



Inspiration by Pop-up Advertising among the Community in Batam and Consumer

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A B S T R A C T

The rapid increase in the use of Information and Communication Technology (ICT) in society has affected significant changes in entertainment media specifically in the field of video games. Advertisements in video games can influence user behavior, particularly in Inspired-To. To learn more about Inspired-To and how it can influence the behavior of video game players, the author will administer a questionnaire (N=390) and conduct interviews (N=30) with video game players. The authors of this study discovered that users were contented with the results of pop-up advertisements if the content was entertaining and provided incentives. The author also notes that each of the advertisements is entertaining and that providing incentive benefits can enhance the value of the advertisement. The author discovers that a strong ad value can inspire users to discover something new, which will then inspire them to download the new game advertised by the pop-up ad. This research will assist users in identifying factors that increase the likelihood that they will acquire a new game..

1. INTRODUCTION

1.1. Research Background

The rapid increase in the use of information and communication technology (ICT) in society has affected significant changes in entertainment media. In entertainment media, online games have become a source of entertainment that has a positive impact on players of all ages [1]. In Indonesia, there are as many as 94.5% of internet users who play video games with an age range of 16-64 years. We are Social noted that 68.1% of internet users who play video games use smartphones. Then, as many as 83.6% of internet users play video games using other gadgets.

As the video game industry grows, video game opportunities can open up new avenues of revenue generation development, advertising, and game marketing. This can provide the possibility that advertising in video games can become a new goal in the world of advertising [2]. Players tend to play games for a very long time so online games will remain relevant in the market for a very long time [3]. This can get the attention of advertisers and developers to consider online games as the right medium for

raising awareness, promoting features in-game, and influencing the inspiration of the players.

In general, advertising aims to direct users to a website where the product can be purchased or view the website's commercials. The ads work when a website opens a new web browser window (no user input) to display a single ad; it is a small window that appears over the website being viewed. In video games, the ad works while in the game which will bring up an ad pop-up. These ads can appear at the start of the game, when the game has ended, or when the user wants to get a prize by watching the ad first. Ads appear pop-up; it can be timed to appear or it can start when the user clicks on the provided link. Usually, advertising pop-ups can be deleted by pressing the "x" button at the top right of the content.

However, the use of advertising still needs to be studied more deeply, bearing in mind that advertising media is often responded to negatively by users. Advertising is seen as a medium that is annoying and disliked by users [4]. So, users sometimes do various ways to avoid advertisements that appear to them. According to previous research, advertisements must be considered good by consumers to be effective [5]. This is because advertisements that are considered good by consumers can attract their attention and their curiosity about the content promoted in



these advertisements. If an advertisement has got the user's attention, it can increase their engagement and can affect their inspired state.

1.2. Literature Review

This research was conducted based on the results of research of Ref. [6] which discussed the effect of the value of pop-up advertisements in online video games on the inspiration of gamers. This study uses a quantitative approach method, namely by distributing questionnaires to gamers in online video games with a sample of 321 samples. The analysis of this study uses Partial Least Squares-based Structural Equation Modeling (PLS-SEM) with the results of the research namely proving that the advertising value of pop-up ads positively influences the state of being inspired-by, which in turn can determine the state of being inspired-for gamers.

Another study conducted by Ref. [7] discussed the effect of the value of pop-up ads on advertising attitudes and their impact on purchase intentions. This study uses a quantitative approach method, namely by distributing questionnaires to people who have received pop-up advertisements on their mobile devices, a sample of 200 respondents was obtained. This study used Structural Equation Modeling (SEM) and AMOS analysis with the results of the study proving that the value of pop-up advertisements on mobile devices was assessed as "low", informativeness was assessed as "medium", and annoyance was assessed as "high" so that the attitude of respondents towards pop advertisements -up on mobile devices is rated "moderate" and respondents' purchase intention for products in mobile device pop-up ads is rated "low".

Another study was conducted by Ref. [8] who examined the effectiveness of pop-up advertisements on social media for students using the Facebook application. This study used a qualitative approach by conducting interviews with 35 people. The results of this study prove that pop-up ads can influence buying a product, then pop-up ads are very effective for social media users, especially Facebook social media users.

In this study, we will examine the effect of pop-up ads based on research by Ref. [6], [7]. The author will use a research model based on Ref. [6], [7] with the variables studied being Entertainment, Irritation, Incentive, Advertising Value, Inspired-By, and Inspired-To. The author will also distribute questionnaires to young video game users according to research [6], [7] and conduct research-based interviews [8]. The results of this study will be analyzed using the Structural Equation Modeling (SEM) approach according to research by Ref. [6], [7] and using the AMOS application according to research [7].

