Infotainment	0.809	0.803	0.879
Player Attitude	0.798	0.793	0.916
Personalization	0.692	0.688	0.778
Download Intention	0.819	0.850	0.794

However, considering the Average Variance Extracted (AVE), which should be at least 0.5 explaining 50% of the variable, (Kim and Han, 2014) those items could be considered acceptable. Reliability and validity are two very important aspects that indicate how well the model measures all the factors. And the main measures of reliability that are considered here are Cronbach's Alpha and Composite Reliability. A Cronbach's Alpha above 0.7 is good (Henseler et al., 2009) and according to the measurement model assessment table, there are three variables which have an alpha value above 0.7. A value between 0.6 and 0.7 is also considered acceptable.

Table 4: Model Fit Summary

Model	CMIN/DF	GFI	AGFI	NFI	RFI	CFI	RMSEA
Model	4.231	0.841	0.802	0.764	0.525	0.808	0.092

The CMIN/DF value indicated in the above table is 4.231, which is lesser than 5 and an acceptable value. A lower root mean square value signifies an improved model fit. The goodness of fit index (GFI) and Adjusted GFI also indicate a good model fit as the values are closer to 1. Normal fit index (NFI) can be referred as the values that scale between the saturated model and independent model and as in the above table, the value received, 0.764 can be further improved. The relative fit index (RFI) can be improved to get a closer value to 1. The Comparative Fit Index (CFI) has a value closer to 1, with 0.808 indicating an excellent fit. RMSEA value should be less than 0.09, but in this case, the value that received is 0.092 which will have to be improved.

Table 5: Structural Model Assessment

Path		Path Coefficients	Std error	t-value	p-value
Download Intention	<--- Infotainment	0.499	0.750	0.665	0.000
Download Intention	<--- Player Attitude	0.271	0.910	0.298	0.000
Download Intention	<--- Personalization	0.295	0.730	0.404	0.000

Using the path coefficients, effect sizes, and t values, the significance of the structural model can be tested (Rezaei et al., 2018). The path coefficients, in this case, indicate that all three independent factors (information, player attitude, and personalization) have a positive and significant impact on the dependent variable (download intention). The path coefficient for infotainment is 0.499, implying that one-unit increase in infotainment is connected with a 0.499-unit rise in download intention. Similarly, the path coefficient for player attitude is 0.271, indicating that one-unit increase in player attitude corresponds to a 0.271 unit increase in download intention, whereas the path coefficient for personalization is 0.295, indicating that one-unit increase in personalization corresponds to a 0.295 unit increase in download intention. Furthermore, the t-values and p-values indicate the statistical significance of the correlations between the variables. All of the t-values in this scenario exceed the crucial value of 1.96, showing that the coefficients are statistically significant at the 5% level. The p-values are all less than 0.05, demonstrating the coefficients' statistical significance.

Overall, the findings imply that infotainment, player attitude, and personalization are the key characteristics that can influence freemium game players' download intentions. Developers should keep these variables in mind when designing and deploying in-game adverts in order to optimize their effectiveness while minimizing their negative impact on user experience.

## 05. Conclusion

As the main objective of this study was to look into the impact of ad characteristics in the freemium games on players' intention to download a new game, after analyzing the collected data, it was concluded that the personalization, infotainment, and the player's attitude toward pop-up ads have a substantial impact on players' intention to download new games. These discoveries have significant theoretical and practical ramifications for the current body of knowledge on in-game advertising and pop-up ads by identifying the qualities of ads that are most effective in promoting game downloads among Sri Lanka's Gen Z demographic. In



practice, the study helps marketers and game developers to create more effective in-game advertising techniques that improve game downloads and income. This study, however, is not without its limitations. One significant weakness is the study's focus on only one age group and one country, which may restrict the findings' generalizability. Future research should look into the impact of ad characteristics on downloads across various age groups and cultures. Furthermore, this study only examined the effect of pop-up advertising on players' intentions to download new games; future game research should investigate players' actual behavior in downloading games after being exposed to pop-up adverts.

