



Indonesian Millennials' Attitude and Intention Towards Mobile In-Game Banner Advertising

Hilarius Bambang Winarko¹, Rustono Farady Marta², Kelian Wulandari Setyabudi³

¹ Universitas Bunda Mulia

² Universitas Satya Negara Indonesia

³ Maria Shandi Music

INFORMASI ARTIKEL

Diterima: Maret 24, 2022
Direvisi: Juni 19, 2022
Tersedia online: Agustus 15, 2022

KATA KUNCI

mobile communication advertising, marketing communication, digital marketing, consumer behaviour, millennials, gaming

KORESPONDENSI

E-mail: hwinarko@bundamulia.ac.id

A B S T R A K

Game berteknologi digital berhubungan erat dengan kehidupan generasi milenial. Penelitian ini berusaha memahami bagaimana faktor spesifik dalam game mempengaruhi sikap gamer seluler terhadap iklan *banner* dalam game seluler (*mobile In-Game Banner Advertising/mobile IGBA*), khususnya untuk para milenial. Faktor-faktor ini beserta insentif dapat digunakan sebagai prediktor intensi gamer seluler dalam merespons iklan tertentu. Hubungan antara sikap-intensi, seperti misalnya preseden dalam penggunaan iklan berbasis Internet umum, faktor-faktor spesifik game, dan penggunaan kupon seluler merupakan tiga elemen yang digunakan untuk mengembangkan hipotesis. Teknik analisis faktor dan uji statistik diferensial dalam perspektif kuantitatif digunakan sebagai dasar untuk menganalisis seberapa signifikan faktor-faktor yang saling mempengaruhi dalam model penelitian yang diusulkan. Hasil penelitian dengan metode survei menunjukkan bahwa faktor spesifik dalam bermain game (aspek ekonomi dan jenis game) merupakan faktor penting yang mempengaruhi sikap gamer terhadap penerapan *mobile IGBA*. Lebih lanjut, penelitian ini juga menemukan bahwa sikap dan insentif (dalam bentuk kupon komunikasi seluler) merupakan prediktor signifikan terhadap intensi generasi milenial Indonesia untuk merespon (klik) iklan dalam komunikasi seluler.

INTRODUCTION

In a developing country like Indonesia, almost 92% of Internet users obtain information and news via Internet, which comes first after television that accounts for 88%, then 89% access it through their smartphone (APJII, 2022). This indicates that mobile devices are starting to play an essential role in the young adult or millennial's lifestyle as 14% of the Internet users use it for online gaming. A mobile game is defined as a game that runs on mobile devices such as a mobile phone, smartphone, or tablet

computer (Casual Games Association, 2012). In consort with the rising of mobile audiences, devices, and shift in consumption habits, consumers these days are more platform sceptical in their digital media consumption that allows them to switch devices throughout the day into the night to stay up to date with news, email, social media, etc. (comScore, 2013).

Being so keen on their mobile phone services, 70% of most downloaded contents by Indonesian are applications and games, which account for the highest, followed by video (49%),

music (44%), and themes (33%) (MMA & Vserv.mobi, 2013) and the trend is increasing in the years to come. The rise of Internet smartphone penetration also leads the gaming industry to experience upward drift all over the world, where the revenue of game developers is escalating four times greater, as the revenue comes from game contents in iOS is twofold while in Android is fourfold (Koran Jakarta, 2014).

According to survey from Statista (2021), the Indonesian online gaming's average revenue per user growth has been increasing since 2017 and will be increasing until 2026. The contribution rate of Internet penetration for the millennials (26%) in 2022 had reached the highest compared to the other generational segmentation (APJII, 2022). This indicates that millennials, who are the major drivers and users, prefer applications that support their lifestyle and culture, in which the entertainment category is ranked first in their preference, especially during the Covid-19 pandemic outbreak. This fact attracts the advertisers to dive into the new advertising platform for better delivering their messages to targeted consumers.

Along with the invention of the Internet on mobile devices, a more minor, more personal, and personalized, widely accessible form of interactive advertising can be explored as a new growing medium of marketing activities (IAB, 2008; Shankar et al., 2009; Sultan et al., 2009). Marketers now start to change how they are marketing their product, as the Internet phenomenon shakes up the world's traditional way of doing business.

As reported by Nielsen (data are taken from Australia, Brazil, China, India, Italy, South Korea, Russia, Turkey, UK, and US), except the US, developed countries are the most likely to encounter mobile advertising applications. However, they are least likely to engage with them as compared to developing countries. This is supported by the report that three Southeast Asia economies are in the list of 20 biggest countries from Mobile Ads Impression: where Indonesia was ranked second globally, after US but outranked England, Russian, and India; then Vietnam stood in 11th, followed by Australia, French, and Germany; and lastly, Malaysia got a hold of 20th position (Goeres et al., 2013).

When it comes to playing the games, the stereotypical profile would be the male teenagers. However, as the games swell their reach to mobile devices, the audiences would get broader as well. The distribution of players' gender is almost balanced worldwide, accounted for females to males, 48% to 52% in North America, 46% to 54% in the EU, and 43% to 57% in the Asia Pacific (Casual Games Association, 2013). It is further reported that the age range of players is dominated by a young adult (20-35 years old), covering 38% in the EU, 41% in North America, and 49% in the Asia Pacific.

Hence, it could be concluded that the target audience for mobile gaming is young adult users, who regularly play their mobile devices and spread evenly between genders. As for the type of game they played, it would depend on their preference. However, based on a report from Casual Games, the two genres that accounted for the highest revenue shares are Arcade & Action (38%) and 31% for casual games (Casual Games Association, 2013).

