Online Banner Advertising: A study of Consumer Responses to Various Factors

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Abstract

This study explores the role of the celebrity endorsement in consumer attitude formation and behavioral intention on the Web. The purpose of this paper is to identify how the various factors and interactivity influence attitude toward the target ads and click-through intention. The findings indicate that the celebrity factor of the online advertising possibly play not only the role of leverage as causal effect when consumers form their attitude toward the banner advertising, but also that theses factors indirectly influence click-through intention.

Key words: online banner, attitude, celebrity, animation

1. Introduction

With the development of the digital devices and computer software, various formats of advertising have been introduced in advertisements. This trend includes traditional TV commercials as well as online advertising. For example, 3D animation in which is combined with dazzling these techniques (e.g., animation, animation message and text information, etc.), is dominant in Online advertising, with these techniques still developing. While complex these tools are said to confuse consumers in their understanding of the originally intended communication messages, it is empirically proven that those heuristic elements evoke positive consumer attitudes and behaviors in the Online advertising environment. Interactive settings in banner advertisements are another these appeal to the online advertising. Interactivity could be an effective tool for the online advertising because the Online makes two-way communication possible. Even though message itself is believed to be a core element when marketing messages are communicated, it is always big concern for the advertising agencies to decide which these elements should be used and stressed. These appeals could be critical factors for the success of advertising campaign. Especially for low involvement products, heuristic elements do play a more significant role. These tools are divided into visual or audio expressions. For print advertising, creativity is limited to the visual expression, but both visual and audio elements are important in the multimedia advertising environment. This means that the strategy is more important in multimedia advertising. In this regard, it would be quite fruitful for both advertising academics and practitioners if some of the effective various factors were found in the online advertising.

2. Literature Review:

Stafford and Stafford {2004} Concluded that sixty five percent of respondents in survey implemented by media research company Frank N . Magid Associates said the internet provides them with useful information about products and services. They concluded that internet provides the customer complete information needed by the customer regarding the product thus building a strong base for purchase decisions which is lacking in both print and broadcast media. Druze and Hussherr {2003} argue that ads can be skipped more easily in the print environment than on radio or television because the" appreciation of the contest leads to less ad processing" The same issue surfaces for the online environment, Where users do not attend to more than fifty percent of banners. Cho, Lee and Tharp {2001} concluded Attitude toward the brand was a measure of advertising effectiveness. In there study Cho and colleagues found that the banner ads presented in the format of the highest forced – exposure level yielded the most desirable advertising effects { i.e., favorable attitude toward the banned ad, favorable attitude toward the brand, and high purchase intention}

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Salmon {1986} concluded that, interest plays an important role in information processing by activating greater cognitive activity. According to the conclusions of Solomon"s research, the interest in the product will determine the degree of effectiveness of that advertisement. Pelsmacker, Geuens,and Anckaert{2002} argue that ads can be skipped more easily in the print environment than on radio or television because" the appreciation of the context leads to less ad processing". The same issue surfaces for the online environment, where users do not attend to more fifty percent of banners. Chun and Jiang{1998}found that during visual search, spatial visual context information is encoded when it is predictive of the target location. The researchers concluded that such contextual learning forms memory traces that facilitate search, a process they called contextual cuing. Chun worked with other cognitive psychology colleagues and fond that this contextual cuing effect is driven by implicit memory representation. Edell and Keller (1989) concluded that a print reinforcement strategy that explicitly links a print ad an already-seen television ad can improve the prospects of that print ad being read, by increasing consumer evaluation of the print ad. Similarly, they reasoned that a print teaser strategy that includes key visual elements of subsequently viewed television ad can enhance processing and comprehension of the TV ad. Both combinations (television-print and print-television) improve campaign effectiveness over a campaign using a single medium.

3. Objectives

- To examine how the various factors and interactivity influence consumer attitude formation and processing in the computer-mediated environment and

- To explore the relationship that may exist between a set of these variables and click-through intentions on the Web.