The current study has various theoretical implications for the existing literature on the impact of ad characteristics on freemium game users' intention to download a new game. The study can guide future research in the field of freemium game advertising by giving a more nuanced knowledge of the impact of ad attributes on players' views and behavior. Furthermore, the study's findings have a number of practical ramifications for game makers and marketers. The study's findings can be used by game developers to better develop their freemium game advertising strategy. Game makers may improve the user experience and increase the possibility of players who download a new game by studying the influence of ad infotainment, player attitude, and ad personalization on players' attitudes and behaviors. Advertisements can be placed during natural intervals or transitions inside a game, for example, to enhance the likelihood of players noticing the advertisements. Furthermore, producers can use ad content to attract and maintain players by offering information about similar kinds of new games, perks and features, awards, and incentives that might give the players an idea that the advertised new game is better. Marketers can build advertising tactics that resonate with their target audience by examining the influence of the variables that have been taken for this study on players' attitudes and behaviors. Marketers can also create other advertising tactics, like in-game adverts and sponsored content of new games, to target gamers who use ad-blockers and improve advertising efficacy. Considering the significance of the attributes of pop-up ads; personalization, infotainment, and player attitude, despite the fact that this study cannot isolate the specific effect of pop-up ad timing, intervals, duration, or frequency, it is expected that these will be the major forces of user-related advertising value. Similarly, it calls for the management of these factors to provide personalized, valuable pop-up advertising.

## References

- Abbasi, A. Z., Shah, M. U., Rehman, U., Hlavacs, H., Ting, D. H., & Nisar, S. (2021). The Role of Personality Factors Influencing Consumer Video Game Engagement in Young Adults: A Study on Generic Games. *IEEE Access*, 9, 17392–17410. <https://doi.org/10.1109/ACCESS.2021.3053207>
- Amaro, S., & Duarte, P. (2015). An integrative model of consumers' intentions to purchase travel online. *Tourism Management*, 46, 64–79. <https://doi.org/10.1016/j.tourman.2014.06.006>
- AppsFlyer*. (2019). <https://www.appsflyer.com/company/newsroom/pr/appsflyer-performance-index-2019/>
- Brackett, L. K., & Carr, B. N. (2001). Cyberspace advertising vs. other media: consumer vs. mature student attitudes. *Journal of Advertising Research*, 41(5), 23–32. <http://search.ebscohost.com/login.aspx?direct=true&db=epref&AN=JAR.DA.BC.BRACKETT.CAVOM&lang=fr&site=bsi-live>