Knowing the increasing trends of the Internet, mobile devices & smartphone penetration, and the promising growth of the online gaming industry worldwide, the in-game advertising issue is getting more attention. Thus, this research aims to understand better in-game advertising consumer behaviour in mobile device usage, specifically in display banner ads, and how effective it would be as an advertising medium in developing countries like Indonesia.

Many studies about mobile advertising have been done; however, only a few of them were found in the context of mobile in-game advertising; and, more specifically, in banner advertising. Banner ads are defined as graphic advertisements displayed on web pages that link to the advertiser's website (Turban et al., 2012), in this case, is mobile ads targeting for gaming consumers. Most of the preliminary researches were discussed about in-game advertising that had been done in the console and/or PC platform (Nelson et al., 2006; Mackay et al., 2009; Gross, 2010; van Reijmersdal et al., 2012; Adis & Jun, 2013; Choi et al., 2013) and never been conducted in Asian countries like Indonesia; moreover, in the presence of location-based advertising strategy. Hence, this research is meant to fill the gap in this field of study.

LITERATURE AND METHODOLOGY

Before the rapid growth of other mobile devices such as a tablet, phablet, PDA, and such, the advertising format is mainly done through SMS or text messaging (Barwise & Strong, 2002; Kavassalis et al., 2003; Tsang et al., 2004; Okazaki & Taylor, 2006; Pescher et al., 2014) and the researches were done on the classic mobile devices. However, the phenomenon of growing smartphone users worldwide has led advertisers to consider new ways of mobile marketing formats beyond just text messaging.

As the number of 4G users in the US market has exploded from 2012-2013 to 33.1 million, reaching 273 percent growth (comScore, 2013), web-browsing was previously possessed by PC – can be utilized in smartphone devices. The likeliness for marketers to implement mobile advertising strategy most likely is “online advertising” (Smith & Tse, 2013). Online advertising via mobile enables marketers to reach across the platform. IAB (2008) defines that mobile display creative takes forms of graphical banners, text, and video. Meanwhile, Shankar and Balasubramanian (2009) explained further in their research that mobile advertising media varies from simple text messaging, integrated content, games to viral and geotargeting.

In regards to variables for measuring the effectiveness of advertising in this medium, the research referred to the well-known Theory of Reason Action (TRA) by Fishbein and Ajzen (1975) measures the relationship between attitude and behavioral intention that is used widely in the specific field of study (Dijkstra et al., 2005; Yoo & Yang, 2005; Lohtia et al., 2007; Shankar & Balasubramanian, 2009; Varnali & Toker, 2010; Song et al., 2011; Liu et al., 2012; Gao et al., 2013). Some previous studies found that attitude strongly played a significant part in forming the behavioral intention of receiving mobile ads (Komulainen et al., 2019; Tsang et al., 2004). Wang & Sun (2010) discovered that belief plays a vital role in predicting attitude toward online advertising (ATOA), and ATOA is positively and significantly predicting ad clicking behavior and online shopping experience. Furthermore, Gao et al. (2013), in the study of consumers' mobile market acceptance in three countries, uncovered that attitude toward and acceptance of mobile marketing is strongly correlated with their intention to engage with

related marketing activities. The linkage between attitude and behavior or intention in mobile communication marketing has been proven, for example, by Tsang et al. (2004), Dijkstra et al. (2005), Adis & Jun (2013) and Farias (2018).

These researchers either focused on mobile advertising, in-game advertising, or banner advertising that becomes the center of attention in the current study. As mentioned earlier that the most of the preliminary researches were studying in-game advertising that had been done in the console and/or PC platform (Nelson et al., 2006; Mackay et al., 2009; Gross, 2010; van Reijmersdal et al., 2012; Adis & Jun, 2013; Choi et al., 2013). Komulainen et al. (2019) and Tsang et al. (2004) suggested four general ad characteristic that consists of: the entertainment, informativeness, credibility and irritation of the ads which affects the attitude toward mobile IGBA. In doing so, this research will examine several links or influences among general ad characteristics, the gamers' attitudes, and the intention toward the use mobile IGBA. They are the attitude effects on the gamers intention to respond mobile IGBA (H_1), the effects of overall attitude (H_2), the effect of each element of four general ad characteristics: entertainment (H_{3a}), informativeness (H_{3b}), credibility (H_{3c}), and informativeness (H_{3d}) toward IGBA.

Economic factor was one consideration when considering the attitude game players have toward advertisement. The gamers who were paid with higher price on a game would least likely to expect the presence of ads in their game. Otherwise, players will considerably accept the ads if it will help to lower the price of the game. One way of marketers to advertise their brand is through game sponsorship (Bahsker, 2009) where the game is usually free to download because the development costs are subsidized by the advertising. Therefore, this research hypothesized that lowering the game's price may influence more positive gamers' attitude towards mobile IGBA (H_4).

As gamers are highly involved with the game, there is no mental capacity remained to process the brand. A game prominence and congruence may affect the attitude toward games positively, once they are immersed in the game. Thus, there is no assurance that they will be remembering clearly the ads shown (van Reijmersdal, Rozendaal, & Buijzen, 2012). The

deeper involvement the gameplay required may affect to the less positive gamers' attitude towards mobile IGBA (H₅).