1.3. Research Objective

This research was conducted to analyze the effect of advertising value pop-ups on the inspiration of teenagers who play video games, so knowing this analysis can prove how much interest everyone has in downloading new games from advertisements pop-ups to teenagers in Batam City. The results of this study are expected not only to provide practical benefits to the industry in implementing advertising strategies but are also expected to contribute academically and enrich the literature related to advertising research pop-ups in video games.

2. MATERIALS AND METHODS

2.1. Materials

The population of this study includes people who are residing in Batam City, especially teenagers. This research was conducted through a quantitative approach. The model in the research used is an adaptation of the research model conducted by [6]. In this study, an investigation will be carried out on Advertising Value which is influenced by Entertainment, Irritation, and Incentive in pop-up advertisements for Inspired-By to Inspired-To teenagers in Batam City.

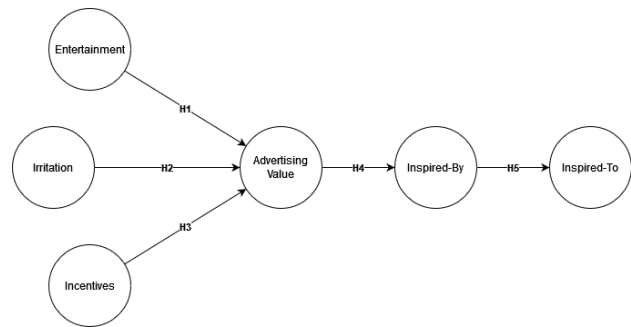


Fig. 1 Research Model

H1: The Advertising Value of pop-up ads influences Entertainment for video game users in Batam City.

H2: The Advertising Value of pop-up ads affects the Irritation of video game users in Batam City.

H3: The Advertising Value of pop-up ads affects the Incentives for video game users in Batam City.

H4: The Advertising Value of pop-up ads influences the Inspired-By state of video game users in Batam City.

H5: The Inspired-By state affects the Inspired-To condition of video game users in Batam City.

Questionnaires will be used in obtaining data as material for discussion in this study. The questionnaire was made by the instruments in the research that had been done previously. The following are the instruments that will be used in this study (Table 1).

2.2. Analytical methods

This study used the SPSS application with the SEM analysis method (Structural Equation Modeling). SEM or Structural Equation Modeling is one of the analytical techniques that can enable the testing of a series of relationships in a stimulant manner. SEM aims to present data in achieving a research objective and can apply many models in achieving answers to a series of research problem formulations [9]. The application of the SEM method uses SPSS and AMOS applications. This research is about the influence of advertising pop-ups in video games on each user in the factors of Entertainment, Irritation, Incentive, Advertising Value, Inspired-By, and Inspired-To.

Table 1. Operational Definitions of Variables

Variable	Indicator
Entertainment	1. I find pop-up ads while playing video games interesting. 2. I find pop-up ads while playing video games enjoyable. 3. I find pop-up ads while playing video games entertaining. 4. I find pop-up ads during video gameplay exhilarating.
Irritation	1. I find pop-up ads when playing video games annoying. 2. I find pop-up ads while playing video games annoying. 3. I find pop-up ads during video game play annoying.
Incentive	1. I am satisfied with getting pop-up ads during video game play offering rewards. 2. I took action to get pop-up ads during video game play offering rewards. 3. I respond to pop-up ads during video gameplay to get incentives
Advertising Value	1. I find pop-up ads during video games useful. 2. I find the pop-up ads during video game play very valuable. 3. I feel that pop-up ads during video gameplay are important.
Inspired-By	1. During video game play, pop-up ads stimulate my imagination. 2. During video game play, pop-up ads intrigue me. 3. During video game play, pop-up ads give me new ideas. 4. While playing video games, pop-up ads found something new for me.
Inspired-To	1. After watching the pop-up ad, I feel the urge to download a new game. 2. After watching the pop-up ad, I feel the urge to download a new game. 3. After watching the pop-up ads, my interest in downloading new games has increased. 4. After watching pop-up ads, I am motivated to download new games

3. RESULT AND DISCUSSION

3.1. Result

Based on the results of collecting questionnaires, the authors obtained 385 respondents. Of the 385 samples, 385 samples were eligible to be tested, which means that all samples received could be tested in this study. The questionnaire was given to find out how much influence pop-up ads in video games have on the inspired state of the people in Batam City where various questions have been provided in Table 2.