4. Hypotheses

H-1: Perception of celebrity as one of the online advertising factors is directly related to the attitude towards the banner

H-2: Perception of text information as one of the online advertising factors is directly related to the attitude towards the banner.

H-3: Perception of animation as one of the online advertising factors is directly related to the attitude towards the banner.

H-4: Perception of position of the banner as one of the online advertising factors is directly related to the attitude towards the banner.

H-5: Perception of interactivity as one of the online advertising factors is directly related to the attitude towards the banner.

H-6: People who have a positive attitude towards banner ads are, on average, more likely to click on such ads.
    According to Briggs and Hollis and Millward Brown Interactive online advertising can raise brand awareness, positive brand perceptions, and intent to purchase. For the Online advertising, the click-through intention represents typical behavior of online advertising. Click-through is based on the consumer's penchant for satisfying their needs immediately by clicking on the banners upon seeing the advertisements. In the same vein, Lohtia, Donthu and Hershberger's study investigates the impact of content and design elements on the click-through rates for banner ads. Li and Bukovac found, through examining the viewer's cognitive response as a function of banner, that banner ad characteristics such as animated/stick banner and size influence the viewer recall and clicks. Recently, the concept of attitude toward advertising format was

introduced and found to be related to attitude toward advertising and click through behavior. Advertising format includes banner, pop-up, skyscraper, large rectangle, floating, and interstitial (webpage) ads generally can be defined as a way of inserting an important messages between the main page and secondary page. Given that attitude toward the ad is the critical mediator in the field of consumer behavior, we can postulate the following hypothesis regarding click-through intention as a consequence of attitudes toward Online advertising.

5. Methodology

The general purpose of this study was to examine the relationship among various factors, attitude toward advertising and click-through intention. Thus, the first goal was to gain a better understanding of responses to advertising by examining consumer attitudes toward banner ads. Furthermore, the study empirically investigated how these elements influence response to advertisements under online environments.

The present study was conducted in Feb. 2009 A total of 300 respondents in the age group ranging from (20 and above) comprising of equal number of males and females were selected randomly through convenience sampling.

In the absence of research it was difficult to follow someone's guidelines. Thus structured questionnaire was deemed as appropriate instrument for data collection (primary). The sample was believed to be quite representative o the population but nonetheless it was a convince sample which may be defined as "a form of non-probabilistic or purposive sample drawn on a purely opportunistic basis from a readily accessible subgroup of the population (Baker 1990).

6. Measures

The measurement tools used in the study were based on the literature review of various factors as independent variables in the advertising study. Attitude toward banner ads and click-through intention are also measured as dependent variables. The current research used previously-developed scales, modified when necessary, to measure study variables.

Various factors: In order to design a reasoned instrument for this study, certain dimensions were selected from previously developed item sets for the measurement of various factors including celebrity, text information, animation, and position of the banner. The semantic differential scales used in this study to measure various factors were selected from various prior research studies. Scale questions asked subjects to evaluate the components of banner ads using 7-point Likert scales.

Four items for celebrity variables were assessed as "pleasant/unpleasant," "not irritating/irritating," "not boring/boring," and "not comfortable/comfortable". Three items for text information variables were assessed as "unfavorable/favorable," "unlikable/likable," and "not attractive/attractive". Regarding animation variables, four assessment items were used, including "not informative/informative," "not persuasive/persuasive," "not valuable/valuable," and "good/bad." In order to measure position of the banner factor in banner ads, four items of position of the banner were assessed as "unfavorable/favorable," "unlikable/likable, "not attractive/attractive," and "not funny/funny".

6.1 Interactivity:

This study used measurement tools of perceived interactivity suggested by Cho and Leckenby, Hoffman, Novak and Chatterjee, and Liu and Shrum. Five-items were selected to measure interactivity in this study, as measured by a seven-point Likert type scale ranging from "very likable" to "very unlikable", from "very

satisfied" to "very unsatisfied", from "very pleased" to "very unpleased", and from "strongly disagree" to "strongly agree." Examples of response opportunities include, "Please tell us how about the feeling when watching the ads or when interacting with the web and clicking on the ads," "To visit or see the ad, when you visit to the ad there is very little waiting time between my actions and the computer's (web page) response," "It is very quick in loading up pagers," and "The web site gives visitors the opportunity to talk back."