Dickinger & Kleijnen (2008) defined mobile coupons as digital coupons sent to mobile devices such as a mobile phone, smartphone, or personal digital assistant, in which can carry messages in the form of text, pictures, audio, and the latest, even video. The coupons can be stored in their mobile devices and be carried everywhere until the time the consumers decided to redeem it. In addition to that, by offering the incentive, the intention of mobile users to receive the mobile ad and perceived it as beneficial can be improved significantly (Tsang et al., 2004; Gao et al., 2010). These imply the positive relationship between financial incentives and the motivation to respond on mobile IGBA (H₆).

Barwise & Strong (2002) suggested that the reward system in mobile advertising can be perceived differently in relation to age group users. The older ones see these rewards as hygiene factors, as an assurance that the targeted ads sent to their mobile devices are not spam. At the other hand, for the younger generation, the rewards are more of an incentive itself. Hence, it would be wise to target a younger, tech-savvy generation, when it comes to mobile coupons. In another word, different gamers would prefer to choose incentives from different options (H₇).

Align with Dickinger & Kleijnen (2008) mobile coupons are efficient because they are portable. The risk for the consumers to lose it can be reduced and the possibility of short expiration date can be avoided as well. Furthermore, based on NCH survey (2013), top number two reason of consumers who did less coupons redeeming is because the coupons expire before they have the chance to use it. Thus, the gamers may be more prefer to use another option of coupon redeeming, like location-based incentives (H₈) considering its practical uses.

Dickinger and Kleijnen (2008) found that redemption effort affects the attitude toward mobile coupons negatively. The consumers are worried that the way of using mobile coupons would be too complicated and cost more (in effort) than the worth of the coupons, based on their perspective. Even if the consumers appear to be well acquainted with SMS and similar tools from mobile devices, the commercial application of mobile coupons is still a long way to go to

draw an appropriate analogy in consumers 'perception (Dickinger & Kleijnen, 2008). Therefore, further hypotheses can be suggested whether gamers more prefer to redeem mobile coupons in a physical store, online store or mobile web store (H_{9a}, H_{9b}).

Hypotheses Development

Based on the earlier research about attitude and intention toward advertising, it is hypothesized that:

H₁: Attitude affects the intention of mobile gamers to respond to mobile IGBA.

H₂: The overall attitude of gamers toward mobile IGBA is negative.

H_{3a}: Entertainment contributes positively in measuring gamers' attitude toward IGBA.

H_{3b}: Informativeness contributes positively in measuring gamers' attitude toward IGBA.

H_{3c}: Credibility contributes positively in measuring gamers' attitude toward IGBA.

H_{3d}: Irritation contributes negatively to measuring gamers' attitude toward IGBA.

H₄: The lower the game's price, the more positive gamers' attitude towards mobile IGBA.

H₅: The deeper involvement the gameplay required, the less positive gamers' attitude towards mobile IGBA.

H₆: Using incentives will increase the intention of mobile gamers to respond to the mobile IGBA.

H₇: Gamers would prefer to choose incentives from different options.

H₈: Gamers are interested in location-based incentives.

H_{9a}: Gamers prefer redeeming mobile coupons in a physical store.

H_{9b}: Gamers prefer redeeming mobile coupons in a physical store or an online store rather than redeeming them in a mobile web store.

Figure 1 summarized the research model of the study. General ad characteristics served as measurement items for attitude variables – instead of antecedents – since the study focused on seeing how factors specific to games would affect the attitude of mobile gamers toward IGBA.

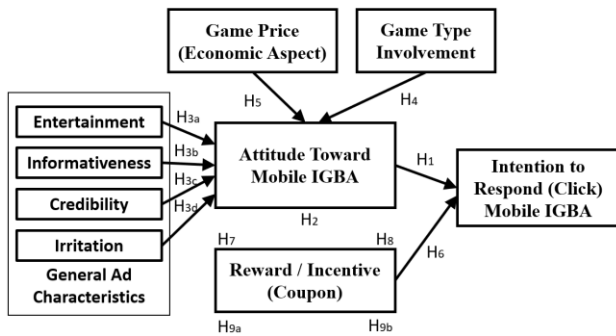


Figure 1 Research Model

Quantitative methodology was used in this study by developing online-based survey questionnaire based on the hypotheses development as discussed in the previous section. Before the questionnaire was distributed, reliability and validity tests were conducted to ensure that the survey questionnaires had good, reliable, and valid measurements. The population of this research were the millennials who live in Jakarta and at least have the experience in playing mobile gaming. Based-on the Slovin's formula, it was estimated that minimum 100 respondents were required. The sample was taken using the purposive sampling technique, and certain criteria were applied to meet the specific purpose of this study (Zikmund et al., 2013). The questionnaires were distributed through online questionnaire survey method.

The Attitude (A) variable which was measured by nine items is referring to how the mobile gamers perceive toward the IGBA characteristics. The factor specific to games divided into two variables. First, namely the Economic Aspect (EA), with two measured items of EA₁ and EA₂. EA is referring to gamers' acceptance attitude whether IGBA is played in the free of charge game situation (EA₁) or charged with certain amount of fee subscription (EA₂). And second, the Game Type Involvement (GI) which is representing the type of IGBA irritation toward the game played and measured with two items of GI₁ (irritating in complex games that required deep level of involvement) and GI₂ (irritating in simple games). As for intention (I), this variable is representing how likely the gamers click the IGBA whether the reward was given or not, and measured by two items (I₁ and I₂). Six items (C₁ to C₆) were used for Incentives (C) measurements that represents the how the gamers would respond to click IGBA

when incentives were given. Lastly the item of LBS (Location-based System) was used later to analyze the gamers' intention to respond the location-based ads.

