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Influential factors and relational structure of Internet banner advertising in the tourism industry

Shwu-Ing Wu[a,*], Pao-Lien Wei[b], Jui-Ho Chen[c]

[a]Department of Business Administration, National Chin-Yi University of Technology, No.35, Lane 215, Section 1, Chungshan Road, Taiping, Taichung, Taiwan 411, ROC
[b]Department of Management Science, National Chiao Tung University, Taiwan, ROC
[c]Department of Electrical Engineering, National Chin-Yi University of Technology, Taiwan, ROC

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Abstract

The Internet serves as a major marketing and communication tool in the tourism industry; it is, therefore, surprising that there have been few discussions of the structural relationship between tourism and Internet-based advertising. This study focuses on determining how Internet-based advertising has influenced travel agencies operating in the tourism industry. The sample of 605 respondents is, therefore, limited to those with experience of both Internet-based advertising and travel agencies. Using structural equation modeling (SEM), it was found that while both consumer contact and attention paid have a direct relationship to a consumer's attitude of an advertisement, they only indirectly affect the consumer's response. The level of importance ascribed to the content of Internet advertisements creates two distinct responses, indicating that the consumer's degree of product involvement is a significant variable in determining the success of Internet advertisements.

Keywords: Internet advertising contact and attention; Internet advertising content design; Internet advertising attitude; Product involvement degree; Internet advertising effects

1. Introduction

The rapid development of the Internet has had an enormous impact on traditional media, and has revolutionized commercials. Many enterprises have adopted the Internet in the marketing and sales of products and today the web is an important advertising medium. These effects are emphasized in the tourism industry; surveys conducted by the World Wide Web for the Taiwanese Civil Service of Ministry of Economic Affairs (MOEA) noted that online shopping is largely tourism based and planning and booking trips online is already common (Tsai, Huang, & Lin, 2005), and that marketing and sales are chiefly conducted through the Internet. Experts believe tourism has the potential to adopt e-commerce and internet advertising as its main communicative tool (Kim, Kim, & Han, 2007; Murphy & Tan, 2003). Information technology and web based advertising has been used to redefine tourism and deliver products to end consumers (Aaron, 2006; Gretzel, Yuan, & Fesenmaier, 2000).

Internet advertising significantly impacts travel and purchase behavior (Buhalis & Licata, 2002; Tierney, 2000). Currently, there are several questions that we believe need to be answered by marketing researchers: (1) in conditions of extreme competition, advertisements may become highly prevalent, and customers would be barraged with advertising; would customers then begin to ignore advertisements? (2) What level of importance is placed on the content of Internet advertisements? (3) What degree of consumer involvement with product affects the attitude toward advertisements, and how does this affect the impact of advertisements? (4) What is the intensity of cause and effect relationships in the online marketplace?

Studies concerning advertisement design methodology and its results have been undertaken previously

*Corresponding author. Tel.: +886 4 23924505; fax: +886 4 23929584.
E-mail address: wusi@ncut.edu.tw (S.-I. Wu).

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(e.g. Bayles & Chaparro, 2001; Briggs & Hollis, 1997; Ducoffe, 1996; Leong, Ang, & Tham, 1996; Rethans, Swasy, & Marks, 1986); however, there are very few studies that discuss the effect of Internet advertising on the tourism industry. Our study has, therefore, selected tourism in an attempt to understand advertising's effect on intangible commodities (tour service marketing and sales), and determine the effect of Internet advertisements on users' perceptions and behavior. While our subject is the tourism industry, this study focuses on the travel and leisure sectors. Our objective is to develop a knowledge base from which travel agencies engaged in Internet-based advertising can draw from.

Compared to traditional media, the Internet is instantaneous, low-cost and global. Internet-based advertising provides a medium to disseminate information to consumers in the form of "enterprise and consumer interactive scenarios"; it also aids advertisers in identifying target markets and in accurately grasping the consumer demands. Advertisers can further narrow markets, identifying individual consumers to be targeted by marketing; this practice benefits enterprise–consumer relationships, helps increase brand value, and aids the creation of a business image.

Studies have found that consumer purchase behavior is occasionally impulsive (Wells & LoSciuto, 1966). Media such as radio, newspapers, and magazines were previously used to deliver messages; if a consumer noticed an advertisement, he/she had to physically travel to a store to make his/her purchase. The time taken to reach a store gave consumers time to suppress their desire to make a purchase; however, Internet stores combine both advertising and purchasing (Hoffman & Thomas, 1996), thus enabling consumers to make a purchase instantly. The Internet, therefore, encourages impulsive purchasing compared to traditional media.

This study discusses the relationships between: consumer's contact and attention paid to and the effect of advertisements, the content and effect of advertisements, and the influence of these variables on travel agents' advertising. Combinations of these variables have been analyzed, and in this paper, the influence of various factors on advertisements' effects have been established and verified through structural equation modeling (SEM). The objectives of this research are:

(1) To find consumers' contact and attention, and the level of importance placed on the content of Internet-based advertisements, and determine how the effect of Internet advertisements is altered by these two dimensions.
(2) To determine how the attitude toward Internet advertisement, and product involvement degree alters its effect.
(3) To construct a relationship between Internet advertisement contact and attention and Internet advertisement content design, and determine what part Internet advertisements play in the cause and effect model.
(4) Generate results that may serve as a reference for industry operators as they devise strategies for Internet-based advertising.