Table 2. Respondent Data

Measure	Options	N	Percentage (%)
Gender	Male	349	90.65%
	Female	36	9.35%
Age	<17 Years	61	15.8 %
	17 – 21 Years	301	78.2 %
	>21 Years	23	6 %
Have played or are currently playing games	Yes	385	100 %
	No	0	0 %
How often do play video games	Often	247	64.16 %
	Sometimes	97	25.19 %
	Seldom	41	10.65 %
	Never	0	0 %

Table 2 states that the questionnaire was filled out by respondents who were male, totaling 349 people from a total of 385 samples obtained with a percentage of 90.65% while as many as 36 (9.35%) respondents who filled out the questionnaire were female. The table shows that all the samples obtained are

respondents who have played or are currently playing video games with a total of 385 respondents. Table 2 also shows that 247 (64.16%) of respondents often play video games, 97 (25.19%) of respondents play video games occasionally, and 41 (10.65%) of respondents rarely play video games.

Table 3. Assessment of Measurement Model

Study-Constructs	Items	Indicator Loadings	Average	Cronbach's Alpha
Entertainment	EN01	0.959	0.956	0.968
	EN02	0.943		
	EN03	0.962		
	EN04	0.960		
Irritation	IR01	0.960	0.958	0.954
	IR02	0.948		
	IR03	0.967		
Incentive	IN01	0.955	0.962	0.959
	IN02	0.964		
	IN03	0.968		
Advertising Value	AV01	0.957	0.955	0.950
	AV02	0.944		
	AV03	0.965		
Inspired-By	IB01	0.953	0.955	0.967
	IB02	0.946		
	IB03	0.959		
	IB04	0.960		
Inspired-To	IT01	0.961	0.955	0.967
	IT02	0.941		
	IT03	0.954		
	IT04	0.962		

The results from Table 3 show that the reliability of the data has been estimated and the value of the Cronbach Alpha in each variable is higher than 0.7 which proves that all of these variables

are declared valid. Before testing the hypothesis in this study, the goodness of fit was tested first. Goodness of Fit is a goodness of fit index which is usually used in statistical hypothesis testing, goodness of fit is obtained by using the asymptotic method. The goodness of fit test aims to describe how well a model fits a series of observations [10]. The goodness of fit experiment is based on several criteria shown in Table 4 such as the calculation of Chi-Square, Probability, CMIN/DF, Goodness Fit Index (GFI), AGFI, Tucker-Lewis Index (TLI), CFI, and so on. The following results are obtained based on data processing using the AMOS application:

Table 4. Goodness of Fit

Criteria	Results
Chi-Square	4796.480 (fit)
Probability	0.000 (unfit)
CMIN/DF	25.650 (fit)
GFI	0.573 (unfit)
AGFI	0.473 (unfit)
TLI	0.713 (unfit)
CFI	0.744 (unfit)
RMSEA	0.253 (unfit)

From the results of the experiment in Table 4, several criteria do not meet the minimum requirements (unfit). However, due to several other criteria that have met the minimum requirements, the entire model can be considered fit. Therefore, the hypothesis experiment can be continued in this study.

Table 5. Estimation of Hypothesis Results

			Estimate	S.E.	C.R.	P	Remarks
AV	←	EN	.641	.024	26.596	***	Accepted
AV	←	IR	-.022	.009	-2.598	.009	Not Accepted
AV	←	IN	.401	.016	24.616	***	Accepted
IB	←	AV	.973	.039	24.844	***	Accepted
IT	←	IB	1.005	.034	29.790	***	Accepted

In Table 5, the estimation states that Entertainment has a significantly positive influence on Advertising Value with a coefficient of 0.641. Then, the Irritation variable has a negative effect on Advertising Value with a coefficient value of -0.022. Then, the Advertising Value variable has a significantly positive effect on the Inspired-By variable with a value of 0.973. In addition, Inspired-To is also positively influenced by Inspired-By significantly with a coefficient of 1.005. All hypotheses that support this theory have been proposed in the previous discussion.

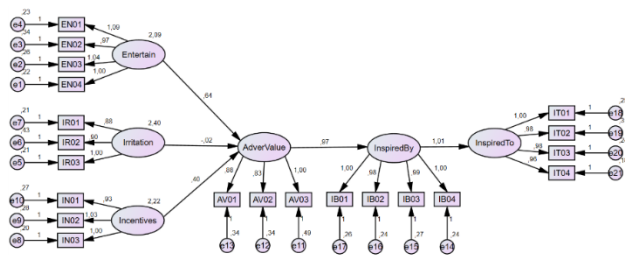


Fig. 2 AMOS Research Model

3.2. Discussion

This research was carried out aiming to analyze the effect of pop-up ads in video games on the condition of being inspired in every community in Batam City using SEM and AMOS. The results of this study prove that pop-up advertisements from video games can have an inspired effect on teenagers and can increase their interest in downloading new games. This study also proves that Irritation does not have a positive impact on Advertising Value. Meanwhile, Advertising Value has a statistically positive impact on Inspired-By and Inspired-By has a statistically positive impact on Inspired-To. The results of the research will be discussed in the following section.