The reliability & validity test was applied for measuring the consistency of the items measuring the variables by distributing the online questionnaires to 30 respondents. The test was done to determine its Cronbach's alpha value, where it was considered reliable if the value shown is 0.07. Based-on the SPSS calculation, the study found that the questionnaires instrument considered as valid and reliable since the value was ranging from 0.72 and 0.90.

The study was done to explore how factors specific to games affecting respondents' attitude toward IGBA and its relationship with their intention to respond to the banner ads in the mobile in-game medium. Therefore, specific questions could only be accurately answered by respondents who have experience playing mobile gaming and those who have seen the banner ads presented in the mobile game they played. The sample gathered were approximately 440 respondents, and after the data screening process, 110 usable samples for this research match the applied criteria.

The data collected concluded that respondents' age range was vary from 17-24 years old, mostly English-speaking millennials and included in the tech-savvy generation. Most of the respondents were familiar with mobile devices (basic mobile phones, feature phones, smartphones, tablet and similar handhelds devices) and had been spending considered amount of time with simple mobile devices' features, such as SMS and simple game(s).

RESULTS AND DISCUSSION

The Cronbach alpha for the variables, as shown in Table 1 were ranging from 0.72 to 0.90, indicating the reliability for all construct. Moreover, the Kaiser-Meyer-Olkin (KMO) for all the constructs ranged from 0.5 to 0.88; hence, the constructs were all accepted and used for further examination.

Table 1 Reliability Test

Construct	Cronbach's α
Attitude	0.751
Economic Aspect	0.733
Game Type Involvement	0.738
Incentive	0.905
Intention	0.721

The items considering attitude were measured on a 7-Likert point scale, ranging from "strongly disagree" (1) to "strongly agree" (7); meanwhile, 4 represent "neutral". The item "overall, I like IGBAs", which previously had also been used by Tsang et al. (2004), was utilized for measuring the overall attitude in this study, got a mean of 2.23 (see Table 2).

Table 2 Mean Values for Attitude Items

Attitude Items (1= Strongly disagree, 7= Strongly agree, 4= Neutral)	Mean
I feel that seeing mobile IGBAs is entertaining.	2.15
I feel that seeing mobile IGBAs is pleasant.	2.05
I feel that mobile IGBAs are an excellent source of timely information.	2.86
Mobile IGBAs provide the information I need.	2.3
I use mobile IGBAs as a reference for purchasing.	2.4
I trust mobile IGBAs.	2.47
I feel that mobile IGBAs are irritating.	5.2
Contents in mobile IGBAs are often annoying.	4.73
Overall, I like IGBAs	2.23

Referring to the mean measurement scale, the items that reflect negative responses are in scale 1-3 areas. Hence, the hypothesis of H₁ about the negative attitude towards IGBA was accepted. This result was consistent with prior research (Tsang et al., 2004).

Exploratory Factor Analysis is widely used for determining in which item(s) give enough loading toward the construct and, later, be used as the measurement item(s) for a particular construct/ variable (Zikmund et al., 2013). The first test for examining the suitability for factor analysis was the Kaiser-Meyer-Olkin (KMO) test, where previously, the overall attitude (A) had passed with a value of 0.77. Moreover, Bartlett's Test of Sphericity was also looked upon, where it was also indicating a good fit ($\alpha < 0.001$). Thirdly, the commonalities have exceeded the threshold of 0.3, with the lowest being 0.416. Therefore, H₂ was accepted.

As for the factor loading, the next question that should be answered was to cut off the load. As some items might cross-loaded, it

could be a problematic situation. Matsunaga (2010) stated that the range is between 0.4 and 0.7, and in this research, the limit of 0.5 was used. At the end of this process, two factors were gained (see Table 3).

Table 3 Rotated Factor Matrix

Variable	Value Factor	Irritation Factor
Entertaining	0.806	
Pleasant	0.885	
Timely Information	0.693	
Needed Information	0.831	
Use as Reference	0.63	
Trust	0.639	
Overall Liking	0.823	
Irritating		0.902
Annoying Content		0.854

Note: Extraction Method Principal Axis Factoring; Factor under initial Eigenvalue of 1 rejected; Rotation method Varimax with Kaiser Normalization; Only loading over 0.5 is showed

The factors contributing to the overall attitude of mobile IGBA were the value factor and the irritation factor. According to the earlier research, the value should be strived for since it contributes positively toward the overall attitude instead of the irritation factor. These two factors are highly influential for the overall attitude toward IGBA. Moreover, the total variance explained by this factor was 68.4% and it is consistent with earlier study that found these items could explain around at the same amount.

Table 4 shows the amount of item's variance contributed to the factors. As predicted, the entertaining and pleasant (related to entertainment) were giving most contribution toward the overall factors, and since those were laid in value factor, the contribution was positive (H_{3a} accepted). This result is also consistent with the previous study about entertainment being the most contributing factor toward advertising.

Further, timely information and needed information (related to informativeness) also laid in the value factor. Thus, its contribution toward the attitude was positive as well (H_{3b} accepted). However, the informativeness percent of "needed information" item was somewhat different from earlier findings. Earlier study found that the form factor (entertaining features) was more critical as compared to the content factor (informative features). Even informativeness was found to be not significant as a predictor in that particular research. Hence, having a 69% contribution toward value factor is new insight for the informativeness category.