2. Literature review and hypothesis

2.1. Contact and attention to Internet-based advertising

Successful advertisements draw customers into purchasing or viewing the product or a company in a more favorable light (Weilbacher, 2003). Craik and Lockhart (1972) believe that recall is higher when one is exposed to continuous stimuli; this view is also held by Rethans et al. (1986). Nua Internet Surveys (2001) estimated that 85% of advertising, marketing, and sales companies believe online advertising aims to increase traffic to the websites promoted. Briggs and Hollis (1997) believe that viewing a banner on a website can convey a message; therefore, regardless of whether the consumer clicks or not, simply viewing a banner increases the chance of a purchase. This position appears to be supported by Nua Internet Surveys (2000), which says that 32% of online trade is the result of viewing advertisements online. Studies by the Internet Advertising Bureau, USA (IAB, 1997) have determined that exposure to online advertising creates a recall rate of 12%; two percent higher than that of television. Bruner II and Kumar (2000) further pointed out that layered effects exist among advertising attention level, advertising attitude, attitude of brand, and purchase intention. Therefore, to increase consumer contact to advertising, and attract consumer attention to Internet advertising, a positively strengthened attitude and Internet advertising effects are improved. Internet advertising contact and attention of consumers affects the advertising attitude and purchasing behavior. This study proposes the following hypotheses:

H1. As the frequency of contact and attention paid to Internet advertising increases, consumers' attitude towards the advertisement becomes more positive.

H2. Consumers react more positively and pay a greater attention when contacted to a higher frequency.

2.2. Internet advertising content design

Advertising content is a key success factor in Internet advertising (Cho, 1999); if the content is congruent with customers attitudes, beliefs, and values, the effect of advertising is enhanced (Braun-Latour & Zaltman, 2006). Online advertisements' content includes variables such as: web interface, background colors, pictures, sound effects, textual content and dynamic techniques (Dreze & Zufryden, 1997); Ducoffe (1996) noted that content presentation also contributes highly to advertisements' results. Consumers form values and alter their consumption patterns based on the messages conveyed; messages that help consumers make decisions positively influence a willingness to make a purchase.

Leong et al. (1996) conducted studies on brand recollection of Asian consumers and discovered that consumers recall advertisements more effectively if they display images as well as text; these results are supported by Costley and Brucks (1992), Childers and Houston (1984), and MacInnis and Price (1987). Stevenson, Bruner II, and Kumar (2000) ascertained that complicated website background designs have negative effects on the perception of advertisements and brand, and decrease purchases generated by the website. Wang (1997) found that static banner advertising increases product attention level. Bayles and Chaparro (2001) compared recall levels between static and dynamic banners, and found that animated information is more likely to be recalled correctly; however, in a later paper, Bayles (2002) noted that animation does not help recall of advertisements, as while users may remember animations on web pages, those animations are not necessarily related to advertising content. Furthermore, Yi (1990a, 1990b) suggested that advertisements that produce a positive emotional response are more likely to generate a positive perception of the brand and the product.

Our literature review has found that attractive and stimulating advertising content design produces a positive perception of the brand and the product, and is more likely to result in a recollection of advertising content. However, few studies have been conducted to discuss the degree to which consumers emphasize content. This study proposes the following hypotheses regarding consumer importance of advertisement content design and advertisements' effects.

H3. As consumers' ability to relate to the content design of advertisements increases, the impact of advertisements also increases.

2.3. Consumers attitude towards Internet advertising and advertisings' effects

Attitude is an important driver of behavioral change (Kimelfeld & Watt, 2001); perception of advertisements directly affects the consumers' attitudes toward brands and then purchase intention (Suh & Yi, 2006). Mackenzie and Lutz (1989) defined the attitude toward an advertisement as being the response elicited in a consumer; Lutz (1985) believed the attitude toward an advertisement is in itself an expression of personal preference towards a product. A consumer's attitude towards an advertisement can be split into two categories: the cognitive, or intellectual analysis of an external stimuli (i.e. an advertisement), and the emotional "inner" response (Vakratsas & Ambler, 1999; Abelson, Kinder, Peters, & Fiske, 1982).

Ajzen and Fishbein (1980), and Mitchell and Olson (1981) noted that the attitude toward an advertisement affects consumer's perceptions of brands, and determines whether a purchase is made. This opinion has been held by many scholars (Brown & Stayman, 1992; Gorn, 1982; Homer, 1990; MacKenzie & Lutz, 1989; MacKenzie, Lutz, & Belch, 1986; Moore & Hutchinson, 1983). Therefore, the following hypothesis has been proposed:

H4. The more positive a consumer's attitude toward an advertisement is, the greater the effect of the advertisement.

2.4. Connection of product involvement degree

The degree of product involvement is a significant mediator for attitude toward the advertising and the advertising effect (Chou, 2006; McGrath & Mahood, 2004; Suh & Yi, 2006; Yoonn & Choi, 2005). It has been determined in past studies that banner advertisements that engage and entertain customers are more likely to be clicked (Cho, 1999; Chung & Zhai, 2003; Cochrane & Quester, 2005; Macias, 2003). The degree of need, the value placed upon, and interest generated by an item was determined by Zaichkowsky (1985) to affect consumer interest levels. Zaichkowsky (1986) defined this as product "involvement", and categorized it into three forms; he also noted that product involvement indirectly affects the extent to which consumers are engaged by the messages of advertisements, and the likelihood they will make a purchase. Okechuku (1992) found that advertisements have the ability to alter perceptions of brands and products; therefore, advertising strategies now aim to generate interest on the part of the consumer (Cohen, 1983). Animations gain consumer interest more effectively than static advertisements (Cho, 1999). Norris and Colman (1992) determined that interesting advertisements are more likely to be recalled; therefore, emphasis should be placed on creating advertisements, that can engage the audience. By learning about a product, consumers gain a connection to a brand; this compounds the effect of future advertisements. We may infer that product involvement is an intermediary variable between the level of importance placed on advertising content design and an advertisements effect. Our hypothesis is thus:

H5. If consumers place greater importance on an advertisement's content design, the consumers will have a higher degree of product involvement.

Korgaonkar and Moschis (1982) suggest that consumers with low levels of loyalty, and low product involvement, are more likely to switch products. Studies show that advertisements with a low degree of complexity of background music tend to produce positive results in terms of brand perception; however, those advertisements with a high degree of music complexity tend to distract users, and may result in the user consciously terminating viewing of the advertisement (Park & Young, 1986). Kurgman (1965) believed product involvement degree would affect the information processing process by consumers and change their attitudes. This indicates a direct relationship between product involvement and consumers' attitude towards advertisements.

H6. The higher the degree of 'product involvement', the more positive the consumer's attitude toward an advertisement.