- Catalán, S., Martínez, E., & Wallace, E. (2019). The role of flow for mobile advergaming effectiveness. *Online Information Review*, 43(7), 1228–1244. <https://doi.org/10.1108/OIR-06-2018-0198>
- Chinomona, R. (2013). The influence of perceived ease of use and perceived usefulness on trust and intention to use mobile social software. *African Journal for Physical, Health Education, Recreation and Dance*, 19(June), 258–273.
- Computer, A. T. H. E., & Game, V. (2015). *ESSENTIAL*.
- De Pelsmacker, P., Dens, N., & Verberckmoes, S. (2019). How ad congruity and interactivity affect fantasy game players' attitude toward in-game advertising. *Journal of Electronic Commerce Research*, 20(1), 55–74.
- Ducoffe, R. H. (1995). How consumers assess the value of advertising. *Journal of Current Issues and Research in Advertising*, 17(1), 1–18. <https://doi.org/10.1080/10641734.1995.10505022>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2014). Corrigendum to “ Editorial Partial Least Squares Structural Equation Modeling : Rigorous Applications , Better Results and Higher Acceptance ” [ LRP 46 / 1-2 ( 2013 ) 1 e 12 ]. *Long Range Planning*, 47(6), 392. <https://doi.org/10.1016/j.lrp.2013.08.016>
- Hamari, J., Alha, K., Järvelä, S., Kivikangas, J. M., Koivisto, J., & Paavilainen, J. (2017). Why do players buy in-game content? An empirical study on concrete purchase motivations. *Computers in Human Behavior*, 68, 538–546. <https://doi.org/10.1016/j.chb.2016.11.045>
- Hanbazah, A., & Reeve, C. (2021). Pop-up Ads and Behaviour Patterns: A Quantitative Analysis Involving Perception of Saudi Users. *International Journal of Marketing Studies*, 13(4), 31. <https://doi.org/10.5539/ijms.v13n4p31>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20(January), 277–319. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Hill, R. J., Fishbein, M., & Ajzen, I. (1977). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. *Contemporary Sociology*, 6(2), 244. <https://doi.org/10.2307/2065853>
- Hussain, A., Abbasi, A. Z., Hollebeek, L. D., Schultz, C. D., Ting, D. H., & Wilson, B. (2022). Videogames-as-a-service: converting freemium- to paying-users through pop-up advertisement value. *Journal of Services Marketing*, 36(3), 398–415. <https://doi.org/10.1108/JSM-05-2020-0164>
- June, M., & Mehta, A. (2000). <2000-Advertising Attitudes and Ads Effectiveness.pdf>. 40(3).
- Kim, J., & McMillan, S. J. (2008). Evaluation of internet advertising research: A bibliometric analysis of citations from key sources. *Journal of Advertising*, 37(1), 99–112. <https://doi.org/10.2753/JOA0091-3367370108>
- Korea, S., Forks, G., Forks, G., & Korea, S. (2018). Mobile game users' evaluations of in-game advertising : role of multitasking and persuasion knowledge Yoori Hwang Joonghwa Lee Soojung Kim Se-Hoon Jeong \*. *Int. J. Mobile Communications*, 16(5), 557–572.
- Lee, E. B., Lee, S. G., & Yang, C. G. (2017). The influences of advertisement attitude and brand attitude on purchase intention of smartphone advertising. *Industrial Management and Data Systems*, 117(6), 1011–1036. <https://doi.org/10.1108/IMDS-06-2016-0229>
- Lee, G., Lee, J., & Kwon, S. (2011). Use of social-networking sites and subjective well-being: a study in South Korea. *Cyberpsychology, Behavior and Social Networking*, 14(3), 151–155. <https://doi.org/10.1089/cyber.2009.0382>