Game Type	-1.07	0.22	-4.95	.000
Involvement (GI)				

Note: Dependent variable: Attitude (A); $\alpha=0.05$

Table 4 The Amount Item's Variance Contributes to the Factors (%)

Variable	Value Factor	Irritation Factor
Entertaining	65.0	
Pleasant	78.3	
Timely Information	48.0	
Needed Information	69.1	
Use as Reference	39.7	
Trust	40.8	
Overall Liking	67.7	
Irritating		81.4
Annoying Content		72.9

Note: Extraction Method Principal Axis Factoring; Factor under initial Eigenvalue of 1 rejected; Rotation method Varimax with Kaiser Normalization; Only loading over 0.5 is showed

However, it seemed to be low in contribution percentage; even for "use as reference", it was somewhat less than 0.4. Nevertheless, it still contributed positively toward mobile gamers' attitude toward IGBA (H_{3c} accepted). As opposed to value, irritation factors consisted of "irritating" and "annoying content" items. These two items previously were within the "irritability" category. Hence, based on the finding, they contributed to the irritation factor (H_{3d} accepted).

Based on the research finding, factor specific to the game (Economic Aspect and Game Type Involvement) together could explain the variance of attitude toward mobile in-game advertising by 36%. Even if the F-test were above 4, and the significance was less than 0.05 – that indicates the overall good fit for predicting the attitude – the adjusted R-squared was pretty small, however.

Table 5 shows that the individual variable's p-value was less than the alpha value of 0.05. Hence, those factors were significantly affecting the attitude toward mobile IGBA. The beta for the economic aspect was negative; hence, as gamers pay more for the game, the less it would contribute to the overall attitude toward mobile IBGA. The same phenomenon was also happening for the game involvement factor. The deeper the immersion game players felt toward the game, the least likely they would positively view mobile IGBA. Thus, it could be concluded that H_4 and H_5 were accepted.

Table 5 Coefficients (EA + GI → A)

	beta	Std. Error	T	Sig.
(Constant)	32.25	3.29	9.79	.000
Economic Aspect (EA)	-0.98	0.19	-5.21	.000

After examining the effect factor-specific-to-game have on gamers' attitude, then it examined the relation between attitude and intention, with the additional incentive predictor. The overall good fit of the model was shown from the F-test which was higher than 4. In addition to that, the significance was less than alpha 0.05. However, just like the previous finding, the adjusted R-squared was relatively low, accounted for only 23%. It means that the attitude and incentive together could only explain 23% variances of intention for gamers to respond on mobile IGBA.

Even so, individual predictors were significantly affecting attitude in the level of 95% confidence. While both sig. were less than alpha 0.05, both betas were also positive. It indicates that both attitude and incentives positively affect mobile gamers' intention to respond to ads (see Table 6).

Table 6 Coefficients (A + C → I)

	beta	Std. Error	t	Sig.
(Constant)	1.413	0.586	2.411	.018
Attitude (A)	0.071	0.024	2.989	.003
Incentive (C)	0.097	0.023	4.164	.000

Note: Dependent variable: Intention (I); $\alpha=0.05$

The more positive the attitude of mobile gamers, the more likely they would respond on mobile IGBA. Furthermore, the more incentives were given (concerning their choices – further be explained in "incentives"), it would increase the likeliness to respond on mobile IGBA. These ultimately verified that H_1 and H_6 were accepted.

The items used for this pair differences were item I_1 , the statement of current clicking activity, and item I_2 , the statement for clicking intention if the incentives were offered. The result in Table 7 shows a significant difference between the two items; hence, it supported the confirmation that the likeliness for clicking on the mobile IGBA was improved once the reward (incentives) presented.

Table 7 Differences in Clicking Behavior if Incentives were Offered

Variable Compared	Paired Differences					
	Mean	Std. Dev.	SE Mean	t	df	Sig. (2-tailed)

Click with reward - Current clicking	0.627	1.697	0.162	3.878	109	.000
--------------------------------------	-------	-------	-------	-------	-----	------

Table 8 shows the clicking activity concerning reply given for both before and after offering a reward (1=never, 7=almost). A 10% percent decrease in replies where gamers would never click (respond) on mobile IGBA. While the negative (1-3) replies decreased, the positive intention (5-7) was getting more replies from mobile gamers almost in every positive Likert scale.

Table 8 Clicking activity

Reply Option	Clicking currently		Clicking if rewards offered	
	Freq.	%	Freq.	%
1	56	50.9	45	40.9
2	33	30.0	20	18.2
3	12	10.9	20	18.2
4	4	3.6	11	10.0
5	3	2.7	6	5.5
6	2	1.8	5	4.5
7	0	0.0	3	2.7
Total	110	100.0	110	100.0

Table 9 shows that the gamers who previously never click on banner ads in mobile games now started to develop intention once the reward was presented. About 40% more of them moved toward a less negative area of replies (greater than 1). Even if most of them were still lingering between the lines of neutral-down (4-2), some small portions of them showed a good intention (considering they were jumping from never having the intention to respond on mobile IGBA at all).

Table 9 Non-clickers Clicking Activity on Reward banners

Reply Option	Freq.	%
1	36	64.3
2	5	8.9
3	6	10.7
4	4	7.1
5	2	3.6
6	2	3.6
7	1	1.8
Total	56	100.0

As for reward systems, the three models of rewards were presented to mobile gamers. The first one is multiple reward options (C₁), then relevant rewards (C₂), and lastly, location-based rewards (C₃). In Table 10, mobile gamers sure made themselves clear that they would somewhat agree to respond to a banner whose reward was relevant to them (seen from most reply option

appeared – mode). As for multiple reward and location-based ads, the neutral opinion seemed to appear frequently. However, it was pretty hard to deduce based on the mean and mode solely; hence, the percentage of reply options was seen.