In addition, McWilliams and Crompton (1997) found that those with different levels of product involvement have different media choices, information processing, processes and behavior patterns. Ray (1973) proposed that degrees of involvement differentiate the product adoption process. Consumers with high product involvement tend to encounter complex product decision-making processes, while those with low involvement tend to adopt simple decision-making models. Cho (1999) found that when the consumers' product involvement degree is high, consumer intention to click through an advertisement also increases. Thus:

H7. The higher the degree of a consumer's "product involvement", the greater the effects of an advertisement.

2.5. Internet advertisement effect measurement

!m_cross-ref refid = "bib20"/ > Cho, Lee, and Marye (2001) measured the effect of banner advertisements using the following factors: users' perception of advertisements, the number of clicks on banner advertisements, users' attitude toward brands and advertisements, and purchase intention. Due to the ease and accuracy of counting Internet user numbers, the primary measurement of advertisement effectiveness is web traffic; however, the number of 'click through' users alone does not measure the purchase intentions of those visitors, nor does it quantify and 'add value' created through branding. In contrast to these traditional measurements, Keng and Lin (2006) measured the effectiveness of advertisements via recall and recognition of components of the advertisement.

To overcome these deficiencies, Hoffman and Thomas (1996) suggested that observing user's "mental aspects" through browsing behavior would aid the measurement of user attitude towards brands, their intent to purchase, and their recollection of advertisements. This study has adopted the following to measure an advertisement's effect: the click through, effect recall, attitude of brand, and the customer's purchase intention.

3. Methodology

3.1. Study framework

The following questions are asked in our survey: (1) what is the influence of consumers' contact and attention and their attitude toward Internet advertising, and how does this determine the advertisement's effect on the user? (2) How does a user's perception of an advertisement differ according to levels of importance placed on the content of the advertisement? (3) What is the relationship between a user's attitude toward Internet advertisement and the advertisement's effect? (4) How is product involvement determined by the importance placed by a user on an advertisement's content. (5) How does a user's product involvement influence both: (a) the attitude toward Internet advertisement, and (b) the advertisement's effect?

The cause and effect model for Internet-based advertisements is shown in Fig. 1.

3.2. Questionnaire design

Examples of literature used in the construction of our questionnaire include: advertising contact and attention (Rethans et al., 1986); advertisement content design (Dreze & Zufryden, 1997); product involvement (Zaichkowsky, 1986, 1994); the advertising attitude (Ajzen & Fishbein, 1980; MacKenzie & Lutz, 1989); and the effects of advertisements (Bezjian-Avery, Cadler, & Iacobucci, 1998; Hoffman & Thomas, 1996). Ten college students who are regular Internet users were selected for focus group discussions. Our literature review and the focus group participants led to a preliminary questionnaire. In order to obtain effective measurement tools, we amended our questionnaire during pre-test and pilot-test stages. During our pre-test, 15 graduate students and 15 members of the public were chosen through convenience sampling. Assessment of the survey was undertaken via interviews and three vague and unclear questions were deleted in the pre-test. After these deletions, the amended pre-test questionnaire was distributed to 50 selected individuals who completed and returned our survey; these 50 responses constituted our pilot-test. Factor analysis and Cronbach α value was used to verify the validity and reliability of our scales. Our results indicate that other than the dimension "Internet advertising contact and attention" (which had α value of 0.521, which was deemed acceptable), the remaining dimensions had values greater than 0.7, confirming to the guidelines suggested by Nunnally (1978). Factor loadings of respective questions items were between 0.687–0.961 (>0.6); respective factor cumulative percent of variances were between 51.17% and 92.32% ($>50\%$). The main research, therefore, used this questionnaire.

The content of the questionnaire is divided into six sections: (1) Internet-based advertisements' contact and attention: including 3 questions items using a five-point Likert scale; (2) the level of importance placed on internet advertising content design: including 4 question items using a five-point Likert scale; (3) product involvement degree: including 10 seven-point semantic differential question items; (4) Internet advertising attitude: including 7 question items of five-point Likert scale; (5) internet advertising effects: including 4 dimensions with 11 items using a five-point scale; (6) personal background: including 6 items of nominal data, i.e. gender, age, education level, monthly income, internet experiences, and daily Internet usage. The respective dimensions and question items of the questionnaire are shown in Appendix A.

3.3. Sampling

Since this study is a discussion of advertising effects of the Internet media, the subjects were experienced web

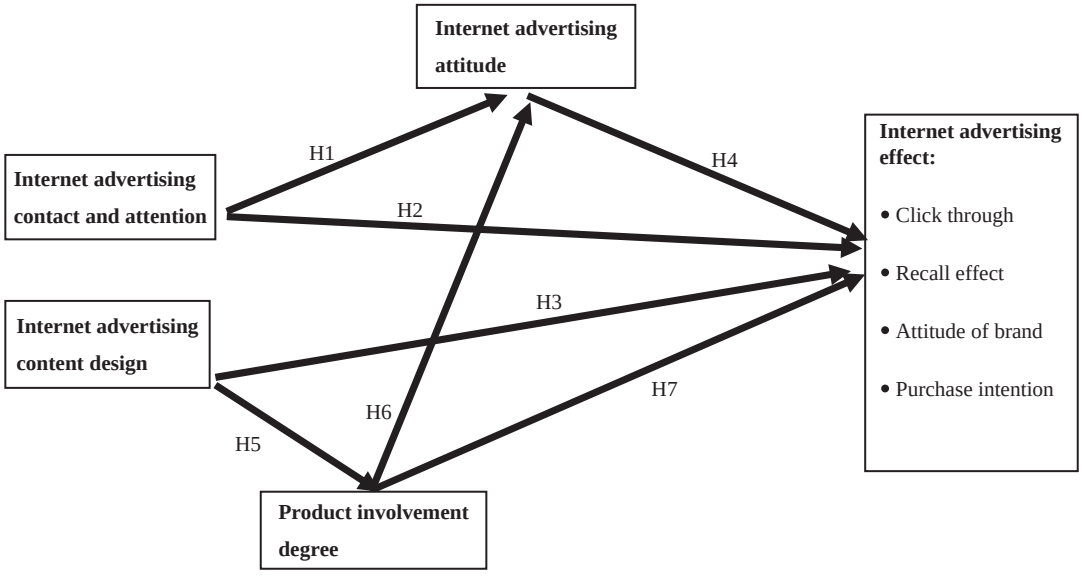

Fig. 1. Study framework.

browsers. Experience of use was, therefore, a filter, and non-users were excluded from the survey. Questions were designed to identify common conceptions of travel agencies Internet-based advertising and were not specific to any one travel agency.

