More information, stronger effectiveness? Different group package tour advertising components on web page

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Abstract

Empirical evidence concerning how group package tourists react to the different combinations of advertising components is scant, leaving unresolved issues in an important research arena. Therefore, the specific purpose of the present study is to identify the optimal numbers and combinations of advertising components on travel web pages and their contributions to advertising effectiveness. An experimental design was employed; sixteen experimental groups were surveyed. In total, 843 student informants participated in the study. The results found that informants will reflect different degrees of advertising effectiveness in response to different combinations of advertising components; and more components will induce a better attitude towards-the-ad and greater inclination to purchase. In addition, when the number of advertising components is increased, an inverted “U” curve of advertising effectiveness won’t be observed, but the hypothesis of a partially curvilinear response can be accepted. Finally, some implications of these findings for travel managers and designers of travel-related web pages are discussed, along with some areas requiring further research.

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1. Introduction

The Internet is used by an ever-increasing number of people worldwide. Tourism-related services emerge as a leading product category to be promoted and distributed through the Internet (Connolly et al., 1998; Sussmann and Baker, 1996). According to Institute for Information Industry, travel constitutes the largest share of the B2C market, travel products are the most popular online products, enjoying almost half of the B2C market (FIND, 2004). Capella and Greco (1987) report that travel services constitute a high involvement product, and tourists are likely to spend significant time engaging in an external search for information. During the search for information about a product or service, the function of advertising is to inform and persuade the undecided consumer. Advertising effectiveness is thus associated with the way the consumer subsequently processes the content of the advertisement (Ducoffe, 1996).

The prior studies on advertising components of web page advertising were concentrated on several perspectives. For example, Bruner and Kumar (2000) once discussed two kinds of web pages: simple pages containing a link and a title; and complex pages containing animated graphics, hotlinks, video, and photos. Their conclusion was that complex web pages may increase viewers’ interest, but also often had a negative effect on viewers’ attitude-toward-the-website. Diaper and Waeldend (2000) compared different components of web pages (i) text; (ii) text and graphics; and (iii) text and animated graphic in relation to viewers’ information extraction ability. Their experiment supports the idea that experienced web users are not distracted by surrounding graphics. Web page graphics, animated graphics or otherwise, do not greatly affect viewers’
Researchers argue that certain combinations of web page components have a positive impact on consumers’ attitude towards the ad, brand and purchase intentions (Stevenson et al., 2000). When people are surfing a web page, additional components and visual devices will catch their attention and increase their interest. Accordingly, the multimedia aspect could make the experience more fun and stimulating, thus holding the attention of the consumer longer (Anderson, 1999). On the other hand, research has also indicated that having too many sensory stimuli on the travel destination website could negatively influence the amount of time and money spent by the consumer, and also affect the website’s advertising effectiveness. They further emphasized that adopting a minimalist approach to the design of the home page with eye-catching but appropriate graphics and categories that draw the web surfer further into the site appears to be more effective (Rosen and Purinton, 2004). To solve these inconsistent findings, we reason that different web page of GPT advertising components should have a different experience on customer attitudes and purchase intentions. Thus, it is hypothesized:

$H_{1a}$: Informants have a different attitude towards-the-ad for different combinations of GPT advertising components.

$H_{1b}$: Informants have a different attitude towards-the-brand for different combinations of GPT advertising components.

$H_{1c}$: Informants have different purchase intentions for different combinations of GPT advertising components.

Huang (2000) examines two dimensions of information load and found that greater information loads have certain effects on consumers’ exploratory and shopping behavior. For example, the novelty dimension kept consumers exploring the shopping sites, whereas the complexity dimension had the potential to induce impulse purchases. Jacoby (1977) indicates that the flexibility of integration involved in information processing will increase as the environment becomes richer (presents more diverse information) until an optimal level of functioning is reached. If the complexity of the information environment is increased beyond this point, the level of integration involved in performance begins to decrease. Accordingly, we therefore expect that as the number of different components in a GPT web page increases, its’ advertising effectiveness would be likely to exhibit a familiar inverted “U” curve, thus, it is posited that:

$H_2$: When the number of advertising components and combination increase, it will result in inverted “U” curve of advertising effectiveness.