Table 10 Reward Banner Characteristics

Variable	Mean	Mode	Variance
Multiple Rewards	4.10	4	2.972
Relevant Rewards	4.21	5	3.635
Location-based Rewards	4.19	4	2.688

Even if there was a slight difference in the number percentage shown in Table 11, it was still hard to deduce any conclusion. Hence, the paired t-test difference was run. Ultimately, there was no significant difference between rewards options preferred by mobile gamers from the two categories. Hence, the hypotheses of mobile gamers who would prefer multiple choices of reward (H₇) could not be accepted.

Table 11 Interest in Reward Options

Reply Option	Multiple Reward Options		Relevant Banners	
	Freq.	%	Freq.	%
1	12	10.9	16	14.5
2	11	10.0	10	9.1
3	10	9.1	9	8.2
4	30	27.3	18	16.4
5	25	22.7	25	22.7
6	12	10.9	21	19.1
7	10	9.1	11	10.0
Total	110	100.0	110	100.0

Seeing from the reply option given by mobile gamers, the tendency was within the negative area (1-3); yet, neutral was also one option though (see Table 12). It seems that mobile gamers were least interested in receiving mobile IGBA based on their location. However, when the reward was presented, their likeliness to respond to such an ad was improved. The tendency of replies was moving upward to the neutral-positive area (4-7), as shown in Table 12. There was a significant difference between "strongly disagree" when asking about their willingness to receive mobile IGBA (26.4%) and would never click IGBA that offer rewards based on their location (8.2%). In contrast, when only 8.2% of gamers were agreed to receive location-based ads, there were 24.5% of them would willingly click on IGBA that had a location-based reward system. Hence, the hypothesis of gamers willing to respond to location-based rewards (H₈) was accepted.

Table 12 Interest in Location-based System

Reply Option	Location-based Ads		Location-based Incentives	
	Freq.	%	Freq.	%
1	29	26.4	9	8.2
2	19	17.3	12	10.9
3	18	16.4	9	8.2
4	27	24.5	30	27.3
5	9	8.2	27	24.5
6	5	4.5	15	13.6
7	3	2.7	8	7.3
Total	110	100.0	110	100.0

Mobile gamers were still accustomed to the old ways of redeeming the coupon. The paired t-test differences showed that physical stores were most preferable when it came to redemption options. However, there was no significant difference between redeeming the coupon via desktop (PC) web store or mobile web store only (see Table 13). Hence, the hypotheses about the redemption option were only accepted for H_{9a} but only partly for H_{9b} . Even if the gamers prefer physical store, it did not mean they will also prefer a desktop (PC) web store redemption option over the mobile web store.

Table 13 Differences in Preferred Redeeming Options

Variable Compared		Paired Differences					Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	t	df	
Pair 1	Physical Store - Web Store	0.5	1.269	0.121	4.133	109	0.000
Pair 2	Web Store - Mobile Web Store	0.155	1.119	0.107	1.449	109	0.150

As discussed above, the overall attitude of mobile IGBA tends to be negative, as shown from the mean of reply options in the descriptive statistic for attitude measurement items. This finding was consistent with previous study from Tsang et al. (2004). Even though there is a difference in medium (in this study, the medium is games), the negative tendency is still shown. Entertainment, informativeness, and irritability have been the primary influence for attitude toward Internet advertising, and added with credibility in value factor.

Entertainment factors are heavily influenced how consumers perceived an ad (attitude). Furthermore, it is also discovered that informativeness has the same contribution toward the attitude in general. This finding is consistent with previous study from Komulainen et al. (2019). However, when relating to gaming medium, the interaction and perception of an ad (specifically banner ads within the game in mobile devices) should be varied. Perceived entertainment may come from playing the game; hence, the other intrusion would be perceived as less significant to them. If the ads appear in their gameplay, they should be the information they needed, not just simply entertaining or pleasant.

Credibility is only contributing less than 50% (for both items) to overall attributes, that for these mobile gamers, it does not matter what kind of advertising is, however. As for irritability, the items laid down in irritation factor that would decrease the overall attitude toward mobile IGBA if it increases. As implication, mobile communication advertisers should aim for the value factors (entertainment, informativeness, and at some point, credibility) while avoiding the irritation factors that mobile gamers might perceive.

As for the factor specific to the game, the model is significant. It is showed that economic aspect and game type involvement are reversely affecting the attitude toward mobile in-game banner ads. As the gamers pay more for the game, they expect to encounter the least ads, or otherwise, they would somewhat understand that one of the reasons the game price is cheap (or even free) is due to the sponsorship and/or product placement. The simpler the game, the more favorable the attitude of gamers toward mobile IGBA would be. Hence, the more involving the game, the more they are immersed in their play, and the least they would like to be intruded by ads. The relationship between attitude and incentives toward intention to respond on mobile IGBA is perceived to be significant. Both attitude and incentives are affecting respondents' intention to respond positively. This finding is consistent with previous studies from Komulainen et al. (2019) and Tsang et al. (2014). Hence, the more positive the attitude and the more incentives offered (concerning their preference), the more the

respondents are willing to respond to mobile IGBA.