Questionnaires were distributed at the International Computer Show in Taiwan; 648 were returned. Invalid questionnaires (with incomplete answers) were eliminated, leaving 605 valid questionnaires. The valid questionnaire return rate is 93.36%.

Among the 605 valid questionnaires returned in this study, the majority of respondents were male (62%), most with over four years of experience in Internet use (63.4%); a daily Internet usage of over 4 h per day: 35.9%; and approximately 22.1% of the study subjects paid attention to internet advertisements. Of the sample, 63.1% were aged 20–29 years; 48.8% were students, most of whom currently schooled at college or university (56.2%); and the average monthly income of the respondents was principally under NT$20,000 p.a. (55.2%). These results are similar to the findings of the Taiwan Internet Information Center's "Taiwan Area Broadband Internet User Survey" conducted in 2005, whose results indicate that the usage rate of Internet in Taiwan is as high as 60.25%. Among these, the "16–20 age group" and "21–25 age group" occupy the highest ratio among Internet users and, in terms of education level, the categorizations "university" and "college" comprise the highest usage rate.

4. Results and discussion

4.1. Reliability and validity analysis

This study first extracted two factors that have eigenvalues of greater than 1 from the 7 items pertaining to a user's attitude toward Internet advertisements, and these were entitled "truthful factor" and "pleasant factor". Then, these two factors and all measurement items in the questionnaire underwent reliability and validity analysis. Results are as shown in Table 1 and Appendix B.

Alpha coefficients for "Internet advertising contact and attention" were 0.527; all other factors had reliability coefficients greater than 0.7—the overall Cronbach α reliability value is 0.920. The coefficients of factor analysis for our other scales were high, but the following items were dropped because of unacceptably low communalities: "average time spent using the Internet per day (X1)", in the dimension "Internet advertising contact and attention", and "Internet advertised products are valuable to me (Y14)" in the dimension "Internet advertising attitude". Consequently factor-loading coefficients were in excess of 0.7, and the cumulative percent of variance for each factor dimension was greater than 50%, thereby indicating convergent validity.

Harman's one-factor test and correlation analysis was used to check for common variance bias. First, based on Harman's one-factor test, all variables for any two factors are entered into a factor analysis. The results of the unrotated factor solutions indicate that more than one factor emerged in every test. We then used correlation analysis to account for all item-to-total correlation, and relationship between each two factors. Our results indicate that all item-to-total correlations are statistically significant, and each of these correlations are larger than the correlations between these two factors (see Table 1 and Appendix C). On the other hand, all correlations in R_{xx} and R_{yy} (measurement) are statistically significant, and each of these correlations are larger than all correlations in R_{xy} (example in Appendix D). The above tests provide evidence of discriminate validities and the measures have

Table 1
Reliability and validity analysis

Dimension (code)	Factor and variable name (code)	Item-total correlation	Communalities	Factor loading	Eigen value	Cumulative percent of variance %	Cronbach α
Internet advertising contact and attention (D1)	Average time spent surfing the internet per day (X1)*		0.236	0.486	1.570 (1.470)	52.344 (73.524)	0.527 (0.640)
	How often consumer is exposed to Internet advertising (X2)	0.470	0.713 (0.735)	0.844 (0.857)			
	Attention level for Internet advertising (X3)	0.470	0.621 (0.735)	0.788 (0.857)			
Internet advertising content design (D2)	Level of importance placed on flash design (X4)	0.589	0.578	0.760	2.702	67.558	0.836
	Level of importance placed on picture and text web interface allotment (X5)	0.752	0.769	0.877			
	Level of importance placed is in highlighted color (X6)	0.731	0.750	0.866			
	Level of importance placed on general Internet advertising content (X7)	0.608	0.606	0.778			
Product involvement (D3)	Important (Y1)	0.800	0.703	0.839	7.719	77.191	0.967
	Relevant (Y2)	0.834	0.751	0.867			
	Means a lot to me (Y3)	0.856	0.783	0.885			
	Valu ab l e (Y4)	0.849	0.774	0.880			
	Needs (Y5)	0.887	0.830	0.911			
	Interesting (Y6)	0.864	0.796	0.895			
	Exciting (Y7)	0.853	0.779	0.883			
	Appealing (Y8)	0.826	0.739	0.860			
	Fascinating (Y9)	0.873	0.807	0.898			
	Involving (Y10)	0.838	0.757	0.870			
Internet advertising attitude (D4)	Accuracy						
	Internet Advertised product and actual product are consistent (Y11)	0.503	0.558 (0.596)	0.705 (0.772)	3.078 (1.929)	31.116 (64.308)	0.723
	I have faith in Internet advertising (Y12)	0.596	0.651 (0.703)	0.775 (0.839)			
	I trust shopping through advertised telephone and address (Y13)	0.529	0.640 (0.629)	0.796 (0.793)			
	Internet Advertised products are valuable to me (Y14)*		0.366	0.558			
	Pleasantness						
	Most Internet Advertisements are pleasant (Y15)	0.546	0.660	0.830	1.906	63.534	0.712
	I am in favor of Internet advertising in general (Y16)	0.572	0.688	0.812			
	Advertising information serves as a good reference (Y17)	0.471	0.558	0.747			