6.2Attitude toward Banner Advertising:

To measure attitude toward banner advertising, semantic differential scales were selected from various prior research studies. Subjects were asked to evaluate banner ads scale (using a 7-point Likert scale) along with four measures anchored by labels of "not informative/informative," "not valuable/valuable," "boring/interesting," and "unfavorable/favorable."

6.3Click-Through Intention:

Click-through intention was measured by tools suggested by Hoffman, Novak, and Chatterjee and Cho and Leckenby. This was seven-point Likert type scales ranging from "strongly disagree' to "strongly agree." Examples of response opportunities include, "I would like to click because the ad, the site, and animated ad have something to do him or his needs," and "I would like to click because the ad, website and animated character are very interesting."

Cronbach's alpha was used in this study and based on acceptable levels of this statistic; all reliabilities for this study were satisfied to the standard acceptance norm of .70;

a) Perception of celebrity was .81,
b) Text information was .89,
c) Animation was .88,
d) Image position of the banner on banner was .92,
e) Interactivity was .95,
f) Attitude toward banner ads was .93, and
g) The click-through intention was .93.
 Thus, we concluded that the internal consistence of the construct was established.

7. Results

 To analyze the hypotheses for this study, a confirmatory factor analysis (CFA) using EQS 5,7b was performed for data analyses. EQS 5.7b for Windows was used because it allows for the simultaneous analysis of several factors.

7.1 Measurement Model

Prior to constructing the measurement and structural model, several underlying assumptions for SEM were checked. Hair et al. suggested that the Skewness and Kurosis values should be ±1.96 with a p-value of .05. Each scale was assessed for construct validity by examining the standard CFA factor loadings of its hypothesized items. CFA was executed by the maximum likelihood extraction method, with varimax rotation because this model is used to decide the number of factors to be extracted and rotated in the conceptual model. Confirmatory factor analysis was used to examine seven hypothetical factor structures. All items had a factor loading of less than .40.Thus, the final model included all items including celebrity, text information, animation, position of the banner, attitude toward banner ads, and interactive.

Scale reliabilities were estimated using Cronbach alpha. In all seven constructs, Cronbach alpha exceeded the standard acceptance norm of .70. Table 1 shows the descriptive data (Ms and SDs) and inter-correlations for all variables. The measures appear to be normally distributed and did not show excessive

inter-correlation that might indicate multicollinearity. Thus, the assumptions remained within acceptable boundaries.

The procedure described by Fornell and Larker was used to assess discriminant validity of the measures. The average variance extracted ranged from .50 to .90 and the squared correlation ranged from .25 to .62. As an indication of discriminant validity, the average variance extracted for each construct was found to be higher than the squared correlation between that construct and any other construct. Thus, the discriminant validity is established in this model. In the normal reliability, Sujan, Weitz and Kumar recommends that t-value should be above 6 and also Nunnally suggests reliability should be above .70. For this reason, the use of an Average Variance Extracted above .50 could be appropriate to suggest convergent validity. Some items were not satisfied with the t-value ratio suggested by Sujan, Weitz and Kumar. Because other criteria were satisfied, it can be said that all factor loadings was significant and that convergent validity is has been established for this study.

7.2 Hypothesized Model Testing

The structural equation model has appropriate to fit the criteria. A structural equation model was employed to test this seven factor model. Overall, model goodness-of-fit indexes also supported this model [x^2 (307)=710.6; x^2/df = 2.31; CFI = .95; GFI = .85; RMSEA = .07]. In the study the x^2 test was significant. Thus, based on these measures, we can conclude that the model was appropriately satisfactory with the x^2 /df ratio.

Standardized path coefficients and path significances are presented in Figure 2. Four of the six path coefficients are significant with a p-value of .05, and support the hypotheses. As expected, we found significant effects of celebrity (H1), position of the banner (H4), and interactivity (H5) on attitude toward banner ads ($p < .05$). Finally, text information (H2) and animation (H3) were not significant with p-vale, while celebrity (H1), position of the banner (H4), and interactivity (H5) had a positive effect on attitude toward banner ads.