3. Method

The study applies an experimental design and as the previous study indicates this approach is useful for assessing advertising effectiveness (Woodside, 1990). For selecting destination and itinerary of GPT, Mainland China and 5-day itinerary to Beijing were chosen. This framing is used because Mainland China is the number one outbound travel destination for Taiwanese, which accounted for 34.2% of the outbound travel population and a 5-day itinerary of Beijing is the most popular GPT in practice (Tourism Bureau, 2004).
3.1. Stimulus

In practice, the chief advertising components used in GPTs’ web pages are text, graphics, and hyperlinks. Other components also were found in prior study, such as animated graphics and video (Palanisamy and Wong, 2003). Accordingly, 5 different web page advertising components were employed, which were: text, graphics, animated graphics, hyperlinks, and video. GPT web pages with text as the only advertising component are designated as a control group; web pages with different combinations of advertising components are designed as experimental groups. The entire array of experimental groups is presented in Table 1.

3.2. Independent variable and manipulation

The experiment was conducted on the WWW in the form of a web site emulating an on-line travel agency. As suggested by Bruner and Kumar (2000), parts of the web page were copied from actual websites in order to maintain high external validity. Furthermore, two elements of the web page design were specifically manipulated, the content design of the web page and the brand name, which are discussed in more detail as follows. Content Design. The number of colors and the basic frame of the web page were all the same among the sixteen experimental groups. Besides, all the experimental groups included the same information of the Beijing 5-day itinerary to, such as price (NT$ 14,900, about US$ 452), detailed introduction for itinerary, meals, and transportation, etc. (Amichai-Hamburger et al., 2004; Lurie, 2004). Brand. A fictitious brand name was developed for the purpose of avoiding potential confounding effects from preexisting brand attitudes (Stafford, 1998). Hence, one of the authors with the assistance of a professional web page designer worked together to design the company’s logo and layout of all the web pages. Finally, sixteen different GPT web pages were created; the web pages were virtually the same, the only differences being the different combinations of advertising components.

3.3. Content validity

In order to verify the trustworthiness of the sixteen web pages, three experts in travel industry web page design were invited to test the content validity (Sadarangani and Gaur, 2004). Several amendments were made according to the experts’ suggestions, such as: content of itinerary, resolution, scroll bar, number of colors used should not exceed three.

3.4. Dependent variables and covariates

This stage was designed in five parts. First, for the purpose to measure the extents of information load of each experimental group. According to Huang (2000) used to check the value of information load of each complexity web pages, employed here. And informants were asked to assess each of the advertising web page by a six-item 7-point bipolar adjective scales anchored by “simple/complex,” “large-scale/small-scale,” “uncrowded/crowded,” “similar/contrasting,” “usual/surprising,” and “common/rare.”

In the second part, to assess attitude toward the brand, the informants were asked to rate on three 7-point bipolar adjective scales. The scales were anchored with “good/bad,” “favorable/unfavorable,” and “satisfactory/unsatisfactory” (Bruner and Hensel, 1992; Lafferty and Goldsmith, 1999).

In the third part, three items were ranked on a 7-point bipolar scale anchored by “good/bad,” “favorable/unfavorable,” and “pleasant/unpleasant” to measure attitude toward the ad (MacKenzie and Lutz, 1989; Lafferty and Goldsmith, 1999). Purchase intentions were measured by a three-item 7-point bipolar scale anchored by “very likely/very unlikely,” “probable/improbable,” and “possible/impossible” (Yi, 1990; Lafferty and Goldsmith, 1999).

In the fourth part, a previous study had indicated that social desirability and acquiescence biases can occur when informants respond to a questionnaire, threatening the reliability and validity of the other measures (Bagozzi, 1994). Therefore, ten items were included in the questionnaire to assess the likely social desirability and yeasaying biases (Lafferty and Goldsmith, 1999).

The final part consisted of seven questions included to capture the informants’ demographic profiles. Besides, the subjects were asked if they had seen this GPT web page before. This question was asked in order to minimize preexisting knowledge and any affect due to prior exposure and familiarity (Till and Shimp, 1998). If they did, it could bias their responses and invalidate the results. Therefore, those informants were not considered and analyzed further.