Internet advertising effects (D5)	Advertisement click through						
	I am likely to click through Internet Advertisements again (Y21)	0.691	0.845	0.919	1.691	84.537	0.816
	I often click through Internet advertisements (Y22)	0.691	0.845	0.919			
	Recall effects						
	I can remember most of the Internet advertising content (Y23)	0.629	0.708	0.842	2.095	69.831	0.784
	Internet advertising enhance my impression toward a product (Y24)	0.573	0.642	0.801			
	I can describe Internet advertising content (Y25)	0.666	0.745	0.863			
	Attitude of brand						
	After viewing Internet Advertisements, I am more in love with the advertised brand (Y26)	0.731	0.782	0.884	2.313	77.109	0.851
	After viewing Internet Advertisement, I developed preference for the brand in the advertisement (Y27)	0.760	0.811	0.901			
	After viewing the Internet Advertisement, my impression for the product brand is strengthened (Y28)	0.673	0.720	0.848			
	Purchase intention						
	After viewing the Internet Advertisement, I am willing to try using the product (Y29)	0.686	0.744	0.863	2.241	74.709%	0.831
	After viewing the Internet Advertisement, I become interested in making a purchase (Y30)	0.726	0.784	0.885			
	After viewing the Internet Advertisement, I will purchase the brand being advertised (Y31)	0.658	0.713	0.845			

*Dropped item, ( ): dropped item after.

no common variance bias (Campbell & Fiske, 1959; Fornell & Larcker, 1981; Podsakoff & Organ, 1986).

This study has not included any controls in the model because no experimentation method was used. Demographic variables (e.g. age, sex, education etc.) were used as control variables as we analyzed variance through ANOVA; our results showed no significant difference between clusters that existed within the demographic variable; they, therefore, could not impact the relationship model, and the model could serve for general use (as shown in Appendix D).

4.2. Hypothesis verification

AMOS5.0 was used in verifying cause and effect relationships among study factors, because the two variables (X1 and Y14) had low communalities, they were dropped from the analysis and the model estimated without them. In terms of 'model fit test', other than adopting χ^2-value as a reference based on studies such as those of Bagozzi and Yi (1988), Bentler (1986, 1990), Chau and Hu (2002), Gefen, Straub, and Boudreau (2000), Joreskog and Sorbom (1982) and Joreskog (1989), a good model should conform to the following: goodness of fit index (GFI), adjust goodness of fit index (AGFI), normed fit index (NFI), increased Fit index (IFI), and the comparative fit index (CFI) should be greater than 0.9; root mean square residual (RMR) should be less than 0.05, root mean square error of approximation (RMSEA) should be less than 0.05 (Benlter, 1982, 1990), and χ^2 relative value to degree of freedom (χ^2/df) should not exceed 3 (Carmines & McIver, 1981). Thus our study is based on this principle in verifying our model fit.

Study results show that the P-value in χ^2-test is less than 0.001; however, such test is influenced by the sample size. If the sample size is large and the data severely deviates from a normal distribution, it will cause an increase in the χ^2-value. Therefore, Bagozzi and Yi (1988) suggested that the number of samples should be taken into consideration when using χ^2-tests, and the relative value of degree of freedom (χ^2/df) should be used to test model fit. In this study, the χ^2 relative value to degree of freedom is 1.764, i.e. less than the cut-off value of 3.0; in general, the study model and observation data possesses a good fit.

In addition, the GFI value is 0.924, AGFI value is 0.907, NFI value is 0.942, CFI value is 0.974, and the IFI value is 0.974, meaning that all are greater than the required 0.90. The RMR value is 0.047, and the RMSEA value is 0.036, both of which are less than 0.05, indicating that the model can be established. In general, the indicators conform to basic requirement values, meaning that this study possesses a good model fit; i.e., our model is the one that conforms to actual data.

To view the relationship among respective factor dimensions and the Internet advertising effects in the model structure of this study, see Fig. 2. All path influence values have adopted standardized coefficients. β and γ values have been computed using the maximum likelihood (ML) method. Test results are shown in Table 2, while the relationship between variables and latent factors of measurement model is shown in Table 3. Our findings include:

(1) The relationship between "Internet advertising contact and attention" and "Internet advertising attitude": this study shows that the two show significant γ positive relationships ($\gamma_1 = 0.335$, $P = 0.000$), thus, the hypothesis H1 is established. Internet advertising contact and attention have positive influences on attitudes toward internet advertising. As consumers' exposure to Internet advertising increases so do attention levels towards those advertisements, and attitudes toward the advertisement become more positive.

(2) The relationship between "Internet advertising contact and attention" and "Internet advertising effects": the study shows that the two show a significant positive relationship ($\gamma_2 = 0.110$, $P = 0.024$), thus, the hypothesis H2 is established. Contact and attention influences advertisements' effects positively, and as the frequency of consumer contact with Internet advertising increases, advertisements' effects become higher.

(3) The relationship between the level of importance placed on "Internet advertising content design" and "Internet advertising effects": the study shows that the two do not possess significant relationships ($\gamma_3 = 0.039$, $P = 0.276$), thus, the hypothesis H3 is not established. Many argue that content is an influential factor in an advertisement's effect, and that content attracts and stimulates readers and listeners to different extents (Bayles & Chaparro, 2001; Braun-Latour & Zaltman, 2006; Cho, 1999). However, the level of emphasis on content showed no significant influence on advertisement's effects. This indicates that attractive content design is more important than the degree of 'consumer involvement' in an advertisement.

(4) The relationship between "Internet advertising attitude" and "Internet advertising effects": the study shows that the two show a significant positive relationship ($\beta_1 = 0.678$, $P = 0.000$), thus, the hypothesis H4 is established, showing that a customer's perception of an advertisement directly affects the advertisement's effect. The relationship is therefore: the more the positive attitude toward advertisement, the greater the effect of the advertisement.

(5) The relationship between "Internet advertising content design" and "product involvement": the study shows that the two possess a significant positive relationship ($\gamma_4 = 0.175$, $P = 0.000$), thus, the hypothesis H5 is established. If consumers place greater importance on an advertisement's content design, the consumers will have a higher degree of product involvement.