In terms of relative importance of the predictive variables on the response variable, celebrity, position of the banner, and interactivity (y = .13, .44, and .36) exhibited the predicting power of [A]banner, respectively. However, text information and animation (y= .03 and .02, respectively p>.05) as various factors did not have the prediction power of attitude toward banner ads. As seen in the results, the attitudes toward banner advertising have a positive effect on click-through intention (H6). As expected, there was a moderating effect of various factors on the relationship between [A]banner and CTI (β = .77, p<.05). Attitude toward banner ads possibly had the moderating effect on CTI. [A]banner had a moderator effect of various factors on CTI. Therefore, factors of these elements are hypothesized to explain the factor of CTI. The effects of these elements are mediated by performances ([A]banner).

SEM result indicated that the model is plausible and, that the position of the banner used banner has a positive influence on consumer attitudes toward banner ads on the Web. Through path analysis, findings indicate that Interactivity and celebrity could affect attitude toward Web banner ads. However, this study did not find a significant relationship between text information and animation and the perception of Web banner ads. Results support some hypotheses that celebrity, position of the banner and interactivity influenced subjects. There were positive relationships between the attitude toward banner ads and Web banner ads click-through intention. It implies that subjects may look at position of the banner, interactivity and celebrity, and the perception of banner ads on the Web to determine how they perceive the web and brands.

8. Conclusion:

The main purpose of this study was to explore how various factors and interactivity elements influence consumer attitude formation and behavioral intention in the computer-mediated environment. To meet the purposes, this survey was conducted. The results were quite conclusive showing a significant positive

relationship between various factors and attitude toward advertising even though we failed to find significant roles of text information and animation.   Cho, Lee and Tharp {2001} concluded Attitude toward the brand was a measure of advertising effectiveness. In there study Cho and colleagues found that the banner ads presented in the format of the highest forced – exposure level yielded the most desirable advertising effects {i.e., favorable attitude toward the banned ad, favorable attitude toward the brand, and high purchase intention}

In addition, the current study found that interactivity was also an important these factor in Online advertising. Given the previously established importance of interactivity in Online communication, this result is consistent.

This study also successfully replicated the relationship between attitude toward banner advertising and click-through intension. Various factors had relationships with click-through intention mediated by attitude toward banner advertising. Given that the click-through is indicative of consumer behavioral intentions regarding Online advertising, this relationship was consistently proved.

The findings of the current study have managerial implications. First, when online advertisements are developed, various factors should be considered carefully including visual and audio. Another benefit of position of the banner picture advertising is that these elements could attract user attention when the online banner is put in the middle of the screen or any of the two top left corners also animation could be an important design tool in current graphic interfaces because it motivates consumer action and draws viewer attention to specific product features. Image position of the banner used in banner can be an attractive tool to capture viewer attention and support the parsing of complex information in graphical user interfaces. The animated genre will have greater appeal to our increasingly visual culture.

Another implication from the results is that interactivity should be considered as a these strategy of the web advertising. Interactivity does not mean just a link between banner advertising and a linked site as understood by its literal meaning. Interactive elements should be designed in the banner advertisement itself. This strategy would include user friendly interfaces of banner advertising that make simple interaction possible in the banner without links to the main advertising page. This interactive these strategies could foster consumer energy toward and interest in advertised banners through a reduction of advertising clutter. This result has additional implication for online media selection. To elicit more favorable attitudes toward web advertisements or click-through, advertisers should select media that have more interactively oriented user interfaces.