First, the results of this study prove that entertainment has a positive impact on advertising value. In this section, Entertainment plays an important role in determining how entertaining an advertisement's Advertising Value is. Previous research has also proven that the Entertainment variable can have a positive influence on Advertising Value [11], other research carried out by [12] proved that the Entertainment variable has a very significant influence factor. The results of this study state that pop-up ads can be improved by making the content in the ads as attractive as possible.

Second, this study proves that Irritation does not have a positive impact on Advertising Value. These results suggest that not all pop-up ads provide consumers with a feeling of unsaturation. Research [13] proves that Irritation does not have a significant effect on Advertising Value. Although some agree that pop-up ads are annoying, Irritation is not enough to affect Advertising Value [14]. Every pop-up ad that is created must also be ensured not to irritate users so that they can continue viewing the pop-up ad.

Third, this study also proves that incentives have a positive impact on advertising value. Previous research has proven that Incentives have a positive influence on Advertising Value, the higher consumer interest in incentives, the more significant the use of each of these pop-up ads [15]. Research [16] also proves that incentives have a significant effect on advertising value. The results of this study prove that in addition to being able to provide entertainment, pop-up ads can also provide incentives for some users' applications.

Fourth, the results of this study prove that Advertising Value has a positive impact on Inspired-By. Research conducted by Ref. [17] proves that the Advertising Value variable has a significant influence on the Inspired-By variable. Thus the results of this study state that, the higher the value of a pop-up ad, the more inspired each user is to find something new.

Fifth, the results of this study also prove that Inspired-By has a significantly positive impact on Inspired-To. Research [18] states that Inspired-By has a significant effect on Inspired-To. Therefore, researchers found that with the Inspired-By state, each user can generate an Inspired-To state for the pop-up advertisements they see.

Based on the results of the five studies, it can be concluded that entertainment and incentives are needed in the process of creating pop-up ads for every video game. It is necessary to provide entertaining pop-up ads and get incentives to watch them so that they can positively influence the Advertising Value of these pop-up ads. With good Advertising Value, it can positively influence the Inspired-By state which will then be followed by the Inspired-To state. The results of this analysis also prove that

the results of this discovery can create a synthesis, where developers, game marketers, and advertisers can use this method in the process of developing pop-up ads. For example, users who play a video game where pop-up ads in the application can entertain and attract the user's attention to try the game, these pop-up ads can also help incentivize the video game.

In other words, pop-up ads that are entertaining and provide benefits in the form of incentives can increase the value of these ads so that they can trigger an inspired state for every user to download the games offered by these pop-up ads. Therefore, developers, game marketers, and advertisers in Batam City can continue to develop good-quality pop-up advertisements to increase the use of the games displayed in these pop-up advertisements.

4. CONCLUSION

This study aims to analyze the inspired state of users in Batam City towards pop-up advertisements in video games. This study uses quantitative research as its method. The research was implemented using SPSS and AMOS with analysis in the form of SEM. In this research model, there is an Advertising Value variable which is influenced by the Entertainment, Irritation, and Incentive variables, and the Advertising Value variable which influences the Inspired-By variable up to Inspired-To. The results of this study prove that the Entertainment and Incentive variables have a significant positive influence on the Advertising Value variable, which means that the quality of an advertisement can be improved by providing entertaining content and providing incentive benefits. Then, the Advertisement Value variable has a statistically significant effect on the Inspired-By variable, where the better or higher the value of an ad, the more inspired each user is to get imagination and make them interested in the content provided by the pop-up ad. After that, the Inspired-By variable affects Inspired-To statistically, meaning that by being inspired by the imagination of users, they can be motivated to download new games offered by pop-up ads. Based on the results of these conclusions, the video game industry that provides pop-up advertising services must always pay attention to the value of these advertisements both in terms of entertainment and incentives. Apart from entertainment and incentives, game developers, advertisers, and marketing must also ensure that the content in these pop-up ads is easy to understand and does not irritate users. One recommendation that can be given is to ensure that each user can get used to the User Interface (UI) and User Experience (UX) provided by video games. Providing UI and UX consistency in pop-up ads contained in video games will reduce the feeling of boredom felt by users. The development of pop-up ads on video games will be continued in the future. The value of each pop-up ad must be considered good and entertaining to ensure that users do not feel irritated by the advertisements in the video game.

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