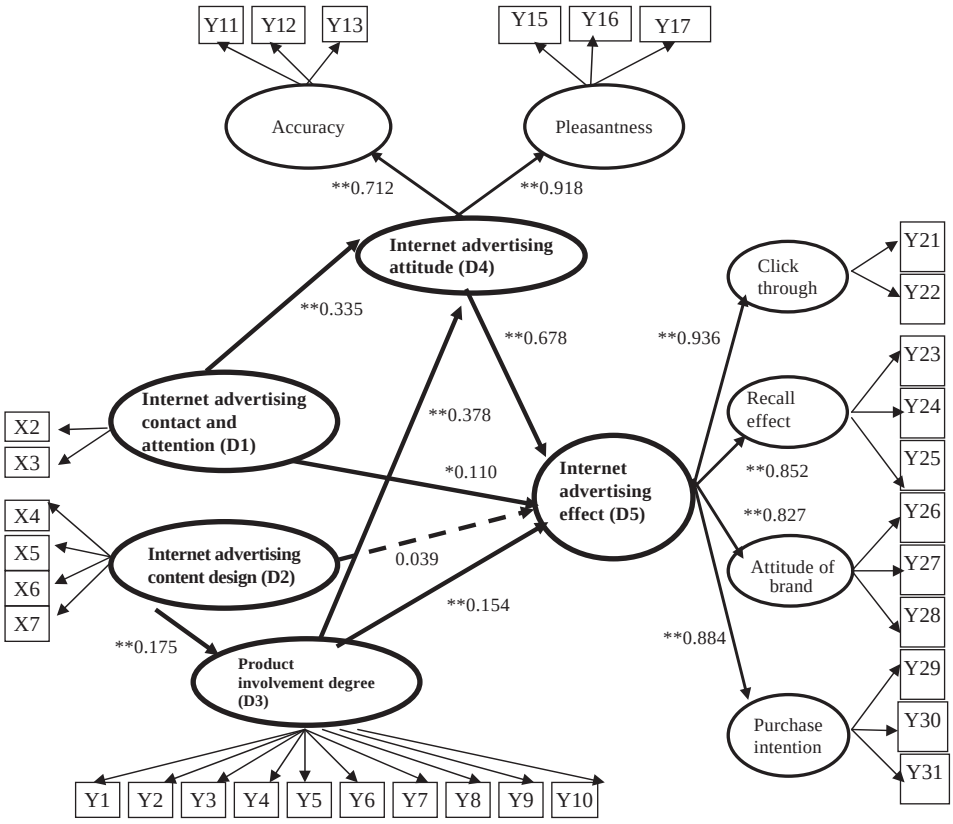

Fig. 2. The relational structure of Internet advertising effect $^{**}P<0.01$, $^{*}P<0.05$.

Table 2
Hypothesis verification

Hypothesis	Relation	Coefficient	P	Result
H1: Internet advertising contact and attention → Internet advertising attitude	+	$\gamma_1 = 0.335$	0.000	Supported
H2: Internet advertising contact and attention → Internet advertising effect	+	$\gamma_2 = 0.110$	0.024	Supported
H3: Internet advertising content design → Internet advertising effect	+	$\gamma_3 = 0.039$	0.276	Not supported
H4: Internet advertising attitude → Internet advertising effect	+	$\beta_1 = 0.678$	0.000	Supported
H5: Internet advertising content design → Product involvement degree	+	$\gamma_4 = 0.175$	0.000	Supported
H6: Product involvement degree → Internet advertising attitude	+	$\beta_2 = 0.378$	0.000	Supported
H7: Product involvement degree → Internet advertising effect	+	$\beta_3 = 0.154$	0.004	Supported

(6) The relationship between "product involvement" and "Internet advertising attitude": the study shows that the two possess a significant positive relationship ($\beta_2 = 0.378$, $P = 0.000$), thus, the hypothesis H6: "The higher the degree of 'product involvement', the more positive the attitude toward an advertisement" is established.

(7) The relationship between "product involvement" and "Internet advertising effects": the study shows that the relationship between the two is positive ($\beta_3 = 0.154$, $P = 0.004$), thus, the hypothesis H7: "The higher the degree of a consumer's 'product involvement', the greater the effects of an advertisement" is established.

4.3. Discussion

The results indicate that the consumer's contact and attention paid to an advertisement produce a significant and direct influence on the advertisement's effectiveness, while the level of importance placed on content does not. In addition, 'Internet advertising contact and attention' impacts on Internet-based advertisement's effect via the user's attitude toward advertisement (as shown in Fig. 3). Layered effects exist among the variables 'Internet advertising contact and attention', 'Internet advertising attitude', and 'Internet advertising effects', and are positively related; this finding confirms the findings of Bruner II and Kumar (2000).

Table 3
The variables relation of measure model

Measuring indicators and the dimensional relation	Coefficient	*P*
X2←Internet advertising contact and attention	0.693	0.000
X3←Internet advertising contact and attention	0.676	0.000
X4←Internet advertising content design	0.659	0.000
X5←Internet advertising content design	0.852	0.000
X6←Internet advertising content design	0.825	0.000
X7←Internet advertising content design	0.683	0.000
Y1←Product involvement degree	0.816	0.000
Y2←Product involvement degree	0.837	0.000
Y3←Product involvement degree	0.887	0.000
Y4←Product involvement degree	0.850	0.000
Y5←Product involvement degree	0.907	0.000
Y6←Product involvement degree	0.874	0.000
Y7←Product involvement degree	0.851	0.000
Y8←Product involvement degree	0.842	0.000
Y9←Product involvement degree	0.893	0.000
Y10←Product involvement degree	0.853	0.000
Y11←Accuracy	0.644	0.000
Y12←Accuracy	0.765	0.000
Y13←Accuracy	0.642	0.000
Y15←Pleasantness	0.680	0.000
Y16←Pleasantness	0.777	0.000
Y17←Pleasantness	0.569	0.000
Y21←Advertisement click through	0.849	0.000
Y22←Advertisement click through	0.811	0.000
Y23←Recall effect	0.733	0.000
Y24←Recall effect	0.728	0.000
Y25←Recall effect	0.762	0.000
Y26←Attitude of brand	0.845	0.000
Y27←Attitude of brand	0.839	0.000
Y28←Attitude of brand	0.743	0.000
Y29←Purchase intention	0.784	0.000
Y30←Purchase intention	0.841	0.000
Y31←Purchase intention	0.739	0.000

This study has determined that product involvement (a) has a significant and direct influence on the effect of an advertisement, and (b) indirectly determines an Internet-based advertisement's effectiveness via attitudes towards the advertisement. Therefore, although the level of importance placed on content by consumers does not produce a direct impact upon an advertisement's effectiveness, indirect effects are produced via either of the two intermediary variables 'Internet advertising attitude' or 'product involvement degree'. Note that there are two influential paths (as shown in Fig. 4):

Firstly, one may distinguish a pattern between the levels of importance placed on content design, and that they lead to product involvement—in turn influencing an advertisement's effectiveness.