3.5. Informants

Student informants were selected for the experiment. In total, 15 departments participated in this current experiment. The Department of Tourism Management was deliberately excluded so as to avoid the possibility of judgments by experts (Wang et al., 2002). Within each department a total of thirty-two classes were randomly assigned to one of sixteen groups (two classes per group).

| Table 1 |
The experimental groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>Text</td>
</tr>
<tr>
<td>Experimental group 1</td>
<td>Text, graphics</td>
</tr>
<tr>
<td>Experimental group 2</td>
<td>Text, animated graphic</td>
</tr>
<tr>
<td>Experimental group 3</td>
<td>Text, hyperlinks</td>
</tr>
<tr>
<td>Experimental group 4</td>
<td>Text, video</td>
</tr>
<tr>
<td>Experimental group 5</td>
<td>Text, graphics, animated graphic</td>
</tr>
<tr>
<td>Experimental group 6</td>
<td>Text, graphics, hyperlinks</td>
</tr>
<tr>
<td>Experimental group 7</td>
<td>Text, graphics, video</td>
</tr>
<tr>
<td>Experimental group 8</td>
<td>Text, animated graphic, hyperlinks</td>
</tr>
<tr>
<td>Experimental group 9</td>
<td>Text, animated graphic, video</td>
</tr>
<tr>
<td>Experimental group 10</td>
<td>Text, hyperlinks, video</td>
</tr>
<tr>
<td>Experimental group 11</td>
<td>Text, graphics, hyperlinks, video</td>
</tr>
<tr>
<td>Experimental group 12</td>
<td>Text, animated graphic, hyperlinks, video</td>
</tr>
<tr>
<td>Experimental group 13</td>
<td>Text, graphics, animated graphic, video</td>
</tr>
<tr>
<td>Experimental group 14</td>
<td>Text, graphics, animated graphic, hyperlinks</td>
</tr>
<tr>
<td>Experimental group 15</td>
<td>Text, graphics, animated graphic, hyperlinks, video</td>
</tr>
</tbody>
</table>
4. Results

In total, 1120 sample questionnaires were collected, of which 843 were usable. The characteristics of the 843 respondents were as follows: 56% of usable questionnaires were filled out by the males and 44% by the females; most of whom were between 20–22 years old (42%). Nearly 51% of informants had at least one outbound travel experience, including GPT or foreign independent tour.

4.1. Reliability and advertising effectiveness

The reliability was tested and Cronbach $\alpha$ was employed. The results seemed sound; all the values were at least above 0.7. With respect to the test of social desirability and yea-saying, the results indicated that none of the potential biases existed; thus, these items were not considered further. One-way analysis of variance (ANOVA) was run to test whether there were significant differences in response to various GPT web page designs (Table 2). No significant difference was found in attitudes toward the brand ($F=1.60, p > 0.05$). However, a statistically significant difference was found in the attitude toward the ad ($F=1.88, p < 0.05$) and purchase intentions ($F=1.66, p < 0.05$). In brief, the preceding results indicated that H1a and H1c were supported but this effectiveness was not found in attitude toward the brand (H1b).

4.2. Advertising effectiveness and information load

Regression was employed for examining the advertising effectiveness and information load. Advertising effectiveness was used as the dependent variable and information load as independent variable. Since linear regression model performed rather low $R^2$, and as suggested by Cohen et al. (2003) that in the regression model, when a curvilinear relationship is evident of the addition of this quadratic term will result in significant incremental variance, Therefore, a quadratic model was further used, the results indicated that 7 groups possess significance: experimental group 1 ($R^2 = 0.186$, $p < 0.01$), experimental group 4 ($R^2 = 0.175$, $p < 0.05$), experimental group 6 ($R^2 = 0.254$, $p < 0.01$), experimental group 8 ($R^2 = 0.221$, $p < 0.01$), experimental group 9 ($R^2 = 0.320$, $p < 0.01$), experimental group 11 ($R^2 = 0.310$, $p < 0.01$), and experimental group 12 ($R^2 = 0.122$, $p < 0.05$). A graph was drawn to illustrate the groups demonstrating significance (Fig. 1). According to this graph, the initial trend showed that information load did not enhance its effectiveness. Instead, a decreasing trend was displayed. When video was included in the information load, ad effectiveness was seen to be progressing; when text, graphics, and video were added, ad effectiveness was at its highest point; when text, graphics, animated graphics, and video were incorporated, ad effectiveness demonstrated a decreasing trend. Therefore, H2 was partially supported.