As for the incentives factor, there is no significant difference between multiple reward options and reward that relevant to the gamers' need. However, if the rewards still will be offered, it should be - at some point – relevant to gamers' needs. Considering the location-based issue, gamers are least likely to agree on receiving such ads. However, the presence of reward increases the likeliness to respond on mobile IGBA. As previously hypothesized, gamers would still prefer physical stores for the redemption options compared to the other two options (webstore and mobile store). However, there is no significant difference if the redemption will be used in the desktop (PC)-based or mobile web store. This study found that gamers would be attracted to IGBA if that ad is informative, aside from entertaining and pleasing, even when integrating the coupon into it. Location-based incentives also show a promising medium as the millennial gamers would agree to respond to this type of ad. They may consider the place and time they are at the time and the chance to be offered the coupon redemptions that are probably relate to them.

CONCLUSION, IMPLICATION & RECOMMENDATION

Based-on the hypotheses and discussion in the previous sections, this study concludes the following Indonesian mobile gamers consumer behavior:

1. The mobile gamers' attitude affects their intention to respond to mobile IGBA.
2. The overall attitude of gamers toward mobile IGBA is negative.
3. Entertainment, informativeness and credibility factors contributes positively in measuring gamers' attitude toward IGBA. Meanwhile, the irritation factor contributes negatively to measuring gamers' attitude toward IGBA.
4. The lower the game's price, the more positive gamers' attitude towards mobile IGBA.
5. The deeper involvement the gameplay required, the less positive gamers' attitude towards mobile IGBA.
6. Using the incentives might increase the intention of mobile gamers to respond to the mobile IGBA.

7. There was no preference for mobile gamers in receiving incentives from different options, however they were interested in location-based type of incentives.
8. Further, the mobile gamers preferred redeeming mobile coupons in a physical store than in webstore or mobile store. However, there was no significant difference whether the coupon redemption will be used in the desktop webstore or in a mobile web store platform.

By understanding this mobile gamers IGBA's consumer behavior, the research implication could be utilized by marketing communication or advertising departments that will use the findings as reference on which IMC strategies can be applied properly by targeting those from the millennials' market segmentation. Overall, when considering advertising in banner ads within the mobile game, mobile gaming advertisers should carefully select where and how they should advertise it. The marketing communicators should keep their banner ads concise, precise, and straightforward. As for future research, there are improvements needed to be considered when attempting to do a similar study. This research was conducted on well-educated respondents, which their sound educational background may somewhat influence whereby informative factors shall be put first. Recommended future research might consider the background diversity of respondents related to their educational, occupational background, and/or other related lifestyles.

REFERENCES

- Adis, A.-A. A., & Jun, K. H., (2013) 'Antecedents of Brand Recall and Brand Attitude towards Purchase Intention in Advergaming', *European Journal of Business and Management* 5, 58-67.
- Aria, P., (2013) '23 Percent of Indonesian are Having Cellular Phone' [In Indonesia language].
<http://www.tempo.co/read/news/2013/09/23/072515690/Nielsen-23-Persen-Orang-Indonesia-Punya-Ponsel>
- APJII (2022), *Indonesian Internet Profile 2022*,
<Rhttps://apjii.or.id/survei2022x>

- Arradian, D., (2014) 'Affordable Smartphone Penetrates Indonesian Market' [In Indonesia language], <https://autotekno.sindonews.com/read/845874/122/smartphone-murah-penetrasi-pasar-indonesia-1395231322>
- Bahsker, B., (2009) 'Electronic Commerce: Framework, Technologies and Applications', New Delhi: Tata McGraw-Hill.
- Barwise, P., & Strong, C., (2002) 'Permission based Mobile Advertising'. *Journal of Interactive Marketing* 16, 14-24.
- Bhaskoro, A. T., (2013) 'Vserv Releases South-East Asia Internet Mobile Users Pattern' [In Indonesia language], <https://dailysocial.id/post/vserv-rilis-laporan-pola-pengguna-mobile-internet-se-asia-tenggara-2>
- Bhaskoro, A. T., (2013) 'Walker Sands Mobile Traffic Report Q3 2013: Internet Access Via Mobile is Increasing, Followed by The Decreasing of iPad Market Share' [In Indonesia language], <https://dailysocial.id/post/walker-sands-mobile-traffic-report-q3-2013-akses-internet-via-mobile-meningkat-diikuti-dengan-penurunan-pangsa-pasar-ipad>
- Casual Games Association, (2012) 'Casual Game Sector Report: Mobile Gaming 2012', Casual Game Association.
- Casual Games Association, (2013) 'Games Market Sector Report: Smartphone and Tablet Gaming 2013', Casual Game Association.
- Chang, Y., Yan, J., & Zhang, J., (2010) 'Online In-Game Advertising Effect: Examining the Influence of a Match Between Games and Advertising', *Journal of Interactive Advertising* 11, 63-73.
- Cho, C.-H., & Cheon, H. J., (2004) 'Why Do People Avoid Advertising on the Internet?', *Journal of Advertising* 33, 89-97.
- comScore, (2013) 'South East Asia Digital Future', <http://www.comscore.com/layout/set/popup/Request/Presentations/2013/2013-Southeast-Asia-Digital-Future-in-Focus-PDF-Request?c=1>
- Dickinger, A., & Kleijnen, M., (2008) 'Coupons Going Wireless: The Determinants of Consumer Intentions to Redeem Mobile Coupons', *Journal of Interactive Marketing* 22, 23-39.
- Digi-Capital, (2014), 'Global Games Investment Review 2014', Digi-Capital.
- Dijkstra, M., Buijtels, H. E., & van Raaij, F. W., (2005) 'Separate and Joint Effects of Medium Type on Consumer Responses: A Comparison of Television, Print, and the Internet', *Journal of Business Research* 58, 377- 386.
- Farias, P., (2018). 'The effect of advergaming, banners, and user type on the attitude to brand and intention to purchase', *Review of Business Management*, 20(2), 194-209, DOI: 10.7819/rbgn.v20i2.3784
- Fulgoni, G. M., (2014) 'The Evolution of Digital Advertising', <https://www.comscore.com/Insights/Presentations-and-Whitepapers/2014/The-Evolution-of-Digital-Advertising2>
- Gao T., Sultan, F. & Rohm, A., (2010) 'Factors influencing Chinese youth consumers' acceptance of mobile marketing', *Journal of Consumer Marketing* 27 (7), 574-583.
- Goeres, J., Jain, P., Lee, P., Stewart, D., & White, N., (2013) 'Technology, Media & Telecommunication Prediction 2013: South-East Asia Edition' [In Indonesia language], Jakarta: Deloitte Southeast Asia Ltd.
- Horwitz, J., (2014), 'Internet Users Statistics in Asia and Indonesia' [In Indonesia language], <http://id.techinasia.com/statistik-pengguna-Internet-di-asia-dan-indonesia-slideshow/>
- IAB. (2008). *Platform Status Report: A Mobile Advertising Overview*. Interactive Advertising Bureau.
- Karimuddin, A., (2013) 'Niko Partners: South-East Asia Online Gaming Market is Predicted Reaching \$1.2 Billion in Year 2017' [In Indonesia language], <https://dailysocial.id/post/niko-partners-pasar-permainan-online-asia-tenggara-diperkirakan-capai-12-miliar-di-tahun-2017>
- Kartika, B., (2012), 'Global Survey Highlights Asian Consumer Needs on E-Commerce' [In Indonesia language],