Secondly, the level of importance placed on advertising content by consumers may also influence product involvement. Through product involvement, attitudes towards advertising are altered, in turn affecting an advertisement's effectiveness (i.e. the level of importance placed on content design by consumer → product involvement degree → internet advertising attitude → advertisement's effect). Results obtained differ between scholars (Bayles & Chaparro, 2001; Leong et al., 1996; Wang, 1997; Yi, 1990a, 1990b). This difference is most likely related to (a) product features (tour products are intangible commodities); or (b) the result of having two intermediary variables of "product involvement" and "Internet advertising attitude" that differ from models proposed by past scholars.

In addition, this study concerns the "overall effectiveness" of Internet advertisements instead of single or recall effects, and probably contributes to the difference in our results when compared to results obtained by others. It is worth noting that the study shows that the variables 'Internet advertising attitude' and "product involvement"

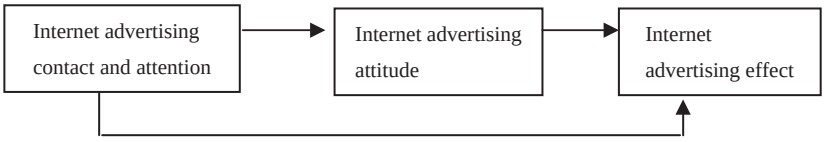

Fig. 3. The influence of Internet advertising contact and attention on Internet advertising effect.

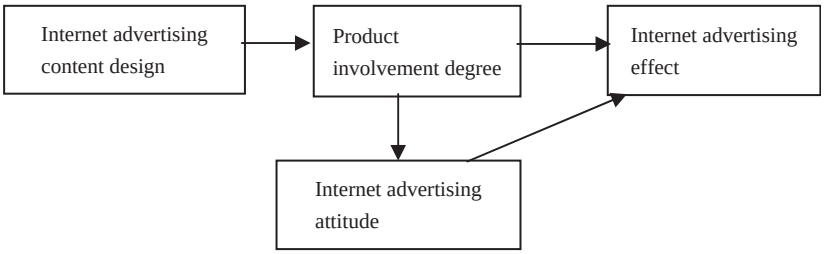

Fig. 4. The influence of Internet advertising content design on Internet advertising effect.

are important intermediary variables; this is an important finding, and further discussions are to be encouraged.

5. Conclusion and implications

5.1. Conclusions

The survey found that contact and attention determined Taiwanese travel agencies' Internet-based advertisement's effectiveness. A layered, positive relationship exists amongst the variables 'Internet advertising contact and attention', 'Internet advertising attitude', and 'Internet advertising effects'. Although the level of importance placed on content design by consumers did not produce a significant effect on advertisements' effectiveness, the two intermediary variables, 'product involvement degree' and 'Internet advertising attitude' may reinforce its effect on Internet-based advertisements. Thus these two dimensions act as important antecedents determining Internet marketing effectiveness in the tourism industry.

The attitude toward Internet advertising produces relatively greater intermediate effects between Internet advertising contact, attention and Internet advertising effectiveness. The other intermediary variable, product involvement, produces greater intermediate effects in (a) perceptions of content design and (b) the advertisement's effect. Both 'Internet advertising attitude' and 'product involvement' are significant mediators. The more positive the attitude towards Internet-based advertising and the higher the product involvement, the more effective the advertising.

From previous studies on factors of advertising effects, it has been found that attitudes toward advertisements play the major role of a mediating variable (Brown & Stayman, 1992; Homer, 1990; MacKenzie & Lutz, 1989); however, if product involvement is also listed as an intermediary variable, and the dual effect of the mediator is considered, then differences should be noted. This study implies that the degree of product involvement plays an important role in advertising effects, and constitutes an important finding of this study.

5.2. Managerial implications

In Taiwan and across the world, the Internet has become a mature service industry in its own right. Internet-based advertising is an important communication channel for travel agencies in the tourism industry, and pose as an opportunity for travel agencies to enhance consumer contact and attention. Consumer attitudes toward such advertising need to be strengthened and more effective advertising needs to be achieved; therefore, planning and designing attractive tours via Internet advertising to enhance consumer' product involvement and attitude towards the advertising is important. Consequently, understanding the special features and requirements of different product involvement groups and designing appropriate advertising content are prerequisites for Internet advertising operators.

For operators in the tourism industry using the Internet to advertise their products, the effectiveness of Internet advertising may be enhanced through two channels: 1, increased advertising exposure to improve internet user contact and attention and 2, design appropriate advertising content that suits internet users' preferences so that their involvement with a product can be enhanced. By generating more favorable attitudes toward Internet advertising, the effectiveness of that advertising increases. The results from this study show that "Internet advertising contact and attention" and "Internet advertising content design" are the basic elements that produce effective Internet advertising, and that they are crucial to Internet-based advertising's success. These results can also be offered to other industries that use Internet-based marketing strategies.

5.3. Study limitation and future research

The study does have some limitations, of which the main ones are:

(1) The use of convenience sampling. Future studies may be done using random sampling to ensure better reliability of results.
(2) This study has integrated four factors to measure Internet advertisement effectiveness in the tourism industry. In essence a "Comprehensive effect measurement" has been made of Internet advertising effects. Therefore, it is impossible to understand single effects of influential factors on the advertising effects (e.g. click through or recall effects). In future studies, a "single effect" analysis may be done to better understand the effects of related factors on click through, recall, brand, attitude, and desire to purchase.
(3) In terms of Internet advertisement effect measuring, this study based its measuring dimensions on the communication effects. However, actual "sales value" is the ultimate goal of Internet advertising. If actual sales figures can be obtained, perhaps Internet advertising effects can be more objectively and effectively measured. This is considered as one option for future studies.