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Biodata

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Table 1. Correlation among Variables									
Variable	Mean	S.D	1	2	3	4	5	6	7
Celebrity	5.26	.93	.81[a]						
Text information	4.38	1.35	.19**	.93					
Animation	4.66	1.16	.40**	.46**	.88				
Position of the Banner	4.72	1.21	.30**	.49**	.70**	.95			
Interactivity	4.67	1.31	.23**	.51**	.62**	.71**	.92		
Attitude Banner	4.59	1.21	.33**	.47**	.64**	.74**	.79**	.93	
CTI	3.85	1.43	.37**	.34**	.45**	.54**	.49**	.58**	.93
**p=.01, [a]Cronbach's Alpha, N=300									
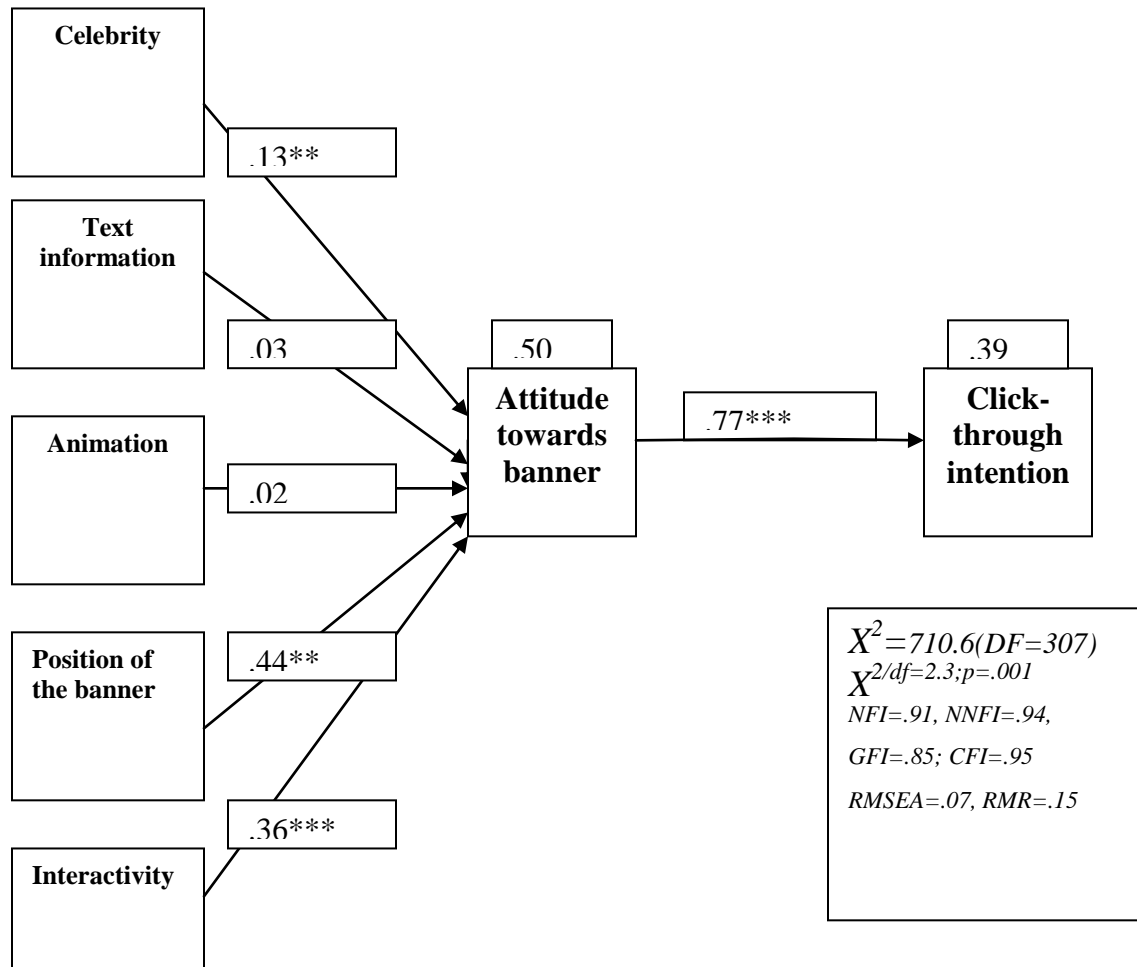
*** Path Significance of: *P< OR =.*

** Path Significance of*: P< OR =.01*