- http://www.chip.co.id/news/startups-press_release/4439/survei_global_soroti_kebutuhan_konsumen_asia_pada_e-commerce
- Komulainen, R., Lappeman, J., & Islam, AMN., (2019), 'Determining banner advertisement effectiveness in mobile games: A study from South Africa', *The Retail and Marketing Review*, 15 (1), 57-71.
- Koran Jakarta, (2014), 'Major Online Gaming Users Still Uses PC' [In Indonesia language], <http://www.koran-jakarta.com/?8177-game-online%20-pengguna-mayoritas-masih-berbasis-pc>
- Manchanda, P., Dube, J.-P., Goh, Y. K., & Chintagunta, P. K., (2006) 'The Effect of Banner Advertising on Internet Purchasing', *Journal of Marketing Research* 43, 98-108.
- MMA & Vserv.mobi, (2013) 'The Mobile Internet Consumer: Indonesia 2013', Vserv.Mobi.
- NCH, (2013) 'NCH Annual Topline US CPG Coupon Facts Report For Year-End 2012', NCH Marketing Services.
- Nielsen, (2013) 'The Mobile Consumer: A Global Snapshot', The Nielsen Company.
- Okazaki, S., & Yagüe, M. J., (2012) 'Responses to an Advergaming Campaign on a Mobile Social Networking Site: An Initial Research Report', *Computers in Human Behavior* 28, 78-86.
- Shankar, V., & Balasubramanian, S., (2009) 'Mobile Marketing: A Synthesis and Prognosis', *Journal of Interactive Marketing* 23, 118-129.
- Shankar, V., Venkatesh, A., Hofacker, C., & Naik, P. (2010) 'Mobile Marketing in the Retailing Environment: Current Insights and Future Research Avenues', *Journal of Interactive Marketing* 24, 111-120.
- Smith, J., & Tse, D., (2013) 'What's Next Getting Started With Mobile', <http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2013%20Reports/Whats-Next-Getting-Started-With-Mobile.pdf>.
- Statista (2021), *Online Games Highlight*, <https://www.statista.com/outlook/dmo/digital-media/video-games/online-games/indonesia>
- Tsang, M. M., Ho, S.-C., & Liang, T.-P., (2004) 'Consumer Attitudes Toward Mobile Advertising: An Empirical Study', *International Journal of Electronic Commerce* 8, 65-78.
- Turban, E., King, D., Lee, J., Liang, T.-P., Turban, D., (2013) 'Electronic Commerce 2012: A Managerial and Social Networks Perspective Global Edition., 7/E', Pearson.
- van Reijmersdal, E. A., Rozendaal, E., & Buijzen, M., (2012) 'Effects of Prominence, Involvement, and Persuasion Knowledge on Children's Cognitive and Affective Responses to Advergaming', *Journal of Interactive Marketing* 26, 33-42.
- vserv.mobi, (2012) 'Mobile Advertising How to Win Emerging Markets', <http://www.slideshare.net/vservmobi/mobile-advertising-how-to-win-emerging-markets>.
- Yang, B., Kim, Y., & Yoo, C., (2013) 'The Integrated Mobile Advertising Model: The Effects of Technology- and Emotion-based Evaluations', *Journal of Business Research* 66, 1345-1352.
- Yang, M., Roskos-Ewoldsen, D. R., Dinu, L., & Arpan, L. M., (2006) 'The Effectiveness of "In-Game" Advertising: Comparing College Students' Explicit and Implicit Memory for Brand Names'. *Journal of Advertising* 35, 143-152.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M., (2013) 'Business Research Method, Ninth Edition', Canada: Cengage Learning.