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Appendix A. Questionnaire

Notice: Before interviews were conducted, the interviewer asked Internet users if they had experience with Internet advertising in the travel agency. If not, that person

was not interviewed. The interviewer explained to the interviewee that the object of the survey was Internet advertising in the travel agency. The questions were designed to identify a common conception toward travel agency Internet advertising, not specified for any single travel agency.

Section I

Internet advertising contact and attention about travel agency	**Very high**				**Very low**
1. Average time spent surfing the internet per day	5	4	3	2	1
2. How often consumer is exposed to Internet advertising	5	4	3	2	1
3. Attention level for Internet advertising	5	4	3	2	1

Internet advertising content design about travel agency	**Very high**				**Very low**
1. Level of importance placed on flash design	5	4	3	2	1
2. Level of importance placed on picture and text web interface allotment	5	4	3	2	1
3. Level of importance placed is in highlighted color	5	4	3	2	1
4. Level of importance placed on general advertising content	5	4	3	2	1

Product involvement toward travel

Important	7 6 5 4 3 2 1	Unimportant
Relevant	7 6 5 4 3 2 1	Irrelevant
Means a lot to me	7 6 5 4 3 2 1	Means nothing to me
Valuable	7 6 5 4 3 2 1	Worthless
Needs	7 6 5 4 3 2 1	Not needed
Interesting	7 6 5 4 3 2 1	Uninteresting
Exciting	7 6 5 4 3 2 1	Unexciting
Appealing	7 6 5 4 3 2 1	Unappealing
Fascinating	7 6 5 4 3 2 1	Mundane
Involving	7 6 5 4 3 2 1	Not involving

Internet advertising attitude toward travel agency	**Strongly agree**				**Strongly disagree**
1. Internet Advertised product and actual product are consistent	5	4	3	2	1
2. I have faith in Internet advertising	5	4	3	2	1
3. I trust shopping through advertised telephone and address	5	4	3	2	1
4. Internet Advertised products are valuable to me	5	4	3	2	1
5. Most Internet Advertisements are pleasant	5	4	3	2	1
6. I am in favor of Internet advertising in general	5	4	3	2	1
7. Advertising information serves as a good reference	5	4	3	2	1

Internet advertising effects toward travel agency	Strongly agree				Strongly disagree
Advertisement click through					
1. I am likely to click through Internet advertisements again	5	4	3	2	1
2. I often click through Internet Advertisements	5	4	3	2	1
Recall effects					
3. I can remember most of the Internet advertising content	5	4	3	2	1
4. Internet advertising enhance my impression toward a product	5	4	3	2	1
5. I can describe Internet advertising content	5	4	3	2	1
Attitude of brand					
6. After viewing Internet Advertisements, I am more in love with the advertised brand	5	4	3	2	1
7. After viewing Internet Advertisement, I developed preference for the brand in the advertisement	5	4	3	2	1
8. After viewing the Internet Advertisement, my impression for the product brand is strengthened	5	4	3	2	1
Purchase intention of travel					
9. After viewing the Internet Advertisement, I am willing to try using the product	5	4	3	2	1
10. After viewing the Internet Advertisement, I become interested in making a purchase	5	4	3	2	1
11. After viewing the Internet Advertisement, I will purchase the brand being advertised	5	4	3	2	1

Section II

Sex: □ Male □ Female

Age group: □ Below 19 □ 20-29 □ 30-39 □ 40-49 □ Over 49

Education: □ Primary or below □ Secondary □ College or University □ Graduate school

Average monthly income (NT$): □ Below 20000 □ 20001- 40000 □ 40001-60000 □ 60001-80000 □ 80001- 100000 □ Over 100000

Internet experiences: □ Below 1 year □ 1-2 years □ 2-3 years □ 3-4 years □ Over 4 years

Daily Internet use: □ Below 1 hour □ 1-2 hour s □ 2-3 hour s □ 3-4 hours □ Over 4 hours

Appendix B

Factor loading of two factors of Internet advertising attitude is shown in Table B1.

Table B1

Original items	Factor loading	
	1	2
Internet advertised product and actual product are consistent (Y11)	0.705	0.247
I have faith in Internet advertising (Y12)	0.775	0.224
I trust shopping through advertised telephone and address (Y13)	0.796	0.077
Internet advertised products are valuable to me (Y14)	0.558	0.235

Table B1 (*continued*)

Original items	Factor loading	
	1	2
Most Internet advertisements are pleasant (Y15)	0.214	0.773
I am in favor of Internet advertising in general (Y16)	0.264	0.766
Advertising information serves as a good reference (Y17)	0.139	0.761

Appendix C

Correlation between five factor dimensions is shown in Table C1.

Table C1

Correlation	D1 (Internet advertising contact and attention)	D2 (Internet advertising content design)	D3 (Product involvement)	D4 (Internet advertising attitude)	D5 (Internet advertising effects)
D1	1				
D2	0.182	1			
D3	0.225	0.173	1		
D4	0.187	0.099	0.342	1	
D5	0.281	0.169	0.429	0.408	1

Appendix D

An example of correlation between measurements is shown in Table D1.

Table D1

Correlation	X2	X3	Y21	Y22
X2	1			
X3	0.470[a]	1		
Y21	0.271[b]	0.256[b]	1	
Y22	0.244[b]	0.191[b]	0.691[c]	1

($R_{xx} > R_{xy}$), and ($R_{yy} > R_{xy}$).

[a] R_{xx}.

[b] R_{xy}.

[c] R_{yy}.

Appendix E

Analysis of variance for Internet advertising effect is shown in Table E1.

Table E1

Item	*F*	*P* value
Sex	3.248	0.072
Age	1.302	2.268
Education	1.925	0.088
Income	3.276	0.076
Job	3.928	0.085

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