- Mackay, T., Ewing, M., Newton, F., & Windisch, L. (2009). The effect of product placement in computer games on brand attitude and recall. *International Journal of Advertising*, 28(3), 423–438. <https://doi.org/10.2501/S0265048709200680>
- Malheiros, M., Jennett, C., Patel, S., Brostoff, S., & Sasse, M. A. (2012). Too close for comfort: A study of the effectiveness and acceptability of rich-media personalized advertising. *Conference on Human Factors in Computing Systems - Proceedings*, 579–588. <https://doi.org/10.1145/2207676.2207758>
- Mattke, J., Maier, C., Reis, L., & Weitzel, T. (2021). In-app advertising: a two-step qualitative comparative analysis to explain clicking behavior. *European Journal of Marketing*, 55(8), 2146–2173. <https://doi.org/10.1108/EJM-03-2020-0210>
- Mehrtens, N., Rosenboom, I., Chen, T., & Raeside, R. (2018). Deriving revenue from in game adverts in on-line mobile games. *Entertainment Computing*, 27(April), 101–109. <https://doi.org/10.1016/j.entcom.2018.04.005>
- Mehta, A., & Purvis, S. C. (2006). Reconsidering recall and emotion in advertising. *Journal of Advertising Research*, 46(1), 49–56. <https://doi.org/10.2501/S0021849906060065>
- Nelson, M. R., Keum, H., & Yaros, R. A. (2004). Advertainment or Adcreep Game Players' Attitudes toward Advertising and Product Placements in Computer Games. *Journal of Interactive Advertising*, 5(1), 3–21. <https://doi.org/10.1080/15252019.2004.10722090>
- Nik Najib, N. M., Kasuma, J., & Bibi, Z. B. H. (2016). *Relationship and Effect of Entertainment, Informativeness, Credibility, Personalization and Irritation of Generation Y's Attitudes towards SMS Advertising*. 213–224. <https://doi.org/10.15405/epsbs.2016.11.02.20>
- Nikhashemi, S. R., & Valaei, N. (2018). The chain of effects from brand personality and functional congruity to stages of brand loyalty: The moderating role of gender. *Asia Pacific Journal of Marketing and Logistics*, 30(1), 84–105. <https://doi.org/10.1108/APJML-01-2017-0016>
- Noor, U., Mansoor, M., & Shamim, A. (2022). Customers create customers!–Assessing the role of perceived personalization, online advertising engagement and online users' modes in generating positive e-WOM. *Asia-Pacific Journal of Business Administration*. <https://doi.org/10.1108/APJBA-11-2021-0569>
- Pappas, I. O., Mikalef, P., Giannakos, M. N., & Kourouthanassis, P. E. (2019). Explaining user experience in mobile gaming applications: an fsQCA approach. *Internet Research*, 29(2), 293–314. <https://doi.org/10.1108/IntR-12-2017-0479>
- Rezaei, S., Emami, M., & Ismail, N. (2018). Paid internet advertising (PIA) and frequency of apps-buying decisions: Insights from the retail enterprises in an emerging market. *Journal of Enterprise Information Management*, 31(3), 463–487. <https://doi.org/10.1108/JEIM-08-2017-0113>
- Seo, Y. nam, Kim, M., Lee, D., & Jung, Y. (2018). Attention to eSports advertisement: effects of ad animation and in-game dynamics on viewers' visual attention. *Behaviour and Information Technology*, 37(12), 1194–1202. <https://doi.org/10.1080/0144929X.2018.1488993>
- Shaouf, A., Lü, K., & Li, X. (2016). The effect of web advertising visual design on online purchase intention: An examination across gender. *Computers in Human Behavior*, 60, 622–634. <https://doi.org/10.1016/j.chb.2016.02.090>
- Student, M. T., Kumar, R. R., Ommets, R. E. C., Prajapati, A., Blockchain, T.-A., MI, A. I., Randive, P. S. N., Chaudhari, S., Barde, S., Devices, E., Mittal, S., Schmidt, M. W. M., Id, S. N. A., PREISER, W. F. E., OSTROFF, E., Choudhary, R., Bit-cell, M., In, S. S., Fullfillment, P., ... Fellowship, W. (2021). *Frontiers in Neuroscience*, 14(1), 1–13.

- Suki, N. M., & Suki, N. M. (2007). Mobile phone usage for m-learning: Comparing heavy and light mobile phone users. *Campus-Wide Information Systems*, 24(5), 355–365. <https://doi.org/10.1108/10650740710835779>
- Van den Broeck, E., Poels, K., & Walrave, M. (2020). How do users evaluate personalized Facebook advertising? An analysis of consumer- and advertiser controlled factors. *Qualitative Market Research*, 23(2), 309–327. <https://doi.org/10.1108/QMR-10-2018-0125>
- Vashisht, D. (2017). How gamers process in-game brand placements under different game-involvement conditions. *Management Research Review*, 40(4), 471–490. <https://doi.org/10.1108/MRR-07-2015-0163>
- Vashisht, D., & Chauhan, A. (2017). Effect of game-interactivity and congruence on presence and brand attitude. *Marketing Intelligence and Planning*, 35(6), 789–804. <https://doi.org/10.1108/MIP-01-2017-0018>
- Wu, J., & Boulevard, C. B. (2008). Why They Enjoy Virtual Game Worlds? an Empirical Investigation. *Online*, 9(3), 219–230. <http://www.csulb.edu/journals/jecr/issues/20083/paper4.pdf>
- Wu, R., Wang, G., & Yan, L. (2020). The effects of online store informativeness and entertainment on consumers' approach behaviors: Empirical evidence from China. *Asia Pacific Journal of Marketing and Logistics*, 32(6), 1327–1342. <https://doi.org/10.1108/APJML-03-2019-0182>