5. Conclusion and discussion

According to the results of this study, the differences between the sixteen experimental groups were not significant in terms of
attitude towards the brand, which could perhaps be attributed to the fact that web page brands are virtual and that GPT itinerary web pages emphasize product content and not brand concepts. As not much information is dedicated to the brand, differences exist in terms of respondents’ brand recognition. And according to Nutech Solutions (2004) indicated that today the tourism industry is characterized by a low level of brand profiling, increased marketing costs and growing price. Coupled with the relationship between brand attitude and prior consumption experience, a consumer can only form an attitude towards the brand after he or she has used the product. As a result, the effect of virtual brand is not manifested. However, different advertising components are associated with significant differences in attitude toward the ad and purchasing behavior. Therefore, travel operators should understand users’ preferences in web page design. As to designing web page ads, travel operators consider users’ needs and their attitudes towards different advertising components (Sadarangani and Gaur, 2004).

As Fig. 1 indicates that the curve’s trend progresses with GPT’s web page combination of components, ad effectiveness first demonstrates a decreasing trend but then the graph displayed an inverted “U” shape. At the beginning of reducing ad effectiveness, we found that the ad effectiveness combining graphics and animated graphics was poorer than graphics alone. Generally speaking, more components will have better ad effectiveness. But in our study, animated graphics possesses a higher degree of information load, however, it might assume that simultaneous portrayal of the same graphics in both stationary and animated fashion will cause users’ reading displeasure and generate poor ad effectiveness. Therefore, in Tversky and Morrison (2002) study indicates that only carefully designed and appropriate graphics (static and animate) prove to be beneficial for conveying information.

Another interesting phenomenon was also discovered. Incorporation of video into the components mix enhances ad effectiveness. Through videos, consumers can better understand local folklore and travel itinerary (i.e., product uniqueness), hence better ad effectiveness. This research finding was similar with that of previous literature: video will enhance consumers’ perception of the travel destination and purchasing decision process (Seaton and Hay, 1998). The industry generally agrees that media presentation methods have greatly improved. Although video reinforces ad effectiveness, further examination of ad components reveals that more components reduce ad effectiveness (i.e., group 12: text, graphics, animated graphics, and video). This result was coincidently similar to that of simultaneous stationary and animated graphics presentation. Also, when the presentation includes both animated graphics and video, consumers will have to spend more time browsing the page and will experience difficulty in understanding it contents. Therefore, it might imply that incremental information load will offset ad effectiveness. Incorporating various media components into the web page yields positive results to ad effectiveness, leading to the inverted “U” shape.

Currently, video presentation is not a usually used component in travel agencies’ web page designs. In the real Internet environment when add video or many combination of components on the web page, it might have some problem in travel operators, such as cost, manpower and bandwidth. These technical problems will involve in producing marketing clips and also are important issues to consider.

In addition, products involving travels to China belong to the growth phase of the product life cycle. Thus, the best combination of components should be text, graphics, and video. Therefore, when travel operators are making marketing strategy, they should not only strike a balance between cost and revenue, but also consider products’ life cycles in order to determine the best web page combination of component. By doing so, they can better demonstrate travel agencies’ commitment for GPT products, which will in turn influence consumers’ attraction and trust of certain travel products. This nurtures consumers’ understanding of the products and raises their purchasing intention.

Although this study sought rigidity in the research process, several limitations could be identified. In order to measure web page ad components in an objective manner, the concept of information load Huang’s (2000) study was adopted. Subjects were asked to browse web pages and then filled out the questionnaire based on their perceptions of the web page ad component presentation. This was the only methodology for measuring information load. However, this measure can cause measurement errors because of consumers’ perceptual differences. For future studies, we recommend better methods based on more scientific methods to measure web page ad components’ information load. Or, in terms of sampling, subjects from different market segments could be studied. In addition, according to Palanisamy and Wong (2003), customers can freely choose whether or not to use hyperlinks to understand more information. Internet networks cannot force consumers to browse. This study adopted laboratory experimental techniques in which one of the media components was a hyperlink. In order to simulate real-life browsing, instructors only reminded respondents on the types of ad components to browse. Whether or not respondents used hyperlinks in the process was an issue beyond this study’s control. One of the possible defects is that respondents’ use of hyperlinks may cause a deviation in measuring ad effectiveness.
In conclusion, with the rise of Internet developments, the results of the study could be used as a source of practical management advice and recommendations for travel operators. Future studies can explore the real effectiveness and differences of the Internet advertising components in the hope of continuously expanding the related knowledge of this territory.

References


Lafferty BA, Goldsmith RE. Corporate credibility’s role in consumers’ attitudes and purchase intentions when a high versus a low credibility endorser is used in the ad. J Bus Res 1999;44(2):109–16.


Sadarangani PH, Gaur SS. Being more effective on the world wide web: a communication model. IIMB Manag Rev 2004;16(2):36-47.


